OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as "developed", "industrialized" and "developing" are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

Public goods for economic development

Compendium of Background Papers

Public goods

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

PUBLIC GOODS FOR ECONOMIC DEVELOPMENT

Compendium of Background Papers

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna, 2008

This publication has not been formally edited and do not necessarily reflect the views of the United Nations Industrial Development Organization.

The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as "developed", "industrialized" and "developing" are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.The opinions, statistical data, and estimates contained in signed articles are the responsibility of the author(s) and should not necessarily be considered as reflecting the views or bearing the endorsement of UNIDO.

This document may be freely quoted or reprinted but acknowledgement is requested.

Foreword

The global public goods concept has become central to the debate in international fora on how to address challenges arising from intensified globalization and poverty reduction in the context of the Millennium Development Goals. With the increasing importance of the international exchange of goods, services and production factors, as well as the seemingly limitless possibilities offered by new technologies, the degree of international economic integration and interdependence are reaching new levels. Globalization involves different types of spillovers and international interdependencies. From them emerges the specific domain of public goods. To function in today's global economy, developing countries require a host of national and international public goods that promote good governance, financial stability, commerce, technological progress, health, peace and environmental sustainability. The international community is still learning how best to deal with the undersupply of these public goods.

The character of public goods means that leaving their provision to market forces will result in their undersupply in terms of the socially desirable level. This may affect prospects for economic development, threatening global economic stability, peace and prosperity. The Millennium Development Goals, the internationally agreed goals and targets for knowledge, environment, health and governance, also acknowledge the need for international public goods provision.

Despite the research done in this field, there is still a substantial gap in the understanding of how the provision of public goods can contribute to economic development and which public goods are most urgently needed for economic development. This unsettled debate and the slow progress of the international community to address urgent global problems call for more research on the role of public goods in economic development, as well as for a critical analysis of how specific public goods should be provided efficiently and effectively at, national, regional, and global levels. Current views of economic development need to be enriched and complemented by considerations of international public goods, to achieve sustained high-quality economic growth and ensure that growth translates effectively into poverty reduction.

To bridge this gap, in 2005, UNIDO initiated a research project on public goods for economic development, with the objective to contribute to understanding of the role of public goods in economic development and how specific public goods, urgently needed for economic development, can be provided efficiently and effectively, within the context of intensified globalization. The ultimate goal of the research project was to inform policy-making at national, regional and international level, focusing on the UN system, in general and UNIDO, in particular.

The research project has mobilized knowledge, lessons of experience and views of leading scholars and policy-makers worldwide on topical issues in five core thematic areas: enhancing market integration for poverty elimination; creating developmentally relevant knowledge and diffusion of technology for productivity convergence; financial instability in terms of possible distortions in allocation of resources that inhibit productivity and income growth; protecting the global economic environment by making environmental management an integral component of poverty reduction, and global governance.

The Compendium brings together, in three parts, selected background papers prepared in the context of this UNIDO's research project. The first part presents papers addressing a number of specific thematic issues related to the above five core thematic areas. The second includes regional studies. The third gives the deliberation of the 2005 UNIDO Conference on International Public Goods. These background papers, combined with a set of literature review on public goods in its modern use, and the deliberations of the UNIDO' 2005 Conference on International Public Goods for Economic Development, were integrated in the final report *Public Goods for Economic Development.* The final report was edited by Olga Memedovic, UNIDO staff member.

Acknowledgement

During the implementation of the research project UNIDO has cooperated with the Instituto Complutense de Estudios Internacionales, Madrid, whose team leader was Jose Antonio Alonso. It has also cooperated with the Weatherhead Center for International Affairs, Harvard University, whose team leader was Domingo F. Cavallo.

The Compendium benefited from the UNIDO Conference on International Public Goods for Economic Development, held on 7-8 September 2005 at the Weatherhead Center for International Affairs at Harvard University, which focused on the subject of how to address challenges arising from globalization and the poverty reduction objective of the Millennium Development Goals from an international public goods perspective. It also benefited from discussions held at the Third Meeting of the Group of Friends of the International Task Force on Global Public Goods held on 20-21 January 2005 in Berlin and from its Regional Consultation in Latin American and Caribbean held on 1 March, 2005, in Santiago, Chile.

This Compendium was prepared by Olga Memedovic, UNIDO staff member. Iguaraya Saavedra, also from UNIDO, provided administrative and secretarial support. UNIDO interns Zoson Enkhtaivan, Vinodh Natarajan, Robert Lambertus van Lavieren, Anne Terheggen and Lara Salloum provided research assistance during various stages of the project implementation.

Table of Contents

FOREWORD ... iii
ACKNOWLEDGEMENT ... v
TABLE OF CONTENTS ... vii

PART I: THEMATIC ISSUES ... 1

FINANCIAL STABILITY ... 3
INTERNATIONAL MONEY AS A PUBLIC GOOD: THE CASE FOR A WORLD CURRENCY ... 5
Robert Mundell ...

KNOWLEDGE ... 31
KNOWLEDGE FOR DEVELOPMENT AND ... 33
KNOWLEDGE AS AN INTERNATIONAL PUBLIC GOOD ...
Carl Dahlman ...

MARKET EFFICIENCY AND INTEGRATION ... 69
THE IMPLICATIONS OF AGRICULTURAL TRADE LIBERALIZATION AND PREFERENCE EROSION FOR DEVELOPED AND DEVELOPING COUNTRIES ... 71
Joseph Francois ...
FOR WHOM IS A LEVEL PLAYING FIELD A GLOBAL PUBLIC GOOD? ... 95
Raphael Kaplinsky ...
PREFERENTIAL TRADE AREAS: AN INTERNATIONAL "PUBLIC BAD"? ... 121
Arvind Panagariya ...

ENVIRONMENT ... 137
SPECIFIC PUBLIC GOODS FOR ECONOMIC DEVELOPMENT WITH A FOCUS ON ENVIRONMENT... 139
Michael Braungart ...
Per Bondesen ...
Albin Kälin ...
Benson Gabler ...

GLOBAL GOVERNANCE ... 177
GLOBAL PUBLIC GOODS AND GLOBAL GOVERNANCE: A POLITICAL ANALYSIS OF ECONOMIC THEORY AND POLICY PRACTICE ... 179
Richard Higgott ...
GLOBAL PUBLIC GOODS AND GLOBAL GOVERNANCE: ...
HIGHLIGHTS AND SOME POLICY RECOMMENDATIONS ... 213
Richard Higgott ...

PART II: REGIONAL STUDIES ... 227

REGIONAL VS. GLOBAL PUBLIC GOODS: THE CASE OF POST-COMMUNIST TRANSITION ... 229
Marek Dabrowski ...
Artur Radziwill ...

SUB-SAHARAN AFRICA AND INTERNATIONAL PUBLIC GOODS: THE WEAKEST LINK OR A DE-LINKED REGION? 253
Jean-Claude Berthélemy ....

THE CASE OF MIDDLE EAST AND NORTH AFRICA (MENA) REGION 285
Samir Radwan ....

GLOBAL PUBLIC GOODS: A ROLE FOR CHINA AND INDIA 315
Richard N. Cooper ....

INTERNATIONAL AND REGIONAL PUBLIC GOODS AND THE ECONOMIC DEVELOPMENT OF EAST ASIA 329
Siow Yue Chia ....

THE CASE OF LATIN AMERICA 369
Joaquín Cottani ....
Claudia Silva ....
Ivanna Bandura ....

PART III: UNIDO CONFERENCE ON INTERNATIONAL PUBLIC GOODS FOR ECONOMIC DEVELOPMENT 415
PROCEEDINGS 417

PART I

THEMATIC ISSUES

Financial Stability

International Money as a Public Good: The Case for a World Currency

Robert Mundell
Professor of Economics, Columbia University
1999 Nobel Laureate in Economics

Introduction

The idea of a world currency is by no means a new idea, but it is one that has not had much attention in modern discussions of reform of what many call—rather too optimistically—the international monetary "system."

If some spaceship captain came down from outer space and looked at the way international monetary relations were arranged she would be very surprised. She would find 184 members of the IMF representing about 170 currencies. Some IMF members like San Marino have never had a currency of their own and a new dozen of its more prominent members in Europe have scrapped their national currencies for their new supercurrency, the euro. But it would strike her as very strange to find the complete disorganization of currency markets, the recurrent currency and debt crises, and wonder why more than one currency was needed to conduct international trade and payments in a world that prided itself, since the end of the Cold War, on globalization and aspired to a high degree of free trade and international interdependence.

1. Universal Currency and Old Idea

In every previous age of man's literate history over the past three thousand years there has been some kind of account and medium of exchange that could pass as international money. The civilizations of antiquity had units of account that served as a common measure of value and physical commodities that embodied these values and could be used as media of exchange. Two thousand years ago, in the days of Caesar Augustus, the Roman aureus passed current over all of Western Eurasia and North Africa and five aurei were equal to one Roman libra, the unit of account for the Roman Empire. A thousand years ago, the successor of the aureus, the bezant, was a unit of account through most of Europe. Five bezants were always equal to one libra, and the amount of silver that exchanged for one libra was the pound sterling, the link through the ages from the Romans to the currencies of Charlemagne and Queen Victoria. A hundred years ago, the pound sterling could pass for a universal unit of account. Even as recently as thirty-five years ago, there was the "1944 gold dollar" that was the official unit of account of the International Monetary Fund and the universal unit of account for most of the world.

Recent era is exceptional in that it does not have a universal unit of account. The period since 1971 is unique in the history of civilization, a period when there has been no money that qualified as a universal currency. The monetary revolution of the 1970s contained three provisions: the inconvertibility of the dollar; the divorce of the SDR from gold; and the shift to flexible exchange rates. There are now just commodities and national currencies. What is even more unusual is that

among the general body of economists and monetary officials, there is little recognition that anything is amiss. Some economists think that the present "system" is close to optimal.

What a contrast from the ideas of the classical economists who over the centuries were almost unanimous in favor of an international monetary system based on the gold or a common currency. John Stuart Mill thought that the idea of separate currencies for individual nations was barbaric. Over a century ago that cosmopolitan philosopher and economist wrote:

> "So much of barbarism, however, still remains in the transactions of most civilized nations, that almost all independent countries choose to assert their nationality by having, to their own inconvenience and that of their neighbors, a peculiar currency of their own."

In their treatises on economics, the classical economists typically assumed a single money and never dealt with flexible exchange rates. They assumed that no civilized country would dream of promoting international monetary arrangements based on inconvertible paper currencies with flexible exchange rates, hitherto at most a temporary and unfortunate expedient. When, with the Second Amendment to the IMF Articles of Agreement in the late 1970s, the world moved to endorse managed flexible exchange rates, there was no economic treatise or even official blueprint for destabilization process showing how that such an arrangement would be efficient from a theoretical standpoint, and there was not even then—nor is there now—any comprehensive study of the costs and benefits of flexible exchange rates.

2. The Defective Case for Flexible Rates

The idea of flexible exchange rates goes back to the ancient world but discussion of it tends to resurface after big wars that have brought on inconvertibility when the issue was whether it was desirable to return to a specie standard. This was the case in the eighteenth century, after Sweden's war with Russia, with the writings of Pier Christianen; during and after the Napoleonic Wars in Britain, with the writings of the Birmingham school led by the Attwood brothers campaigning for an inconvertible paper currency; after the US Civil War, with the Greenback Party in the United States; after World War I in Britain with Keynes and after World War II with the papers and pamphlets of Professor (later Sir) James Meade of the London School of Economics and Professor Milton Friedman of the University of Chicago.

Friedman and Meade, two Nobel-Prize-winning economists writing in the early 1950s came at the subject from opposite ends of the political spectrum. Meade was a liberal socialist who believed in planning, and wanted flexible exchange rates for Britain so that the Labor Government would not have its planning frustrated by balance of payments problems.[1] Friedman is a libertarian conservative who disliked exchange controls and saw flexible rates as preferable to fixed exchange rates with price controls.

The basic case for a paper money standard with flexible exchange rate is that a country can have an independent monetary policy to choose its own inflation rate. It is a compelling argument if the rest of the world is tied to an unstable standard, as was the case in many wartime or post-war situations when there either was no international monetary system or it was unstable. For

[1] It was a vain illusion to think that shifting from fixed to flexible exchange rates could eliminate balance of payments problems. Under fixed exchange rates spending and excessive monetary expansion is disciplined by the loss of foreign exchange reserves. Under flexible exchange rates they are disciplined—to be sure much more weakly—by the threat and actuality of inflation.

example, after World War I Keynes campaigned against Britain going back to the gold standard because the gold standard, under American leadership, had become unstable. But in 1944-45 he campaigned aggressively for the Bretton Woods gold standard because he believed that it could be stable. The issues for debate are not whether it is worth joining an international monetary system that is unstable but rather whether the benefits from joining a stable international system are sufficient to compensate for the costs (or benefits) of giving up monetary independence.

Several advantages were claimed for a regime of flexible exchange rates by its advocates, which in my view do not have much foundation:

- *It would give policy makers an additional instrument of economic policy.*

This is only true if monetary stability is given up. A fixed exchange rate (in conjunction with the automatic mechanism that goes with it) is a monetary rule that produces a certain kind of monetary stability. Moving to flexible rates with monetary stability requires an alternative form of control over the money supply. There is no extra degree of freedom unless monetary stability is thrown out the window. Under fixed exchange rates, the money supply is committed to maintenance of balance-of-payments equilibrium; under flexible exchange rates it is committed to inflation-forecast targeting or the price level itself.

- *It would make international reserves of gold or foreign exchange unnecessary.*

In the 1960s Sir Roy Harrod used to argue (correctly) that international reserves are more necessary under floating than under fixed, and that more, not fewer reserves would be needed under floating. As far as the facts are concerned, actual reserves have exploded since floating began, not just in absolute terms but as a percentage of international trade. No country with flexible exchange rates could afford to lose control of the ability to intervene in exchange markets in times of emergency. A country without reserves would be forced to resort to controls, exactly the opposite of what libertarians want.

- *Monetary discipline would be kept under floating because central banks would use undesired depreciation as a signal to tighten. Unwelcome depreciation of a currency under floating would thus preserve monetary discipline and avoid inflation.*

History does not bear this out. In most countries inflation targets are soft targets compared to exchange rate targets. There are many cases where countries, after shifting to floating, regarded their "new degree of freedom" as a license to run fiscal deficits and finance them by money creation. Thus Mexico, after 22 years of a fixed exchange rate between 1954 and 1976, devalued and then floated, and then, despite the discovery of colossal newfound oil reserves, embarked on a program of spending that resulted not only in the debt crisis but also in multi-digit inflation that necessitated in the 1990s a currency reform. Mexico's experience was by no means unique; it was duplicated over much of Latin America and the Caribbean in the late 1970s and in the transition countries after the end of the Cold War.

- *Several countries that "do inflation targeting" even say—in the best Bundesbank tradition—that "exchange rates don't matter."*

This is not a sound position for either small or large countries. Between two large blocs like the dollar and euro areas, the huge swings in the dollar-euro rate between 1999 and 2006, amounting to over one period an appreciation of the euro of 70 per cent against the dollar, have been

primarily changes in real exchange rates and have involved shifts in real wealth between the two areas that must be calculated in the trillions of dollars.

It is always easier to increase the supply of money than to tighten monetary policy. As Keynes wrote in his *General Theory* the course of prices has been historically upward because when money is excessive, prices are allowed to rise, and when there is a threat of deflation, some means is always found to increase the quantity of money. For this reason, countries with floating exchange rates are much more likely to use monetary policy to prevent appreciation than they are to prevent depreciation. Countries are more prone to intervene when their currencies are too strong, because they fear the loss of competitiveness from overvaluation more than the inflation risks of undervaluation. In 1985 the United States rejected the market solution for exchange rates and organized the Plaza Accord to depreciate the dollar not because the dollar was weak but because it was too strong.

- *Exchange rates would be more stable under flexible rates than under fixed rates because it would eliminate the "one-way option" associated with crises of currencies under "pegged" exchange rates.*

The "one-way option" is usually associated with pegged exchange rates, not fixed exchange rates. Pegged exchange rates arise when a country intervenes to fix the exchange rate but nevertheless pursues an independent monetary policy because there is no mechanism of adjustment.

By contrast, a fixed exchange rate contains within it an adjustment mechanism that, in the absence of sterilization, is automatic; the existence of this mechanism ensures continuous correction and prevents large imbalances from building up, leading to confidence in the permanence of the rate.

- *Flexible exchange rates will lead to greater stability of exchange rates than fixed rates. This is because fixed rates lead to disequilibrium and crises that typically result in more extreme devaluations and greater exchange rate changes than take place smoothly under flexible exchange rates.*

This was the argument used at the IMF to sell the idea of flexible exchange rates as a stable system. It has proved to be invalid. For several countries flexible exchange rates resulted in loss of monetary and fiscal discipline and much great exchange rates changes (e.g., the transition countries after they floated in 1989/90). In general, just compare the stability of exchange rates between the three major currencies in the two periods before and after floating began: 1950-1970, and 1970-1990. The yen-dollar rate over the earlier period was absolutely fixed, and the DM-dollar rate varied only slightly; whereas in the subsequent period there were large swings of both currencies that completely refuted the prediction.

Even though most OECD countries have restored monetary stability after the unstable period of the 1970s, the problem of instability under flexible exchange rates persists even between areas that have price stability. The instability of the dollar-euro exchange rate, which fell by 30%, from \$1.18 at its inception to a low of \$0.82 in the first two years, followed by its rise by 70% to nearly \$1.40.

- *Speculation would be stabilizing under flexible exchange rates.*

Friedman's argument that "speculation is stabilizing is equivalent to saying that speculators make profits" has some truth in it especially in the absence of coordination, monopoly, and contagion.

But if "stabilizing" is defined as bringing a price closer to its fundamental equilibrium value it is hard to see how to determine the equilibrium value in order to test the proposition. Those who bet against the euro in its first two years made money, while those who bet on it over 2002-2004 made money. The soaring euro in the latter period hit Europe just at the wrong time when it was succumbing to recession and stagnation.

- *Flexible exchange rates would be the best way of achieving balance of payments equilibrium in a customs union or free trade area.*

Meade had made that argument for flexible exchange rates for the Common Market countries in 1956 (a few decades later changed his mind in support of the euro). If the argument were true, why did the nation-states in Europe and the world over move in the last millennium toward fixed exchange rate systems for its provinces and a single currency? Would the United States customs union be improved if each state had a separate and floating currency? The history of monetary integration shows that nation-states have been inexorable in their movement toward a fixed rate system among the provinces of a country and its apotheosis, a single currency.

Flexible exchange rates do not solve balance of payments problems. The US balance of payments deficit is far larger now than it was under fixed rates not only in absolute terms but also as a share of GDP.

- *Flexible exchange rates would be a better cushion against shocks than the use of foreign exchange reserves.*

No new resources are achieved by currency fluctuations. A fall in real income caused by a term of trade shock or a "harvest failure" cannot be wiped out by exchange rate changes. If the shock were an increase in oil prices in an oil-importing country, would the home currency appreciate to cushion the shock and reduce the increase in the home-currency price of oil, or would the government follow policies leading to currency depreciation, aggravating the increase in oil prices? In the oil shocks of the 1970s currency depreciation was the rule aggravating the rise in prices. Under fixed exchange rates, the use of reserves spends some cushioning effect but this cannot be carried so far that it undermines confidence in the exchange rates pushing the whole world into deflation; and again, took the pound off the DM in 1992 when the asymmetric shock associated with German unification was forcing unwanted appreciation on the other European Monetary System (EMS) countries. If the instability were expected to persist, a country would have to choose between floating and finding an alternative anchor.

- *The exchange rate is a price, like any other price. Interferences with the market lead to distortions. A flexible exchange rate is the "free market" solution, whereas a regime of fixed exchange rates smacks of price controls and dirigistic policies.*

It is true that the exchange rate is a price but it is not like any other price. The price of money is unique because it is a measure of value. That is why Britain kept the price of gold constant at £3 17s.10 1/2d. for centuries, and why the dollar is always fixed at 100 cents = 20 nickels = 10 dimes = 4 quarters. The above statements, which are repeated ad nauseum in the flexible exchange rate polemics and sometimes even in the literature on finance, do not take into account the role of money as a unit of account. Money is a measure of value, anchor for the price-information system, the unit of price quotations, the unit of contract for deferred payments and the instrument for implementing legal tender. For all of these functions fixity not flexibility is needed.

Under a commodity currency like gold, a free market in gold was desirable because it led to fixed exchange rates between gold currencies. But it is stretching credulity to pretend that paper currencies produced by quantity-fixing government monopolies called central banks have anything to do with free market principles.

3. Historical Observations

Some historical notes may help to connect current issues with past attitudes and ideas. As already mentioned, our age is unique for its absence of an international monetary standard. The first is that even though the international gold standard gave the world a high degree of monetary unity—currencies were, as Milton Friedman put it, just names for different weights of gold), there was general recognition in the old days that a global unit of account was desirable. Several monetary conferences in the 19th century made this point, and, with the exception of Britain, most major countries were willing to alter slightly their monetary units in order to make 1 pound = 5 dollars = 25 francs as the common monetary unit. But Britain's policy of abstention killed the idea, and was consistent with the general practice of hyper powers to reject meaningful international monetary reform. Even though countries enjoyed stability of exchange rates under the gold standard they wanted to go further and fine-tune the system to eliminate or reduce unnecessary information and transactions costs associated with international trade. This concern, which was shared by Bagehot and other far-sighted economists, derived from the common sense of saving on information and transactions costs, before the development of erudite mathematical models of information theory.

The second historical note is that in preparing for the post-war system, President Franklyn D. Roosevelt directed his Secretary of the Treasury, Henry Morgenthau Jr., to make plans for a world currency. Both the American and British plans at Bretton Woods included provisions for a world currency. The American plan named it *unitas*; the British plan named it *bancor*. It was never implemented for political reasons that had to do with American politics. Months before the Bretton Woods conference, the Americans withdrew their proposal for a world currency and when the British, as Lord Robbins tells us, brought up the issue, "the Americans changed the subject." The year 1944 was a presidential election year, and isolationist forces and the next Congress might have resisted an idea that might have been interpreted as sacrificing a degree of sovereignty.[2] But US reluctance to go forward with a global currency fits the historical pattern that the leading power resists monetary reform that might interfere with the international role of its own currency. But an international monetary system without a world currency is inherently flawed, as subsequent events showed.

The third note is that the failure to create a world currency at Bretton Woods gave rise to the special problems of the post-war international monetary system, and the Triffin[3] Dilemma: If the United States corrected its deficit, the rest of the world would be starved for reserves and it would bring on a deflation; but if the United States did not correct its deficit, there would be a currency crisis and a collapse of the system. To finesse this problem, the IMF actually moved in the direction of a world currency, with the creation of the Special Drawing Rights (SDRs), which were agreed upon at the 1967 IMF meetings in Brazil. This showed that the leaders of the major countries and the IMF at this time fully favored the idea of a world currency. A few years later, however, in 1974 the gold guarantee of the SDR was stripped away and expansion of the SDR into a genuine world currency was never allowed to take root.

---

[2] I have discussed this issue in "The International Monetary System: The Missing Factor," *Journal of Policy Modeling* 17(5): (1995): 479-492.

[3] See Robert Triffin in *Gold and the Dollar Crisis,* 1959.

The fourth historical note is that the 1976 agreement in Jamaica on "managed flexible exchange rates" was never enthusiastically endorsed, even by the United States. For three years (1972-1974), the Committee of Twenty had tried to negotiate a plan that would bring about a reformed world monetary system.[4] There was never a lack of demand for the system; it foundered because no one could find a negotiable solution. There were great difficulties, one of which was how to fit the UNITED STATES into a symmetrical system, and no solution for it emerged at that time. But the shift to "managed floating" came not because many people considered it a solution to international monetary problems but because the alternatives had failed.

The fifth deals with the history of the theory of international adjustment mechanism under fixed exchange rates. For over a quarter of a millennium—ever since the publication of Hume's Essays—economists have accepted the fact that under fixed exchange rates the balance of payments is self-adjusting, as long as the monetary authorities do not interfere with it by sterilizing the changes in the money supply on which the adjustment mechanism depends. Unfortunately, the economics literature got the nature of the adjustment wrong and for a couple of centuries economists talked about the "price-specie-flow" mechanism as the adjustment mechanism under the gold standard or fixed exchange rates. The usual textbook story that "countries in surplus experienced inflation and countries in deficit, deflation" perpetuates a mistake that has been refuted in both the theoretical and empirical literature. Under bimetallism or the gold standard, a well-working fixed exchange rate system, a common currency arrangement such as that in the United States or the European Monetary Union, or most nation-states, the price level is connected together and rises and falls in both surplus and deficit countries together. But the fallacious view of the adjustment mechanism of the gold standard (which, by the way, was not shared by a sophisticated theorist like Ricardo) had already done its harm and persuaded them of the need for fluctuating exchange rates to avoid changes in the price level and unemployment.[5]

4. Defects of Current System

A case for a change in the present system must ipso facto be a case against the current arrangements.[6] What are its defects? Besides the omission of a global unit of account, anchor for

---

[4] The Committee of Twenty represented the "members" that were the twenty constituencies of the Executive Board of the IMF, headed by the Minister of Finance of the largest member in a constituency (in several countries like the UNITED STATES there was only one member). Each member could be accompanied by two associates who were also allowed to speak in addition to the Executive Director of the Fund and various advisers. This cumbersome group, representing (then) 124 IMF members, to develop a plan for reform involved over 150 people in the room. It was a far cry from the comparatively successful procedure at the Bretton Woods Conference in 1944, and in the procedure that went through the Delors Report to the Maastricht Agreement in the planning for the euro. For a valuable account of the efforts of the Committee of Twenty, see Robert Solomon, *The International Monetary System 1945-76*. New York: Harper & Row. 1977: Ch. 14.

[5] I have dealt with this issue at length in "The International Adjustment Mechanism of the Balance of Payments," *Zagreb Journal of Economics,* Volume 1, No. 1, 1997, which reviews the literature on this subject and provides a theoretical analysis of the key issues. See also P. A. Samuelson. 1980. "A Corrected Version of Hume's Equilibrating Mechanism for International Trade," in *Flexible Exchange Rates and the Balance of Payments*, ed. by John S. Chipman and Charles P. Kindleberger. Amsterdam: North-Holland.

[6] I have critiqued the present system in a number of articles over the past few decades. See for example, "Reform of the International Monetary System: The Sixth Robbins Memorial Lecture," in Mundell, R. A. and P. J. Zak, "*Monetary Stability and Economic Growth: A Dialogue between Leading Economists.* Cheltenham, U.K. Elgar. 2002: 1-23 and "A Reconsideration of the Twentieth Century," American

neutral countries, and means of settlement, the major defect and the main threat to prosperity in the world system lies in the wild gyrations of major exchange rates and the risk of instability of the dollar.

Recent Phases of the International Monetary Arrangements

Int'l Gold Standard	1873 -- 1914
Dollar-Gold Standard	1915 – 1924
Gold Exchange Standard	1925 – 1933
Dollar-Gold Standard	1934 – 1971
Dollar Standard	1971 – 1973
Flexible Exchange Rates	1973 – 1999
Currency Areas	1999 – ?
International Money	?

Since floating began, the world economy has been characterized by a pronounced dollar cycle. Two-digit-inflation, low real interest rates and soaring gold and oil prices accompanied the weak dollar of the late 1970s; falling inflation, high real interest rates, rising deficits and falling gold and oil prices characterized the strong dollar of the early 1980s; low inflation and low oil prices accompanied the weak dollar of the late 1980s and early 1990s; low inflation, rapid growth and (relatively) low gold prices were associated with the soaring dollar of the later 1990s and early part of the new century; and low interest rates and low inflation have characterized the weak dollar since 2002. For the past two decades inflation has not been a major problem for the United States, Europe or Japan, so that the large swings of the dollar have reflected changes in real exchange rates.

Real exchange rate changes are sometimes necessary as an inevitable response to real shocks and relative changes in productivity. Within a common monetary area, these changes are handled automatically by adjustments in relative prices. But real exchange rate changes that do not reflect basic changes in economic structure can be thought of as distortions. When floating began most advocates thought that nominal exchange rate changes would reflect differences in inflation rates and not by themselves be a source of real exchange rate disturbances. Yet this has not proved to be the case. Even sporadic nominal exchange rate changes based on speculative capital movements typically involve real changes that alter economic structure. Real exchange rate adjustments in a common currency area work out slowly. But under flexible exchange rates, expectations of real changes—often incorrect and reversible--lead to instantaneous adjustment in the foreign exchange market and swings in real exchange rates that have little if anything to do with any fundamental need for changes in real exchange rates. As a consequence, exchange rates under floating lead to false values of the real exchange rate and the perceived need for intervention—as, for example, during the November 1 crisis in 1978, the Plaza Accord in 1985, or the converted (but failed) intervention in September 2001.

Economic Review.

Distortions in real exchange rates have their counterparts in distortions of real interest rates, investment and the markets for financial assets that involve huge and arbitrary shifts in financial wealth. The exchange rate gyrations associated with the dollar cycle and other swings have been very costly to the international monetary system. The conventional wisdom is to blame the developing countries for their own difficulties. It is always possible to find mistakes that developing country—or any country for that matter—makes. But this is partly an alibi for the mistakes in the system. The debt crisis of the early 1980s was caused mainly by the swings of the dollar: negative interest rates in the late 1970s led to easy and lax borrowing, followed by soaring real interest rates and dollar depreciation in the early 1980s, pushing emerging market countries all over the world into default. The tripling of the value of the yen after the Plaza Accord between 1985 and April 1995 weakened balance sheets and clogged up the Japanese banking system with Non-Performing-Loans that persist to this day. The soaring dollar from 78 yen in April 1995 to 148 yen in June 1998 set in motion the Asian crisis, by cutting off FDI from Japan to SE Asia and undercutting the export markets of countries whose currencies were fixed to the dollar. Similar stories could be told about the Russian and Argentine crises.

5. Intervention in the Currency Market

There is an old saw exchange market intervention cannot work. The trans-border financial markets, so the argument runs, amount to more than $2 trillions of transactions every day, or about half a quadrillion of dollars every year! This is so much larger than any conceivable actual intervention by central banks that the latter seems like just a drop in the bucket in the foreign exchange markets. In one of the most recent cases of generalized G-7 intervention, just before the IMF Annual meetings in Prague in September 2001, the G-7 countries tried to slow or stop the fall of the euro when it had dropped as low as 85 cents. For a few days, the intervention seemed to work and the euro immediately rose to over 90 cents, only to fall back once more and eventually hit an all-time low of $0.82. This episode seemed to lend truth to the contention that intervention does not work.

This argument seems to confuse the activities of a small speculator with the powers of a central bank. But central banks have the power to make their targets self-verifying. There are five conditions for successful intervention:

1. The intervention target must be realistic in terms of fundamentals.
2. The target should be made explicit and unambiguous regarding floors and ceilings.
3. The intervention should not be sterilized, so that the market will realize that an adjustment process is involved.
4. The intervention should take place in the forward as well as the spot market.
5. The intervention should be concerted with partners.

That the 2001 G-7 intervention had the fundamentals on its side was demonstrated by the 70 per cent appreciation of the euro that took place in the next three years, when the euro rose to nearly $1.40. It was also concerted with its partners (the G-7), so that two of the five conditions for successful intervention were met. The other three were absent: there was no announced exchange rate target (floor for the euro), the intervention took place only in the spot market, and it was sterilized. The basic conclusion about intervention is that an intervention that is consistent with the fundamentals will fail if it is half-hearted, if its implementers are confused about its objectives and if they believe or plan in advance for it to fail.

6. International Money as a Public Good

"Money-of-Account," Keynes wrote in the opening lines of his *Treatise on Money*, "is the primary concept of a Theory of Money." A money of account comes into existence along with debt and price-lists that can only be expressed in terms of a money of account. The money of account is a public good in the most precise sense of the term in that one person can use it without that good detracting from the utility of money enjoyed by other users.

Even more than a public good as classically conceived, money *qua* unit of account is a "super public" good or "magical good" in the sense that an individual's utility is generally enhanced by participation of more users, i.e., by the extension of its "domain." A lonely but rational Robinson Crusoe would need an internal numeraire for economizing on thought in making personal choices, but he would have no need for a social unit of account. In a complex economy, however, it is indispensable and the more so the larger the economy. It is for this reason that the nation state, with hardly a single exception in the history of the world, has always evolved into a common monetary area. There is not a case in today's world where a single country uses officially more than one domestically created money, within its own territory.

The public-good nature of a money looked at from its primary concept of unit of account hardly requires explanation. Imagine a barter society without a unit of account. Without a unit of account, prices would be quoted in pairs. If there were n commodities, there would be 1/2 n (n-l) relative prices. If n = 100, then the number of relative prices is RP = 4,950.

Of course even some barter communities would catch on and realize that with price relations like aX = bY = cZ they could find a common unit of account, such as X, so that the relative prices quoted in a unit of X is equal to X = b/aY = c/aZ, giving birth to a numeraire and eventually a full-fledged unit of account. In a barter economy, the unit of account would be a commodity.

Not just any commodity. A process of natural selection would select the unit-of-value or numeraire commodity that in some sense was the most familiar, reliable and stable: familiar because people have to know its value to relate other values to it; reliable because it must not be ephemeral and subject to the vicissitudes of weather, harvests and political changes; and stable because it must reside in memory. Civilization started in defendable settled areas with economies based largely on agriculture. The almost universal unit of value was the cow or ox, e.g., *pecus.*

It is clear that the establishment of the convention of unit of account is a pure public good in which all members of the society have the potential to share. The more people use it the greater the utility accruing to the whole society.

International monetary systems have attributes of public goods in the sense that one country can benefit from them without detracting from (but rather increasing) the benefits derived by other countries. Monetary unions and currency areas (fixed exchange rate zones) are examples of monetary systems which produces welfare gains in the form of reduced transactions costs, enhanced transparency of pricing, and the elimination of balance of payments problems and uncertainty about exchange rates. Larger monetary unions and currency areas are more stable than smaller ones because the marginal utility of money declines at a slower rate, making the liquidity preference schedule flatter.

7. Size of Currency Domain

The idea of separate currencies for each country flies in the face of the logic of gains from trade based on the division of labor and economies of scale. Free trade in money would lead to a competitive solution in which one or a few moneys would dominate. In the age of metallic money, gold, silver and copper came to rule with variations on the theme of pounds, shillings and pence going back to the days of Roman currency.

The economies of scale idea associated with money implies that the gains from the use of a unit of account increase with the size of the currency domain, measured either in number of transactors or in aggregate transactions effected with the use of money. Economies involve both scale and scope. Addition of a new transactor offers gains to her as well as additional gains to existing transactors. The larger the population and average level of transactions the greater the gains from the use of money. Other things equal, gains would be maximized by a single unit of account.

In a world of countries of unequal sizes, the unit of account of the largest economy will be the most efficient from the standpoint of attractiveness of a unit of account. A new small nation emerging on the scene could thus maximize its gains from money by using the currency of the largest economy and existing smaller states would likewise reap the advantages of the unit of account by adopting the currency of the largest economy. The unit of account industry is like a natural monopoly in which the ultimate equilibrium is a single global unit of account.

The more transactors in an economy the more gains there are from the use of money in its role as a unit of account. But economies of scope are also relevant. An economy producing and consuming a single product like rice would have no use for a unit of account distinct from rice itself. But the greater the number of more differentiated commodities there are to be priced, the more useful is a specialized unit of money.

The gains from the use of a single money increase with the size of population and, to the extent that income is associated with complexity, with wealth. The larger the population of a state and the greater its wealth, the greater are the gains from the use of a common unit of account.

Economies of scale imply that, other things equal, large and wealthy economies gain more from money than small and primitive economies. For this reason there are gains for two or more countries to share a common money. Indeed, the more economies share the same money—again, *ceteris paribus*—adopting or sharing the same money of account can achieve the more gains. From this consideration alone, a common money of account for the world economy would be optimal.

A common currency area implies a common inflation rate, measured on the basis of a common price index. In a common monetary area, for example the common inflation rate is measured by the nation consumer, producer or wholesale price index and applies for all countries. This does not of course mean that prices cannot move at different rates in different localities. Price adjustments are not always made simultaneously a communication costs can results in imperfections of arbitrage, which amount to variations on the "law of one price." A more important discrepancy can result from the use of different indexes. Different weights in local price indexes, differential timings in price adjustment and pass-through rates, differences in quality (including location and time), and the existence of transport costs and domestic goods can all be factors which can result in differences between local prices in their rates of change. Despite these local differences, however, the discrepancies between the local rates of inflation and the average are small.

This is true not only in the United States but even in the comparatively new euro currency area.[7] Looking back over history we find considerable closeness of inflation rates among countries adhering to common monetary standards, such as bimetallism between 1815 and 1873, the gold standard between 1873 and 1914, and the anchored dollar standard between (say) 1950 and 1971.

Participants in a common currency area have no alternative but to accept the existence of a common inflation rate throughout the area. That common inflation rate is determined mainly by the monetary policy of the common central bank if there is one (as in the dollar or euro areas today) or by the monetary leader in a fixed exchange rate monetary union (e.g. the United States in the dollar area between 1934 and 1971) or the Bundesbank in the ERM area preceding the creation of the euro. In the case of the gold standard, the money supply was determined mainly by gold production and gold demand and the world price level was determined by the interaction between the demand for and supply of gold.

Monetary integration implies a common degree of monetary stability and rate of inflation among the countries of the fixed-exchange-rate or common currency zone. A merger of two or more currency areas introduces the question of what will be the common inflation rate. In a currency area dominated by the larger partner (e.g., within the dollar area) the preferred inflation rate of the large partner is likely to be dominant. Alternatively, the common inflation rate could be made by common agreement or by a weighted average of the preferred inflation rates of the member countries (the analogy to selecting the common tariff rate of a customs unions is apparent here).

The two issues involved are stability of the price level in the sense of being able to withstand shock, and the inflation rate itself. Given comparably competent monetary policies (perhaps designed to minimize variations in the rate of inflation), the advantage of stability lies with the larger currency area. The advantage of a large currency area is its greater ability to absorb shocks. A large lake can absorb without great disturbance a meteor shock easier than a small pond, and similarly, the currency area of a large economy has more absorptive capacity than a currency area of a small economy.

Germany's unification shock in the early 1990s, when the German government dramatically increased fiscal spending to rehabilitate its new ex-communist sector, suggests an example where the size of an anchor currency area is important. Because Germany was the pivot of the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS), this asymmetric macroeconomic shock created not just for Germany itself but also for other members of the ERM. To honor its statutory commitment to price stability, the Bundesbank raised interest rates to levels that reversed Germany's capital outflow to other European countries and abroad, and brought about the balance-of-payments crises in countries like Italy, Spain, France, and Britain. The result was that Italy and Spain were forced to devalue, Britain exited the ERM, and France insisted on immensely widened exchange margins to accommodate a de facto if temporary depreciation of the franc. The same $100 billion annual shock in the United States, with a GDP four times larger than Germany's, would have had a proportionately smaller impact.

8. Inflation Preferences

[7] In the euro zone, for example, in the third quarter of 2005, national inflation rates with one exception, differed by less than 1 1/2 percentage points from the eurozone average of 2.3. The exception was Greece, which had an inflation rate of 3.9%. Yet Greece was unique, first, because it was the latest member to join the eurozone, and second, because Greece had an unnecessary devaluation just before its entry.

The price level of a currency area is determined by the demand and supply of money in the area. Money demand depends mainly on income, and the cost of holding money (including inflation and interest rates), and money supply depends on the natural or devised mechanisms for determining and changing the supply of money. Under metallic monetary systems like bimetallism or the gold standard the production of the precious metal, which was subjected to shocks arising from discoveries of gold and mining techniques, was the determining supply-side factor. On the demand side, shifts from silver to gold or away from specie altogether was a frequent source of disturbance.

In the age of metallic currency—essentially before 1914—inflation preferences did not received much attention. Gold and silver standards were mechanisms for giving the world economy a high degree of monetary unity without political integration. Gold had almost a mystical significance as the centerpiece of civilization and the cement of social order. “Don’t tamper with gold” was an imperative widely obeyed and adhered to. There were exceptions in times of exigency and war, but post-war convertibility was inevitable. As a consequence the gold price level in Britain had legendary stability over the long run. Several years could be found over the four centuries between 1530 and 1930 with the same price level measured on a common price index.

This was not to say that there were not over the period long swings in the price level. There were long swings of the price level in Britain between common levels of the price level. These can easily be identified with factors on both the side of supply and demand. Falling prices from 1750 to 1789 were caused by Britain placing India on the silver standard after the Battle of Plessy; rising prices from 1789 to 1815 was caused by the countries going off specie during the period of the French Revolution and the Napoleonic Wars; falling prices from 1815 to 1850 were caused by the return to specie and the dearth of silver (and to a lesser extent gold) arising from the South American Revolutions; rising prices from 1850 to 1873 were due to gold discoveries in the Ural Mountains, in California and in New South Wales, and to the abandonment of specie by the United States during the Civil War; falling gold prices during 1873 and 1896 were caused by the breakdown of bimetallism and the swing to gold of most of the major countries; and rising prices from 1896 to 1920 were caused by the supply of gold overtaking the demand for gold as a result of the discovery of gold in South Africa in 1885, the implementation of the cyanide process for refining gold ore in the early 1990s, and the abandonment of specie by major countries during World War I.

The importance of predicting turning points between inflationary and deflationary periods showed that inflation preferences have always played a role but not enough to challenge the prestige of specie standards. The gold standard was by no means perfect but it forced countries to maintain fiscal discipline and gave the world a degree of monetary unity it has not found since. What undermined the prestige of gold was its instability during World War I, the movement toward creation of national central banks, and the mismanagement of the abortive return to the gold standard in the 1920s.

Already before World War I, there were proposals for stabilizing the price level, many of which independently discovered or revived ideas that had been proposed during and after the Napoleonic period. Alfred Marshall and Irving Fisher both advocated a stable price level with proposals for a “tabular standard” or “compensated dollar” but they did not get serious attention until the war-induced instability of the international monetary system undermined the doctrine of automaticity and brought monetary management to the fore.

In the age of gold, the idea of an optimum rate of inflation did not receive much attention. It could be said that there was a consensus among economists on price stability, i.e. a zero rate of

inflation. This was unambiguous for a stationary economy, but growth presented a problem. But a growing or a regressing economy posed additional problems. In a growing economy real income would rise and with it the demand for real money balances, a demand which could be satisfied either with a constant money supply by proportionately-falling prices or with a constant price level by proportionate increases in the money supply. Which of these might in a world of flexible prices be desirable would probably depend on the sources of growth, whether it was due to growth in the supply of factors of production or growth in quality arising from productivity changes. The debates over these questions in the context of the literature on the gold standard in the 19th and early 20th centuries were largely inconclusive. The breakdown of the gold standard during and after World War I brought the issue into sharp focus.

Keynes, in his *Tract on Monetary Reform* recognized that adherence to the gold standard implied a common price level and ultimate inflation rate among member countries. This was based on the "law of one price," a consequence of the assumption that arbitrage profits based on price differences would be eliminated by changes in trade. An application of the law of one price to the international sphere was the purchasing power parity theory of exchange rates. Although this theory was well known to earlier economists like Hume and Ricardo and most businessmen, credit for its introduction into the modern literature goes to Gustav Cassel, Sweden's most prominent economist. The theory was developed to account for exchange rate changes resulting from inflationary finance in the world war. Exchange rates would (or should) be adjusted for changes in relative price levels.

During World War I the dollar had become accepted as (what we might now call) the reference currency for the world economy, largely because of the size of the US economy and because the United States had maintained the gold standard. From 1914 to 1920 the US' price level went from 100 to 200. The prices in most other countries had increased much more than in the United States Restoration of equilibrium with the gold standard would require either deflation or devaluation of those countries whose price level had increased by more than in the United States.[8]

An important question concerned the nature of the international monetary system after the war. There was not much experience with any alternative to the gold standard, and current economic theory had not been very helpful. Alfred Marshall had even said (in 1912) something to the effect that the most important thing one can say about currency is that it is totally unimportant! That may be true when exchange rates are fixed with a high degree of certainty, but it is totally false under variable exchange rates.

9. Two Tasks

Restoration of a gold standard equilibrium required a resolution of two problems. The first was the **international exchange rate problem**, the establishment of equilibrium exchange rates. The problem of determining equilibrium exchange rates suggested the application of the purchasing power parity theory. For example, if the UNITED STATES price level had doubled, while the British price level had tripled, dollar price of the pound should be reduced by one third, from \$4.86 to \$3.24. Other exchange rates could be calculated on a similar basis.[9]

---

[8] An exception was the case of India, which had not share the wartime inflation of the United States, let along Britain. Keynes, in 1919, suggested that India should appreciate the rupee in terms of gold and the dollar in order to avoid an otherwise inevitable inflation (his advice was not taken despite the fact that was was considered, because of his first book, an expert on Indian Currency and Finance). Implicitly of course Keynes was assuming that price stability—zero inflation preference—was the desirable norm.

[9] This was indeed the main tool used after World War II. See especially the article on this subject, written

The second problem was the **global liquidity problem**, the problem of ensuring that relevant forms of international liquidity were available in sufficient supply. In a pure gold standard, there had to be sufficient gold liquidity to maintain the price level and facilitate the level and growth of trade without deflation. This problem was not systematically articulated in the 1920s.

After the doubling of the price level between 1914 and 1920, the Federal Reserve liquidated its holdings of government assets creating a severe deflation in the United States and in countries still on gold; the index of the US price level dropped from 200 in 1920 to 135 in 1921. The problem for other countries was whether or when they should return to gold. It was this episode that gave rise to an important publication by John Maynard Keynes. Should Britain restore the gold standard and import the inflation or deflation of the United States, the dominant country on gold, or should she stabilize the price level, allowing the exchange rate to find its own level? Keynes' *Tract on Monetary Reform*, published in 1923, argued that stabilizing to gold (or the dollar) when these were unstable would bring drastic deflation to Britain and that it was better for Britain to maintain price stability.

Keynes' argument was not so much anti-gold as it was opposition to the gold standard when circumstances made it unstable. He never said, "gold is a barbarous relic." He rather said "the gold standard is *already* a barbarous relic" (my italics). What he meant was that the gold standard no longer worked the way it had worked in the past. It was no longer an automatic mechanism resulting in equilibrium. The operation of the gold standard, Keynes said, was now based on the "policy of a few central banks." Given the history of the Federal Reserve System since it was created in 1913, the large wartime inflation combined with the sudden post-war deflation, and the comparative inexperience of the men governing the Federal Reserve, he was not optimistic that the famed stability of the gold standard in the century before World War I could be restored in the post-War era. Faced with his uncertain prospect, it was better for Britain to give primacy to internal stability.

In its Annual Report for 1923, the Federal Reserve announced a new emphasis in policy, giving emphasis to stability of the price level. This was certainly a desirable move at a time when none of the major currencies had returned to gold. Gold reserves had become concentrated in the United States that had more than half the world's monetary gold stock. The Federal Reserve was successful in maintaining a stable price level from 1922 to 1929.

The return to the gold standard by the European countries created, however, an entirely new situation. Following its stabilization after hyperinflation, Germany, in 1924, restored the Reich mark to its former gold parity by means of a trillion-to-one currency reform. Britain followed in the next year and France in 1926. By the end of the decade most of the world had returned to the gold standard.

It was generally recognized that gold production had declined during the war as a result of higher costs and might not be sufficient to supply the needs of a growing world economy. But it was inadequately recognized that the higher price level in the 1920s (about 35 per cent above the pre-war equilibrium) meant that the real value of gold balances was proportionately smaller. Taking into account the greater need for reserves on account of the increased political uncertainty and the pall cast over the system by reparations payments, a return to the gold standard in the middle of the 1920s should have been rejected as unwise or at best premature. A fixed exchange rate system

---

for the Federal Reserve System, by Lloyd Metzler.

based on the US dollar was perhaps feasible at the prevailing gold price but not a gold standard in which all the major countries participated.

10. The Blunder of the 1920s

The return to the gold standard proved to be a colossal blunder. It could rank as the biggest blunder of the 20th century. The dollar price level in the middle 1920s was about 40 per cent above the pre-war price level, lowering proportionately the commodity value of gold and the real value of gold balances. The gold liquidity of the post-war system was severely strained compared to the pre-war situation. To be sure, with the Genoa Conference in 1922, countries had agreed to endorse the holding of foreign exchange reserves in lieu of gold and both pound sterling and dollar gold balances had increased to partially compensate for the reduction in gold liquidity. But these foreign exchange reserves proved to be fair-weather assets and were quickly unwound at the first hint of crisis.

The shortage of gold liquidity was aggravated by the policy of France. France had returned to gold de facto in 1926 and de jure in 1928 at a value of the franc that was one fifth its pre-war level. This was an exchange rate that fully compensated for French inflation since 1914. It made the French franc in equilibrium with gold but undervalued in relation to especially the pound, but also the dollar, and most other currencies. The French exchange rate was particularly significant because its 1928 monetary law required complete gold backing for the franc. France thus began to withdraw its deposits in London, leading the way to an unwinding the foreign exchange component of reserves France and to a lesser extent the United States became sumps, drawing gold from the rest of the world and setting in motion chain reaction of currency crises. Britain was the first of the major currencies to succumb, leaving the gold standard in 1931, with most of the world following in the subsequent years. Finally in 1933 the United States left gold leaving only France and a few smaller nations like Belgium and Switzerland on gold. After the United States devalued the dollar in 1934, raising the price of gold to $35 an ounce, France's position became untenable and in 1936 also succumbed to devaluation.

Keynes was prophetic is recognizing that a return to gold by Britain, whose price level had increased considerably more than that of the United States, would have unfortunate deflationary consequences. He recognized the relative exchange rate problem. But there was no evidence that he recognized (at least until 1928)[10] the global liquidity problem. He had long argued that Britain should return to gold at a new parity that corrected for the greater in inflation in Britain than in the United States. That policy would have solved Britain's immediate problem, but it would not have averted the global disaster of world deflation. Even if all exchange rates had been corrected to their purchasing power equivalents, there would have remained a gold liquidity problem that would have brought on the great deflation of 1929-32. Neither Keynes nor his English colleagues had or used a global monetary model that warned them that a return to the gold standard would bring on world deflation.

As history was to show, the return to the gold standard in the 1920s set in motion deflationary forces that brought the world price level back down to its pre-war level. It was astonishingly predictable, and at least three economists of the era actually predicted it. Gustav Cassel of Sweden, Charles Rist of France and Ludwig von Mises of Austria made it clear that a return to the gold standard at the prevailing dollar price of gold would bring on a great deflation. The deflation actually began in the late 1920s and over 1929-32 the price level in the United States,

---

[10] Keynes did recognize explicitly the potentially-deflationary consequences of France's new monetary law, which increased the excess demand for gold in France.

Germany, France, Japan and several other countries fell by over 30 percent. The U.K., which avoided the last part of the deflation by checking out of the gold standard in 1931, was the only major country able to limit its damages.

Once the traditional consensus on price stability is discarded, inflation preferences have to be considered. Policy makers in one country might want and have an inflation rate of 1% and object to joining a currency area with a different inflation rate. Of course the country's entry into a currency area might alter the equilibrium currency rate, either because the new member's inflation preference is taken into account or because it is a large country that can impose its own inflation rate on the smaller members.

Some economists take pride in their commitment to hawkish or dovish positions on inflation targeting, but differences between members on monetary policy boards within countries may be greater than those between countries. Uncertainty about the optimum inflation rate further erodes the importance of small differences in preferences between countries. Moreover, the needed policy response to any change in the inflation risk may depend on whether it arises from supply-side or demand-side factors; surely an inflation arising from an increase in oil import prices should meet with a different monetary response than one arising from excessively cheap money. Small differences in inflation targets between existing or prospective members may not be a great deterrent to monetary union. Small differences are unlikely to swamp the gains from the shock-absorbing power of a larger monetary union.

The idea that money-of-account is the primary concept of money has all been lost in modern literature, where money is treated as a good, like any other good, or an asset, like any other asset. It is for this reason that a substantial part of the economics and finance professions deny the need for an international monetary system with a common unit of account and an anchor linking currencies together. Since 1976 the IMF has shifted from its historic support of a fixed exchange rate monetary system to universal floating exchange rates.

The shift to flexible exchange rates in the 1970s was a continuation of the comprehensive revolution in economic policy that had taken place earlier in the twentieth century. Before World War I, macroeconomic policy was all but non-existent. With currencies fixed to gold in all the major countries, the world had many of the benefits of a worldwide common currency. Monetary policy was automatic and the dominant theme of fiscal policy was to have a balance budget and perhaps a sinking fund to repay excessive public debt that was a legacy of past wars. This era was not perfect: there were troublesome recessions arising from the business cycle and long swings of the price level due to the vicissitudes of gold discoveries and gold-mining techniques and shifts onto or away from the gold standard. The recessions were fairly short, however, and the periods of inflation cancelled the periods of deflation so that the long run price level was stable. The general view—certainly of the establishment—was that the inconveniences were well worth the gains from having a worldwide system and long-run stability in the price-level.

The preamble to the revolution started and received its main impetus from the instability arising from the breakdown of the international gold standard in World War I. It was further abetted by the creation of the Federal Reserve System, which created a central bank for the biggest economy in the world, and the expressed need for it to give priority to domestic stability even it that policy conflicted with international stability. Two economists, Irving Fisher and John Maynard Keynes, played a big role in the revolution—Fisher, because of his espousal of a "tabular standard," which amounted to a standard based on American prices, and Keynes, because of his prescient book, *A Tract on Monetary Reform*, published in 1923, which clearly enunciated the choice for a country

between external stability (fixed exchange rates in a system tied to gold) and internal stability, which meant price stability (and later, full employment).

For a brief interlude, in the middle and late 1920s, when all the major powers restored the gold standard, it seemed that the *status quo ante bellum* had been restored. But this turned out to be a chimera. The gold standard had been restored at a worldwide price level that greatly overvalued the dollar and other major currencies and undervalued gold. The US price level had become the benchmark price level ever since the war. From 1914 to 1920, the dollar price level had doubled to a price index of 200 (1913 = 100), only to recede to 135 in the sharp deflation of 1921. The world price level was therefore overvalued, compared to the last episode when the traditional gold standard was working, by 35 per cent. The restored gold standard had its new equilibrium at a price level that was roughly 35 per cent below the existing price level of the mid-1920s. Increased gold requirements brought about a scarcity of gold and tighter policies that brought on the deflation of 1929-32, which prices levels of all the major countries fell by than 30 per cent. Coupled with wrong-headed tariff and tax policies—including both the Smoot-Hawley tariff of 1930 and the huge increase in income tax rates in 1932—brought on the great depression.

The great depression was over by the outbreak of War at the end of the 1930s. But it left a permanent scar. Many intellectuals fell prey to the Marxist idea that the depression was a "crisis of capitalism," and fostered the idea that the state had to take charge of economic policy, following in the footsteps of the Soviet Union. Another way out was National Socialism, which spread in Germany and Spain, following in the footsteps of Mussolini's Italy. The democracies took the in-between path of macroeconomic management.

11. Narrowing Currency Fluctuations

Let us now address the question of world currency. One route to it would start off by defining it in terms of a known substance, such as gold, the historic monetary metal. Gold has the sanction of history and the Bretton Woods Agreement in 1944 that settled on gold as the basis for currency parities. One possibility would be to re-enact the situation applying before 1971, the United States again fixing the price of gold and the other countries using that "convertible-into-gold" currency as the anchor for a new world currency system.

Such a proposal, however, would not stand up under careful scrutiny. The same factors that brought down the Bretton Woods arrangements would make it difficult if not impossible to make the dollar again convertible on demand into gold. There is no price of gold anywhere near current price levels that would make it plausible to convert the trillions of outstanding dollar claims into the precious metal.

Nor would the second most important currency area in the world, the euro area, want to take upon itself the burden of convertibility. This is despite the fact that the European System of Central Banks holds half the world's monetary gold reserves. A useful role might be found for gold in a future international monetary system but, unless a drastic change for the worse were to come over our planet, the possibility of a system involving the convertibility of dollar or euro claims into gold seems unrealistic.[11]

[11] An alternative, weaker form would be for the major willing countries to use monetary policy to "target" the gold price, tightening or loosening monetary policy as the dollar or euro price of gold went above or below, respectively, an agreed parity. The use of the gold price as one component of a target for monetary policies in each of the countries has much to recommend it. The problem with it is that the real price of gold has not been stable in several periods of the twentieth century, so that successful gold targeting would

A better approach is rather to start out with arrangements for stabilizing exchange rates, and move from there to a global currency. It would start off from the situation as it is at present and gradually move it toward the desired solution. We could start off with the three most important currencies in the world, the Dollar, Euro, and Yen, and make a basket of them into a unit that could be called the DEY. Bearing in mind that there is no important inflation in the DEY area, it should be possible for the three DEY central banks to undertake actions to minimize currency fluctuations, using a combination of unsterilized currency intervention and monetary policies. The DEY could then become the platform on which to build a global currency, which I shall refer to as the INTOR.

If the proposal were to be considered today, activity would start off with a plan to prevent excessive depreciation of the dollar, euro or yen. There would be a period of *tâtonnement* for the central banks get a feel for the market and exchange rates that are sustainable. If we look at the dollar-euro exchange rate historically, it would have been fairly easy to put a floor to the euro at $0.90 or at least $0.85 when market participants and officials asserted that the euro had fallen too low, much below its long run equilibrium. It might have been easy for the central bank to put a floor to the euro, and established the precedent that would have allowed a ceiling to it at a future time.

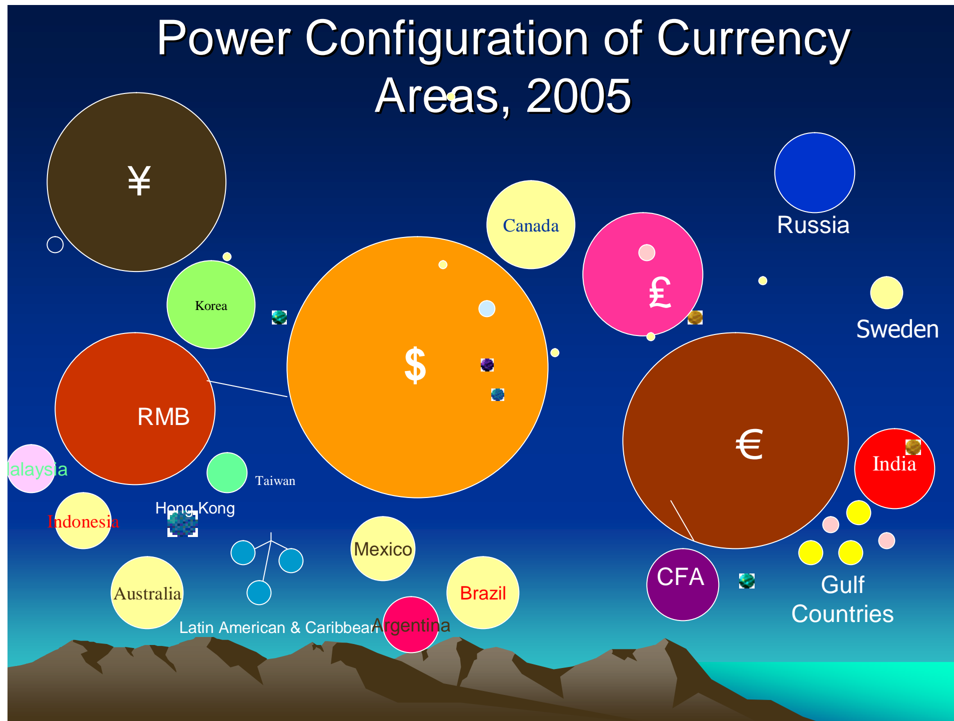
Today, one might start off with the ECB and FRB putting a ceiling on the euro at $1.30. No doubt that ceiling would be tested by speculators, but provided the principles alluded to above are taken into consideration, the victory of the officials in maintaining the ceiling cannot be in doubt. Just as 11 European countries fixed bilateral exchange rates credibly on July 1, 1998—at once eliminating speculative capital movements—they could do the same with the dollar-euro exchange rate. A similar procedure could be conducted between the ECB and the Bank of Japan (BOJ), and the FRB and the Bank of Japan.

12. A G-3 Monetary Union

Let us make a leap of the imagination and consider the possibilities of a monetary union of the FRB, ECB and BOJ, i.e., a G-3 Monetary Union. Of course the argument will be made that these areas are too different to have a monetary union. But in terms of economic reality, there are much more similar than the twelve countries that now make up the EMU and a different magnitude from the diversity of the 25 countries that now make up the European Union and which will probably at some future date all be members of the same currency area.

---

involve movements in the dollar price level that would reflect fluctuations in the real value of gold. It should be realized that while gold itself has been stable over long periods of time over the centuries, there were long swings of comparatively inflation and deflation that results from shifts in supply arising from gold discoveries and new mining techniques, and shifts in demand arising from changes in growth rates and in shifts onto or off the gold standard. Even if gold had now settled down to a period of comparative stability in real terms (after the considerable instability of the period from 1968 until 1985, it would not be clear that gold would be stable in real terms if gold targeting were implemented. Even if gold were stable in the absence of gold targeting, it could become a victim of "Goodhart's Law" and become unstable by the very fact of the shift from inflation targeting to gold targeting.

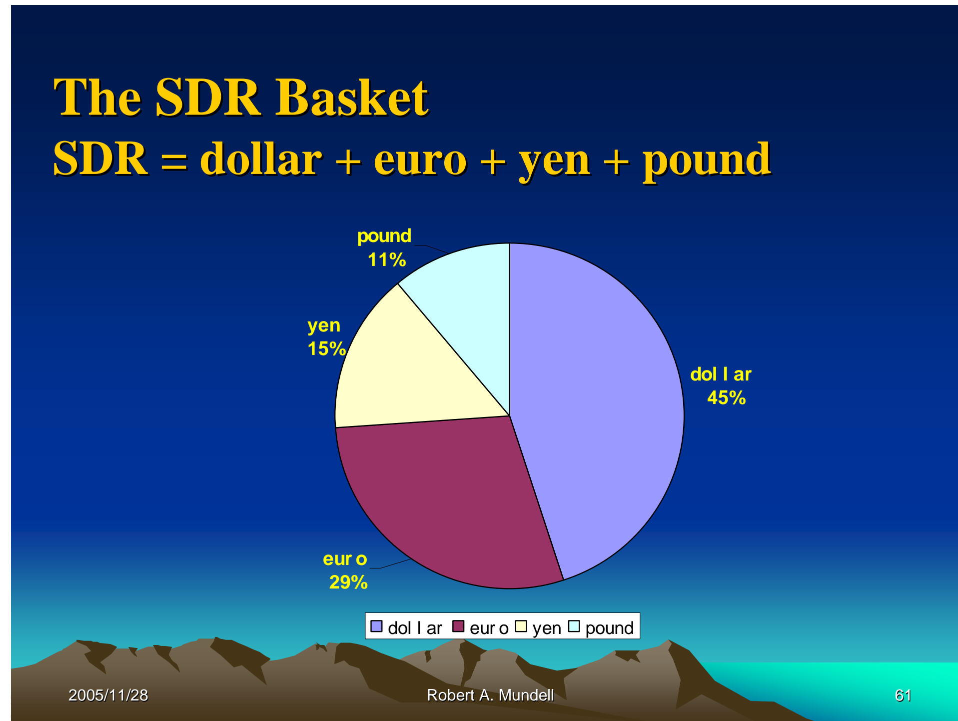


The first point it is necessary to make is that the G-3 Monetary Union I am thinking about is not a single-currency monetary union. I am not proposing that the United States give up the dollar, that Europe give up the euro or that Japan give up the yen. It is rather a multi-currency monetary union, a fixed exchange rate area with a common monetary policy.

Formation of a monetary union for members of either a closed economy or an open economy with flexible exchange rates requires five conditions:

1. Consensus on an inflation target (e.g., 1-3%).
2. Construction of a common index for measuring inflation (e.g., the euro area's Harmonized Index of Consumer Prices (HICP).
3. Locking of exchange rates, as EMU did in July 1, 1998.
4. Establishment of the DEY Central Bank to determine monetary policy as the ECB did in 1999-2002.
5. Mechanism for distributing seigniorage (in EMU it is proportionate to equity in ECB).

A prime requisite for the stability of either a single currency monetary union or a multiple-currency fixed-exchange-rate monetary union is fiscal discipline, whether self-imposed voluntarily by each government or agreed to by collective or consensual agreement and enforced by means of sanctions in the case of violations.

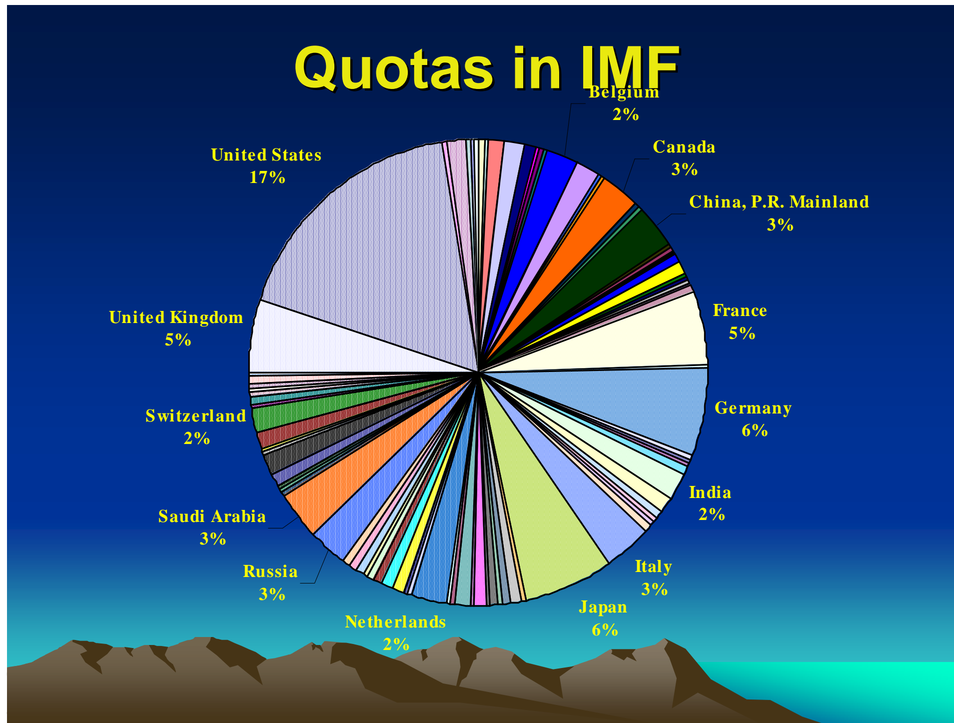


The duty of the DEY central bank would be to pursue monetary stability in the DEY area, which represents nearly two-thirds of the world economy. Successful monetary unions need some arrangement to prevent free-rider fiscal policies. The problems should not be insurmountable in an arrangement with three central banks. There would be a great increase in efficiency and the gains from exchange and payments once the huge gyrations of exchange rates are removed and an enormous gain to the rest of the world. The DEY unit should become the platform on which to base a multilateral world currency in which every country would have a share.

13. Creation of the INTOR

A strong case can be made for making provisions for widening, extending and generalizing the monetary union to other countries. First, the other countries would benefit from stability of exchange rates among the three largest currency areas because it would serve as a more stable anchor for their own currencies. Second, all countries would benefit from the adoption and use of a global unit of account. Third, countries outside the G-3 (especially the larger countries) might resent trilateral dominance in money matters in which they have no voice. Fourth, a world currency is in the nature of a Social Contract in which every country has a juridical stake in proportion to its economic size.

The Board of Governors of the IMF, composed of the Finance Ministers or Central Bank Governors of each member country, represents a broad-based international monetary authority in which all countries have votes. The adoption of an international currency with a name like INTOR, sanctioned by the Board of Governors of the IMF, freely convertible into dollars, euros, yen and DEY, would mark a great advance in the creation of an international financial architecture.



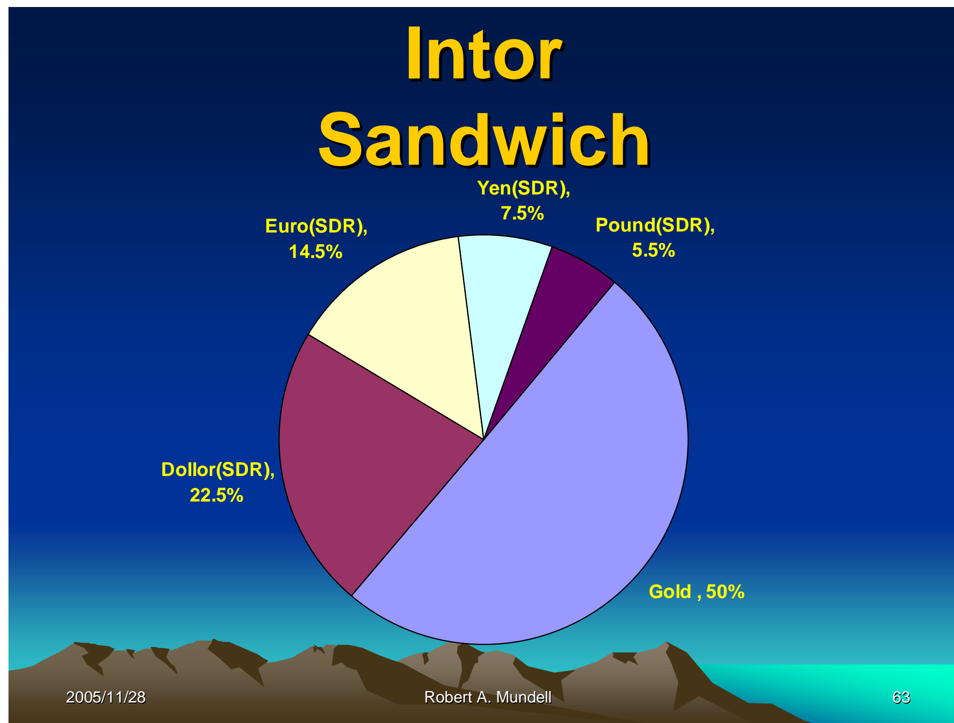
The Board of Governors of the International Monetary Fund could make whatever changes are necessary in the IMF Articles of Agreement. Instead of emphasizing the necessity of flexible exchange rates to its clients, the IMF Executive Board would be asked to stress the advantages of achieving stable exchange rates to an INTOR that is stable in terms of the main world currencies.

The process could start bilaterally between the United States and Europe, Europe and Japan, or US and Japan or, simultaneously, with all three. The core basket of the three DEY currencies could be altered at the discretion of the Board of Governors. As the economies in the basket expand or contract in relative terms, weights in the basket would be duly adjusted.

Consideration could also be given to the changes in the currencies in the basket. At the present time, Britain's pound and China's yuan represent, respectively, the fourth and fifth largest currency areas and consideration could be given to those two areas, allowing for the possibility that Britain might join the euro, and that China's currency might become convertible.

The basic plan for the world currency could be implemented in three stages:

Stage I.	Transition to stable exchange rates.
Stage II.	The G-3 Monetary Union based on the DEY.
Stage III.	Creation of the INTOR.



Stage I would be inaugurated with steps preparatory to the G-3 Monetary Union. A gradual process could start with ceilings and floors on the G-3 currencies.

Stage II would involve the steps outlined above: the fixing of an inflation target and definition of the price level in terms of the DEY; the locking of exchange rates; the establishment of the joint monetary policy committee; the arrangement for the division of seigniorage.

Stage III would begin after Stage II has been completed. It would involved the selection of a definitive name and value of the currency, the mechanism and agency by which it will be introduced, the system and criterion for controlling its quantity, its backing in terms of currency or commodity reserves, and the location of its central authority.

14. Conclusions

The achievement of an international currency may seem remote today. Yet it is surprising how quickly events can overcome inertia. It would have been hard to imagine the Bretton Woods Articles of Agreement before World War II, but the shock of that War brought it about. It would have been hard to imagine the creation of the Special Drawing Rights, the embryo of a world currency, in the early 1960s, but it was agreed to at the IMF meeting s in Rio de Janeiro in 1967. It would have been hard to predict the formation of the European Monetary System but it came about, under the pressure of a weak dollar, in the later 1970s. The next big crisis might be the occasion for a reconvening of a Breton Woods type conference to establish the conditions for a new international monetary system.

The idea of a world currency is actually an old one. Julius Caesar set up a Roman monetary standard in 46 BC based on a 12:1 bimetallic ratio, monopolizing and overvaluing gold. The arrangement was to last through its successors in Constantinople for over twelve centuries, with

the Roman *aureus, solidus, nomisma* or *bezant* fulfilling the role of universal unit of account over the reaches of that great empire.

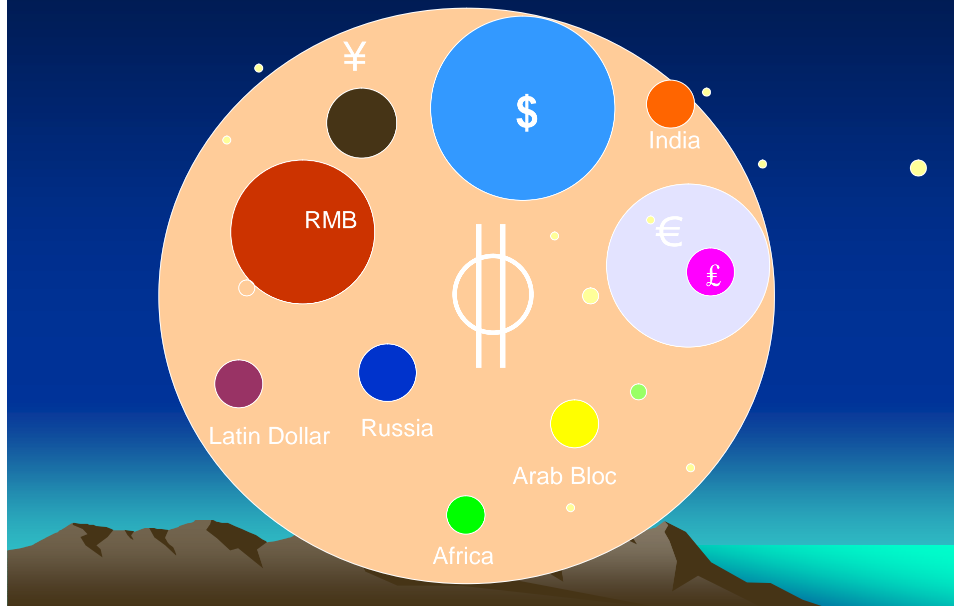
The Italian merchant and banker, Gasparo Scaruffi (1519-84), published in 1582 an impressive work on money that contained a viable proposal for the establishment of universal mint, the adoption of one uniform coinage throughout Europe, with the same shape, weight and name in every country, "as if the world were one city and one monarchy." At that time, as now, the international monetary system was in a state of great confusion, owing to alternations in the values of coins, multiplicity of coin, bad coinage and other abuses. His world was called *Alitinonfo*, a name derived from the Greek meaning "true light," and taken from his desire to spread true light on the subject of money. He did spread true light but centuries late, the monetary system was still in a state of great confusion and it was said, in the nineteenth century that Italians had the best writers on money and the worst coins!

Later in the nineteenth century, at the Paris conference of 1867, presided over by Prince Jerome Napoleon, a plan for a world currency linked to gold coins in multiples of five gold French francs was widely discussed. Several international conferences followed up on this idea. However, it never achieved the agreement of Britain, already the world's leading financial power. A common theme throughout monetary history is that the top financial power has a stake in rejecting international monetary reform because it reduces the monopoly power of its own money.

Less than a century later, by the time of Bretton Woods's conference, a world currency figured in the major plans for the post-war world monetary order. The British plan--essentially Keynes's plan--envisaged a world currency called 'bancor'. Note the change in the British view. When sterling was top dog, Britain rejected an international currency. Now that the dollar had become top currency, Britain wanted and pushed the idea!

One would have expected the United States to be cool to the idea of a world currency at Bretton Woods. Surprisingly, the official American plan--essentially White's plan--made provision for a world currency, to be called 'unitas'. But in the discussions leading up to Bretton Woods, the Americans reverted back to form and withdrew the idea. The United States then used its dominating position at the conference to bury the world currency idea and base the Bretton Woods arrangements on gold and the dollar. It might have been for the best because the idea might have been premature. The technology required for creating and managing a fiat currency at the global level had not been developed.

Does the role of the United States today as the sole superpower foreclose the possibility of an agreement to create an international currency? I think there are grounds for optimism. First of all, as a consequence of the frequent currency crises of recent years, there is growing recognition that international monetary arrangements are in a state of crisis. Second, the advent of the euro has changed the power configuration of the international monetary structure and diminished the monopoly position of the dollar. In the future, the dollar will have to compete for seigniorage and control with the euro even in the absence of the reform. Under these circumstances, the United States may see that its self-interest as well as the stability of its economy and that of the rest of the world lies in the direction of a reconstructed international monetary system.



A world currency would level the playing field for big and small countries alike. As Paul Volcker has aptly put it," a global economy needs a global currency." Why not make one?

Knowledge

Knowledge for Development and Knowledge as an International Public Good

Carl Dahlman
Georgetown University

1. Introduction

Economic development is largely a process of applying knowledge to increase growth and welfare—and of pushing back the frontiers of knowledge and exploiting it for practical uses. However, not all development economists or development institutions have fully grasped its significance or its implications for development policy, or surely it would occupy a more central stage in their activities.

2. Knowledge for economic development

One of the best ways to see the role of knowledge in development, both sobering and enlightening, is to take a long historical perspective on the growth of population and the increase in average per capita income (figure 1).[12] For the first 1,400 years of the two past millennia global population increased very slowly. Although there were privileged elites with much higher income during this period, average per capita incomes hovered around US $400 PPP dollars. This is sobering in that it is roughly the same as that in today's poorest countries.

Then something remarkable began to happen around 1500. Both global population and per capita incomes began to increase simultaneously. This was due to advances in better hygiene and in the development of ingenious ways to harness wind and water to augment human and animal energy. It was also due to advances in agricultural techniques such as irrigation, improved seeds, and multiple cropping. What is even more remarkable when viewed from this long-term perspective is how suddenly, even seemingly exponentially, both population and per capita incomes began to rise from the 1800s onwards. This was when, with the development of the steam engine, mankind was able to further harness energy to productive tasks. This augmentation of power led to the industrial revolution and unleashed a tremendous proliferation of productive activity and the range of products and services.

Further increases in agricultural productivity released labor into even more productive industrial activity. Railroads and steamships further increased the possibilities for specialization and exchange. The reductions in cost and increases in scale increased standards of living throughout much of the western world.

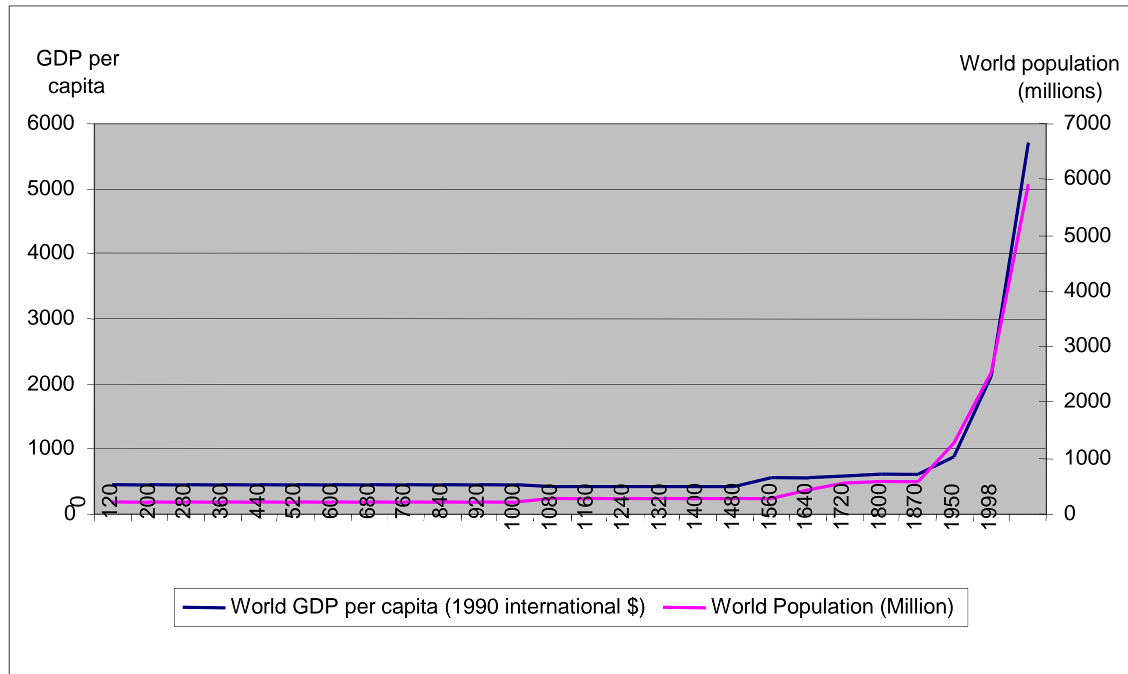
This was followed by other radical innovations including electricity that allowed the distribution of power into more discrete units, including the home for many labor saving devices, releasing women into the workforce. Gas and then electric lighting increased the length of the working day.

---

[12] At the broadest level average per capita income is a good summary measure of the effective application of knowledge to production of goods and services, although in comparisons across countries it is necessary to be mindful of cases where rents from sale of natural resources such as oil bias per capita income upward.

The gasoline engine harnessed power untethered from power grids and promoted more flexible means of transportation. The telegraph and then the telephone also reduced distance by making it possible to communicate and coordinate activities across space and augment the benefits of specialization and exchange.

Figure 1 World GDP per capita and population—a two millennium perspective



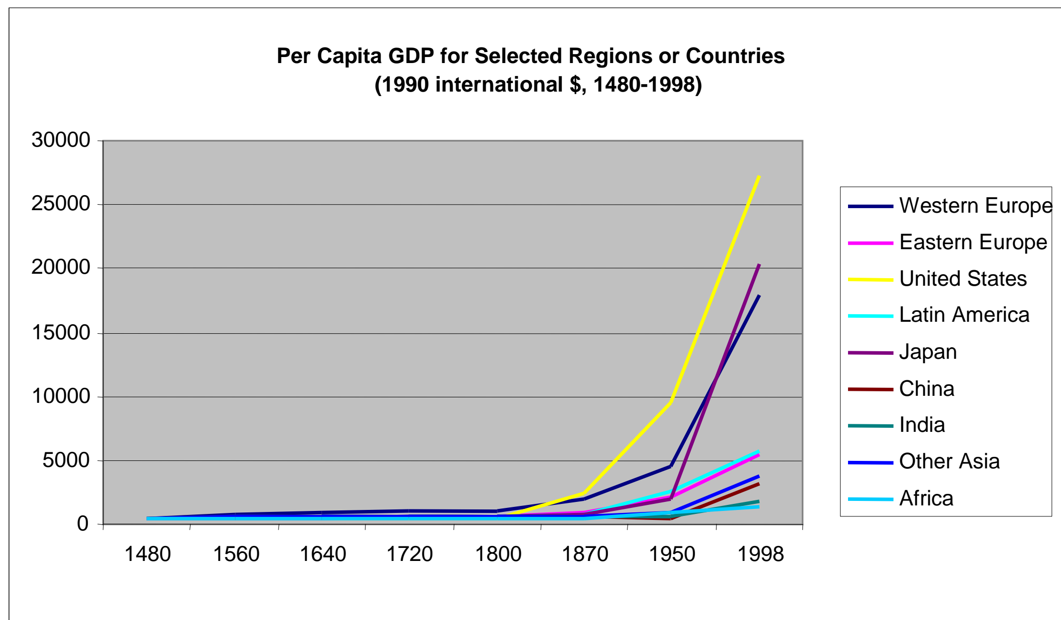
Source: Calculated from Angus Maddison, The World Economy: A Millennial Perspective, OECD: Paris, 2001.

Eventually the development of the semiconductor spawned the current information technology revolution, a major epochal innovation wave that is still transforming the organization of economic and social activity.

The benefits of all these advances were not equally spread. From the 1700s onwards there began to be greater divergence in per capita incomes across countries and regions (figure 2). The benefits of increased per capita income concentrated first in England, which spawned the industrial revolution, then spread to Western Europe and soon thereafter to the United States, that upstart former UK colony, which by the end of the 1800s began to overtake Europe in many areas of industrial production.

What accounts for the dazzling performance of the US? To a large extent it was the larger market size that permitted better exploitation of advances such as railroads and brought large cost reductions from large economies of scale and scope. It was also a country rich in natural resources including land and minerals. But more importantly it developed an economic incentive and institutional regime that supported entrepreneurship, experimentation, and risk taking. Perhaps even more importantly, the US was the first to invent the process of invention itself—the industrial R&D laboratory. This was pioneered by Thomas Alva Edison and quickly imitated by many other large US companies.

Figure 2 Per capita GDP for selected regions or countries



Source: Calculated from Angus Maddison, The World Economy: A Millennial Perspective, OECD: Paris, 2001.

This may lead some to think that the solution is to create more research capability in the developing world. Others may argue that because knowledge is an international public good more should be produced globally and disseminated to all. However what is necessary is not so simple and clear cut. Therefore it is useful to look at this more closely.

3. Knowledge as an international public good

Knowledge has many elements of a public good, even of an international public good when it is relevant beyond national boundaries, but it is an imperfect public good, because it still has some elements of rivalry. It also may have elements of excludability either because the inventor prefers to keep the invention secret, or because with the assistance of legal institutions that have been developed for society for that purpose (intellectual property rights) the inventor legally tries to exclude others from access to that new knowledge. Whether either of these means work fully is an empirical question. The answer depends on the specifics of the innovation, the strengths of the intellectual property rights regime (not just the actual laws, but their effective enforcement), and the capability of potential imitators.

Furthermore, and very important for the implications to be developed below, even if all knowledge were to be made publicly available, much of it would not be used even by people who could benefit from it. This may be due to lack of information on its existence, lack of understanding of its relevance, lack of education or skills to make use of it, or lack of access to complementary inputs or supporting infrastructures and institutions to use it efficiently. A combination of these factors explains why it is not so easy for developing countries to catch up with developed countries, or for poor people to use knowledge that may be very relevant for them. Therefore the development problem is not just one of whether there is relevant international public good knowledge, but whether knowledge can be disseminated, adapted and effectively used in the specific local setting. The most relevant actions to address the lack of use of knowledge differ according to the nature of the problem (table 1). They range from the more

straightforward action of increasing access to information, to the need to build up domestic institutions and domestic capabilities, in terms of people's skills and ability, to make effective use of knowledge.

Table 1 Knowledge failures in the use of knowledge and corrective actions

Nature of problem	*Actions to solve it*
Lack of information of existence of knowledge	Provide more technical information through print, radio, television and internet.
Lack of understanding of its relevance	Educate people on the value and relevance of different types of knowledge and how to look for an access it.
Lack of education or skills to be able to use it	Beyond general education train people with the specific skills necessary to use the knowledge.
Lack of access to complementary inputs or supporting infrastructures and institutions to be able to use it	Provide easier access to finance. Provide extension services and other technical assistance to demonstrate the proper use of the new knowledge and to support its application. Remove regulations that make it difficult to access the knowledge or to start up new business or activities with it. Provide a supportive environment in terms of good rule of law and contract and enforceability of contracts.

For example, even if all the knowledge in the world were to be available to people in poor developing countries, they would not be able to use it unless they had the necessary skills as well as access to complementary assets such as capital—and unless the domestic environment did not throw up too many obstacles or make it too onerous to set up a business or too difficult to operate it because of lack of security or the enforceability of contracts.

Also to be noted is that the kinds of knowledge that are needed for development are not just hard technical knowledge such as how to manufacture engines or produce steel or fertilizers, or petrochemicals. Also important are organizational and managerial knowledge—how to set up transportation or distribution systems, and not just for goods, but also for services. Some examples are how to set up effective tax collection and revenue administration systems for government, or how to provide effective health and education services, or business services.

Equally important for development is policy knowledge—what kinds of policies work under what circumstances and what is the most appropriate policy for the specific conditions faced by a country given its endowments, history and socio political characteristics. Moreover, in the area of policy knowledge there are very important real world constraints. Even if the technical policy knowledge is known, such as how to reform a financial, or a health or education system to make it more effective, it is not automatic that it can be implemented. Often there are strong vested interest groups thatmay block the most technically sound reforms. Or there may be other political

economy type problems including tradition and culture, which require the development of policies that are more appropriate to the specific local conditions.[13]

4. Conceptual framework for knowledge for development

Between the creation and the use of knowledge it is useful to distinguish various steps. These distinctions will be useful in discussing the most appropriate policies, institutions and capabilities necessary to close some of the gaps in the use of knowledge for development. The four activities are the creation of knowledge, the acquisition or dissemination of knowledge, the adaptation of knowledge to local needs and circumstances, and the use of knowledge.

Creation

The creation of knowledge is the process of inventive activity. It is usually the result of explicit research and development effort normally carried out by scientists and engineers. The key institutions involved in the creation of knowledge are public R&D laboratories, universities and private R&D laboratories. However not all creation of knowledge is the result of formal R&D effort. Sometimes the invention comes from the experience of production or from lots of informal trial and error. Sometimes is comes from serendipitous insight. This raises a measurement problem because not all R&D activity results in an invention, and not all inventions come from formal R&D activity.

Moreover, invention is just the process of discovery. If the discovery is basic knowledge, it is often published in a scientific and technical journal. If it is applicable, it may be kept as a trade secret. If it is novel enough, and its inventor is so inclined, it may patented. But even when it is patented it is not a contribution to productive activity. Normally further development and engineering work is required to use the discovery in some concrete application that involves more costs—often even larger than the original costs of the invention. Its first commercial application is called the innovation. An innovation that is the first global application is a global innovation. But the first use of some knowledge in a country or a specific region, even it already exists elsewhere in the world, is considered an innovation over prevailing local practice. And the economic importance of improving the average local productivity to the best global productivity far outweighs the economic benefits of creating a new technology.

The main actor in the creation of basic knowledge is the government or university research lab. However the main actor in the creation of applied knowledge or innovation is usually the private firm. Moreover, the main actor in the creation and dissemination of applied knowledge is the multinational corporation. The R&D budgets of just one of these large multinationals are larger than the total R&D expenditures of all but the very largest developing countries. For example, the expenditure of General Motors ($7.9 billion in 1998) was almost twice the total R&D spending of Brazil in the same year.

Countries or firms that are near the global frontier need to put a lot of effort into developing new knowledge in order to remain competitive as other countries or companies catch-up. Countries and firms therefore have to place a premium on strengthening the whole institutional infrastructure to develop new knowledge. For countries this means placing emphasis on public and private research centers, university research and training of scientists and engineers. For companies it means scanning the world for relevant technical knowledge, developing strategic

[13] For a good critical discussion of the role of institutions which takes issue with the Washington Consensus see Chang (2002).

alliances with other firms who can contribute relevant knowledge, and interacting closely with government and university laboratories to get access to relevant basic knowledge.

Acquisition and dissemination[14]

Countries that are still behind the technological frontier are likely to higher increases in productivity and improvements in welfare from acquiring already existing knowledge than by doing R&D to push back the technological frontier. Creating new knowledge is more difficult and risky and requires much more technological capability.

As already noted above, to acquire knowledge it is necessary to know what to look for and to be able to assess what is relevant, and even to know how to negotiate for it. All of this also requires significant technological capability, including some research capability. While it may not require frontier shifting scientists and engineers, it does require highly skilled people.

The main means of technology transfer for private goods and services in agriculture, industry and services are direct foreign investment, licensing, technical assistance, technology embodied in capital goods, components or products, copying and reverse engineering, foreign study, technical information in printed or electronic form, twinning and training arrangements, and so on. Almost by definition, property technology is usually sold or transferred on a contractual basis. But even proprietary technology may leak out depending on the strength of the intellectual property rights (IPR) regime and its enforcement, and the capability of the users. On the other hand, much relevant technology is in the public domain or owned by governments that could potentially put it in the public domain. The key issue then is how to deliver it to someone who needs its.

For the dissemination of knowledge it is important to have appropriate mechanisms to educate potential users in the benefits of the technology. This often involves more than just providing technical information. In agriculture for example it involves showing the potential users the actual performance of the new technology in their domestic conditions. A lot is at stake in convincing a farmer to abandon proven technology that has been used for perhaps several generations for some untried and usually more complicated new techniques without a proven track record under local soil, climate, water, and pest conditions. That is why it is usually necessary to have demonstration projects. It is also necessary to provide training in the use of the new technology, often including the need to use new inputs such as fertilizers and pesticides, irrigation, and perhaps even different marketing and distribution channels.

Adaptation

As noted above often technologies have to be adapted to specific local conditions. This is particularly true in agriculture, where new technologies such as hybrid seeds are very sensitive to specific local conditions. Thus further research and experimentation is often required to adapt them to specific temperate, soil, and water conditions as well as local pests. To a lesser extent even industrial technologies have to be adapted to local conditions, including specific sizes, special characteristics or other local idiosyncrasies such as sources of power or local standards and or health conditions.

Often the skills necessary to adapt technologies to local conditions are not too dissimilar from those necessary to create new technology. They often also require research and experimentation.

[14] The development of new knowledge raises the issue of whether only the creator will use it, or whether it will be disseminated to others. From the perspective of the new user this is an issue of the acquisition of knowledge. From the perspective of the creator of knowledge, or from that of government who want to get it out to the most users, it is an issue of dissemination.

These capabilities also have to be developed in the local context to enable countries or firms to benefit from the potential of the new technologies.

In agriculture there are many experimental stations in different regions precisely to test and adapt technologies to the specific local conditions and microclimates. In industry this is not so common. However in some countries, such as Japan, the local prefectures set up local R&D labs to help firms adapt industrial technology to local conditions and in general to help firms solve technological problems. Productivity centers, university technology outreach centers, and private engineering and consulting firms carry out similar functions.

Use

As noted above, to be able to use new technologies usually requires more education as well as specialized training. But even beyond the specific skills, using new technology often requires access to complementary inputs and supporting industries. It also typically requires access to finance to purchase new equipment or inputs or even to buy the technology license or expand or build a plant. When it involves starting a new business it is important to have a supportive regulatory environment without excessive red tape, but which at the same time has a strong rule of law that will respect private property and facilitate the enforcement of contracts. At the broadest level it also requires macro stability, good governance and support for entrepreneurship. In short, it requires a well-developed economic and institutional regime.

5. Knowledge in the three broad sectors of economic activity and the relative role of public and private actors

In discussing knowledge for development and the implications for policy it is useful to make two more distinctions—the nature of knowledge across the three broad sectors of economic activity and the relative role of public and private actors in them; and the knowledge needs of countries at different stages of development.

Three sectors of economic activity are usually distinguished—agriculture, industry (including manufacturing), and services. Within each of these sectors the role of public and private actors in the production and use of knowledge varies.

In most countries agriculture is predominantly a private sector activity. In less developed economies, however a large part of agriculture is subsistence agriculture for self-consumption. In the production of knowledge for agriculture there has been a large role for public R&D efforts because there typically have been many producers who do not have the economies of scale to make it worth their while to develop new technology. Also agricultural technology is very sensitive to local soil conditions and microclimates so it is necessary to adapt agricultural technology to local specifics. Hence many countries have extensive government agricultural research stations.

In addition, to encourage farmers to adopt new agricultural techniques, governments have had to develop extensive agricultural extension services that show farmers how to use the new technologies and provide them with technical assistance for how to produce and even market and distribution. At the international level there have been very important efforts to produce international public goods for the agricultural sectors. The most famous of these is the Consultative Group on International Agricultural Research (CGIAR), which was responsible for the development of high yielding maize, and wheat varieties that were the bases for the Green

Revolution that helped create food self-sufficiency in several countries such as Mexico, India and the Philippines.[15]

However, as technology has become more sophisticated with the introduction of new hybrid seed varieties, and more recently with the heavy application of genetic engineering to agriculture there has been an increasing role for private companies. These have become heavily involved in the development of new and improved seed varieties and other specialized inputs such as tractors and agricultural machinery, fertilizer and feedstuffs. As a result there is concern that the boundaries between the public and the private have moved strongly toward the private, raising issues for the role of public R&D efforts. Nevertheless, as will be seen below, there is a strong role for public research to support improved agricultural technologies, particularly as applicable to African countries because the private companies do not see sufficiently large markets to make it worth their while to develop technology for those small specialized markets.

Industry includes mining, construction, electricity, water and gas, as well as manufacturing. In most countries this is essentially private sector activity although in some countries the state is still active in sectors such as electricity, telecommunications, and transport. In manufacturing most of the technology has been developed by the private sector. Although there is some need to adapt manufacturing processes and products to local conditions such as local raw materials, supporting industries, and specific consumer tastes in products, the need for local adaptation is not as large as in agriculture. Therefore most technology is privately developed and sold either embodied in inputs, such as capital goods and specialized inputs, or licensed or sold as technical assistance or exploited by expanding plants domestically or investing abroad.

In services it is useful to distinguish the service sector in general from that of government services. The most pervasive general service sector is perhaps commerce. In developing countries this includes formal organized activity as well as lots of informal service sector consisting of small shops and self employed ambulatory vendors. Other service sectors include transportation, finance, and insurance. Another large sector is personal services, including household help as well as barber shops and personal care and restaurants and tourism. Some high value services include research, engineering design and consulting, marketing and advertising as well as, logistics and distribution. These high value services are becoming increasingly important for international competition. For most of the non-government services, the technology is developed and distributed by the private sectors in terms of products technical assistance, software packages, and management and organizational systems and services.

In many developing countries, the largest service sector employer is the government, for tax collection, government administration, economic management, and delivery of such basic services as security, health, education and defense. A lot of the technology used by the government, including organization and management systems, has been developed by the government agencies or tailor made for their needs by private service providers. This includes not only government administrative services, but also a large part of educational and health technology as well as the organizational and administrative systems to deliver them. The key point here is that while there is a large role for the market and for private actors in the development and delivery of services, there is also a very large role for government. A lot of the government related technologies are in the public domain. Developed country governments could have a very large role in transferring this knowledge for free as part of international development assistance. Alternatively they could sell these services as technical assistance directly, or by allowing employees or private companies market this knowledge.

[15] On the CGIAR and the Green Revolution see Pardee and Beintman (2001).

6. The knowledge needs of countries at different levels of economic development

The knowledge needs of developing countries vary widely according to their specific conditions. The most general need perhaps is to grow faster and to improve the welfare of their citizens. For this they need better policy knowledge about how to improve their development processes and enhance their performance.

But their knowledge needs are related to their economic structure, and there are clear changes in the economic structure of countries as they become more developed.[16] In poorer countries the economic sector absorbing the most labor is agriculture. As countries increase agricultural productivity the workers released by agriculture are absorbed by the industrial sector, manufacturing in particular. At the same time there is an expansion of the service sectors, at first commerce and low skilled sectors such as construction but eventually more knowledge intensive sectors. The transitions are even more pronounced in terms of the value added of the economic activity in the different sectors (table 2). The share of value added in agriculture, for example falls from 24% for low-income countries to just 2% in high-income countries. The share of industry first rises as low-income countries industrialize—from 27% in low-income countries to 37% in lower middle-income countries. However its share starts to decline as a more diversified and higher value service sector develops. In upper middle-income countries the share of industry has fallen 35% while that of services has expanded to 52%. For high-income countries the share or industry has fallen further to 27% while that of services has expanded to 71%.

So the knowledge needs of countries are also closely related to their economic structure. Since the agricultural sector usually accounts for the largest part of employment in low-income countries these countries need a lot of knowledge on how to improve agricultural productivity. As they develop further they need to more knowledge of how to develop efficient industrial sectors. As they develop even further, they need more knowledge on how to set up efficient services sectors.

This is not a simple linear process. Countries at even low levels of development need knowledge about how to start new industries and improve the productivity of existing industries. Given the growing importance of the service sector and the opportunities opened up by information and telecommunications technologies, even low-income developing countries need to see how they can leverage these technologies to improve their growth and development. In some cases they are able to leapfrog old technologies such as telephone landlines and go directly to cell phones as a more cost effective way to develop telecommunications. They can also develop new service sectors such as call centers. In addition they can use the reach of the Internet to leverage their natural endowments, history and culture to develop the tourism industry. Furthermore they have to take advantage of these new possibilities to improve the delivery of basic government services such as information, land registration, payment of taxes, and education and health services. To some extent there is the possibility (or for some countries even the need, as will be developed below) to leapfrog directly from agriculture to services without passing through an extensive industrialization phase.

The key point is that countries at different levels of per capita income have different types of knowledge needs given the structure of their economies as well the stage of development of their institutional and human infrastructure. These different stages need to be taken into account in developing the most appropriate policies and strategies for them.

---

[16] For an instructive discussion of how knowledge is generated and disseminated in three sectors—pharmaceuticals, agriculture, and environment—see Barton (2004a).

Table 2 Typical structure of economic activity of countries at different levels of development

	Low income ($765 or less)	*Lower middle income* ($766–$3,035)	*Upper middle income* ($3,036–$9,385)	*High income* ($9,386 or more)
Agriculture	24	11	6	2
Industry	27	37	35	27
Services	49	52	59	71

Source: World Bank World Development Indicators 2005, table 4.2.

7. Correcting the underprovision of knowledge as a public good for achieving the Millennium Development Goals

At the broadest level underdevelopment is due to lack of knowledge, lack of access to complementary inputs, and lack of power. The second and third are beyond the scope of this paper that deals only with the first and with the second only as it relates to knowledge.

The relationship between the underprovision of knowledge as an international public good and poverty is not just one of the inexistence of knowledge and the need to create more appropriate knowledge. As noted above, there already is a large stock of already existing technical, organizational and policy knowledge, which could be used to fight poverty, to spur growth and to improve welfare. A lot of it is already even in the public domain, but it is not being used for a variety of failures.

The Millennium Development Goals were set up at a Millennium Summit in 2000—with concrete monitorable targets has been established to reduce poverty in half by 2015. Annex 1 presents the goals as well as the knowledge needs to attain them. Meeting the goals is largely an issue of allocating more financial resources to reach the goals. In many instances the barriers are more in the political economy of mobilizing the support and stakeholder interest than in the more technical knowledge area. The main exceptions are for health, environment and tropical agriculture.

In the area of environment, there is also tremendous scope for developing more efficient waste treatment technology as well as developing more environmentally friendly technology. There is no doubt that the creation of new more appropriate knowledge could help make the goals more attainable. This is particularly important in the area of air and water pollution as well as more generally in environmental resource use. The rapid growth of China and India, which together account for one-third of the world population, are going to be putting tremendous pressure on the environment. If they were to have the environmental consumption per capita of the United States, there would be a global adding up problem of environmental sustainability.

In tropical agriculture there is also a need to improve the productivity of current agricultural technologies. Tropical agriculture has not yet benefited from the advances of the green revolution. Concerted international funding to create better tropical agriculture technology is needed to be able to improve the livelihoods of the millions of poor people who barely eek out a subsistence as farmers in poor rural areas, particularly in Africa.

8. The larger issue of increasing global inequality and the preemption of some countries' development paths

The Millennium Development Goals are very worthwhile, but they focus just on meeting basic needs. They are insufficient from the wider perspective of what is necessary to help developing economies be more self-sustaining. Because of globalization, increased international competition and the acceleration in the creation and dissemination of knowledge, there is a growing gap between developed countries and advanced countries. This is not just a gap in incomes—it is a gap in knowledge and capabilities (see next section). And it is getting harder for most of the poorest developing countries to benefit from the global system by competing in the exports of labor-intensive manufactured goods.[17]

The prerequisites for countries (and people) to benefit from increased globalization and knowledge are getting higher. Poor countries can no longer count on being internationally competitive based just on their lower labor costs. They have to be able to produce to international quality standards and on time. Now critical are quick responses to produce new products or variants of products and to deliver them very quickly. This requires domestic technological capabilities and skills. It also requires very efficient communications infrastructure and physical and institutional infrastructure, such as efficient ports and customs procedures. And it requires getting into global production and distribution networks, controlled mostly by multinational companies, the main generators and disseminators of applied knowledge.

In addition, the very strong emergence of China on the global export market in scale, scope and speed is making it more difficult for many developing countries to compete in manufactured exports. China has low labor cost advantages (often lower labor costs that in some poor African countries), better-educated and skilled workers, and economies of scale and scope in production and distribution. It is also already well integrated into global production and distribution chains both through the marketing system of multinationals it has been able to attract and through it own overseas Chinese network. The Chinese challenge for developing country exports is formidable because China still has a reserve of more than 200 million low-cost underemployed workers in agriculture, and it is moving up the technology ladder very quickly. This upward movement is not just from acquiring foreign technology through trade and direct foreign investment but also from ramping up its domestic R&D effort. Since 2003 China has been increasing in R&D expenditures by 50% a year. So there is a real risk that the least developed countries are going to fall farther behind. This requires more attention to technical and organizational knowledge and to policy knowledge and international governance mechanisms.

9. Measuring the underprovision of knowledge as a public good

Per capita income is a broad proxy measure for the under provision of knowledge as a public good.[18] This section starts by analyzing growing inequality of per capita income within and across countries. It then looks more explicitly at the global distribution of various measures of knowledge inputs and outputs, including access to information technologies and education. Finally, it uses an index developed by the World Bank Institute to map countries different readiness to make effective use of their knowledge for development.

---

[17] For a good treatment of this problem see Raphael Kaplinsky (2005) Globalization, Poverty and Inequality.

[18] Per capita income is not a fully adequate measure but it is a useful summary measure. More detailed measures include many social and health indicators such as those included in the Millennium Development Goals. In addition more explicitly knowledge related indicators such those to be discussed in the rest of this section can be examined.

Growing income inequality within and across countries
The increased importance of knowledge and higher education is increasing inequality within countries. If one looks at the 12 largest economies of the world it is striking that income inequality has been increasing in most of them. These include China, the US, Indonesia, Japan, Pakistan, Bangladesh, Russia, Nigeria, and Japan.[19] Part of what was going on was the increasing gap between educated "knowledge workers" and less educated workers.

In terms of income inequality across countries, it is encouraging that in the last 20 years the average per capita income of the low income and lower middle income countries has been growing faster than that of the high income countries (table 3). But that is largely due to the good performance of India (in the low income category), and China (which has done so well it moved into the lower middle income category). The upper middle-income developing countries (which include the large Latin American countries) fared very badly in the decade of the 1980s, and barely managed to grow at the world average in the last 13 years. But the gap between the richest country and the poorest has increased.

In 1983 the per capita income of the then richest country (Switzerland with a per capita income of $16,269) was 136 times that of the poorest country (Ethiopia with a per capita income of $120). Twenty years later in 2003 the per capita income of the richest country (Norway with a per capita income of $43,400) was 482 times that of the poorest country (still Ethiopia with a per capita income of just $90, so its per capita income had fallen even more in real terms).

Table 3 Growth of gross domestic product by per capita income class

	Average per capita income (PPP dollars)	*Average growth of gross domestic product 1980–90 (%)*	*Average growth of gross domestic product 1990–2003 (%)*
Low Income	440	4.4	4.7
Lower Middle Income	1490	4.2	3.9
Upper Middle Income	5440	0.7	2.8
High Income	28600	3.4	2.6
World (weighted)	5510	3.3	2.8

Source: WDI 2005, table 1.1. 24, and table 4.1, p. 200.

R&D inputs
Typical measures of R&D inputs are scientists and engineers doing R&D per million population, as well as R&D expenditures as a share of GDP. These are not perfect measures of the inputs into the creation of knowledge, because not all knowledge is the product of formal R&D efforts. But there currently is no better measure, and even these two measures are not updated yearly or readily available for all countries.

The best estimates show the very large inequality in terms of formal R&D efforts among the different per capita income classes of countries (table 4). The anomaly in the higher number of researchers in R&D per million population for the lower middle income countries compared to the upper middle income countries is due to the much higher ratios of China. In terms of share of global R&D effort, my estimate is that low-income countries account for just 1%, lower middle-income countries 4% (again because of the China factor), and upper middle income countries 1%,

[19] The exceptions are Brazil (which had a very high gini coefficient which is now improving) and India (where there has not been much change in inequality).

while high-income countries account for the remaining 94%. As noted earlier, the bulk of the formal R&D effort done in high-income countries is by the private sector, and the bulk of that, by multinational corporations.

Table 4 R&D inputs

	Researchers in R&D per million population (1996–2002)	*Expenditures for R&D as % of GDP*	*Estimated share of total world R&D (%)*
Low income	na	na	.01
Lower middle income	820	0.85	.04
Upper middle income	705	0.51	.01
High income	3575	2.54	.94
World	na	2.36	750

Source: WDI 2005 table 5.12, p. 316 and author's estimates (taking percentages from middle column times GDP numbers for 2003 and calculating resulting shares).

R&D outputs

Again, the available measures are not very good or complete. Typical measures of R&D outputs are scientific and technical journal articles and patents. The share of high-income countries in global scientific and technical journal articles, at 85% is much less than that of formal R&D effort. Patent statistics are not comparable across countries because of different criteria for patenting across countries. One proxy is to look at patenting in the US. That is not reported in this table, but is available in the KAM methodology discussed below.

Two alternative measures of R&D outputs are royalty and licensing payments and receipts and the share of high technology exports in manufactured exports (table 5). Royalty and licensing receipts are even more concentrated in high-income countries than R&D expenditures. On the other hand the share of high technology exports in manufactured exports is much less concentrated in high-income countries. The better performance of developing countries is because many import advanced technology components, assemble, and re-export the products. Again, the better than expected performance of the lower middle income countries is largely due to China's better performance in this area.

Information and communications technology indicators

Given the importance of information and communications technology as the new critical infrastructure and its relevance for access and dissemination of knowledge, and the speed with which they are being disseminated, it is worthwhile to compare the penetration rates of these technologies by per capita income class. The three measures used are fixed and mobile phones per million persons, personal computers per million persons, and Internet users per thousand people (table 6).

There are still very big differences in penetration ratios, for example the penetration rate in low income countries is only 4.4% of that of high income countries, that of personal computers just 1.5%. The penetration rate of Internet is higher at 4.3% due to the popularity of multi-user facilities such as Internet cafes and public information kiosks in developing countries. There is general consensus that the digital divide as measured by these types of penetration ratios is shrinking because of the very rapid uptake in developing countries. But it is not clear that the gap in the sophisticated use of these technologies to reduce transaction costs across a whole range of economic and social activities is narrowing.

Table 5 R&D outputs

	Scientific and technical journal articles (2001) Share of world total	*Royalty and license receipts (2002) Share of world total*	*Royalty and licensing payments (2002) Share of world total*	*Share of high technology exports in manufactured exports*
Low income	0.02	0.000	0.001	0.002
Lower middle income	0.10	0.010	0.084	0.099
Upper middle income	0.04	0.007	0.040	0.085
High income	0.85	0.982	0.875	0.080
World total	648500	$92.1 billion	$99.9 billion	$1043 billion

Source: Authors calculations from WDI 2005. table 5.12, p.316.

Table 6 Information and communication technologies

	Fixed and mobile phone lines per thousand people (2003)	*Personal computers per thousand people (2003)*	*Internet users per thousand people (2003)*
Low income	56	6.9	16
Lower middle income	403	35.6	63
Upper middle income	594	100.6	208
High income	1268	466.5	377
World (weighted)	405	100.8	105

Source: WDI 2005, table 5.10, p. 308, and table 5.10, p. 312.

Education

Education is the fundamental enabler of knowledge. So it is very critical for developing countries not only to make effective use of existing knowledge, but also to catch up. Typical measures of education are literacy rates and secondary and tertiary enrollment rates (table 7). A better measure is average educational attainment, but that is not available for as many countries. The still very low literacy rates in low income and even lower middle income countries shows how far behind these countries are from having the basic means through which to take advantage of the tremendous increase in codified knowledge. The low secondary and tertiary enrollment rates for low and lower middle income countries are not as surprising, but they also indicate the limited human capital capacity these countries have for doing more sophisticated knowledge related work. It is encouraging, however, that there have been significant increases in enrollment rates at both the secondary and tertiary level, especially for low income and lower income countries relative to the very low levels they had in 1990.

One way to summarize the gaps between high income and developing countries is to compare the relative differences between low-income countries and the high income countries (table 8).

- While the average per capita income of the high income countries is 65 times that of the low income countries and has been getting larger over time, the difference in R&D expenditure is much worse, estimated at 94 times.
- The difference in the production of basic knowledge in terms of scientific and journal articles is just 42 times. However the difference in the production and sale of commercially relevant knowledge (as measured by royalties and licensing fees) is much larger, probably on the order of 200 times.

- The difference in phone connectivity and Internet users per thousand persons is just 23 and has been falling over time. But that in computers per thousand persons is still 68 times.
- In education, as measured by enrollment rates, the difference is just 2.32 times for secondary education, and 6.6 times for tertiary education. This difference has been narrowing over the last 10 years (the respective differences used to be 2.68 and 9.4 times).

Table 7 Education measures (percent)

	Adult literacy rates		*Secondary enrollment rates*	*Higher education enrollment rates*
	Male	*Female*		
Low income				
1990/91	60	38	35	5
2002/2003	68	48	46	10
Lower middle income				
1990/91				
2002/2003	84	74	55	12
	88	86	74	21
Upper middle income				
1990/91				
2002/2003	88	86	63	17
	90	90	81	36
High income				
1990/91			94	47
2002/2003			107	66
World (weighted)				
1990/91	74	63	55	16
2002/2003	80	73	71	26

Source: WDI 2005. table 2.11, p. 90.

The bottom line is that the gap in the formal ability to produce knowledge (and in the actual production of knowledge is larger than the gap in incomes per capita. The good new is the gaps in connectivity is not as great and are narrowing at least in terms of basic access. The best news is that the gaps in education are even smaller, and are narrowing even faster.

Table 8 Summary of gaps in knowledge indicators between high income and low income countries

	Ratio of high income to low income countries
GDP per capita	65
R&D expenditures	94
Scientific and technical journal articles	42
Fixed and mobile phones per 1,000	23
Computers per 1,000	68
Internet Users per 1,000	23
Secondary enrollment rates	2
Tertiary enrollment rates	7

Source: Calculated from tables 3–7.

World Bank Institute Knowledge Assessment Methodology indicators

It is also useful to look more broadly at countries' capability to produce and to use knowledge effectively. The World Bank Institute has developed a benchmarking tool that helps rank

countries by their readiness to use knowledge for their development.[20] The methodology consists of examining a country's global rank ordering in four pillars based on a series of 20 indicators in each pillar. The four pillars are:

- An economic and institutional regime that provides incentives for the efficient use of existing and new knowledge and the flourishing of entrepreneurship. This is critical as has been argued above, because it affects not only the incentive to improve performance, but also the ease with which better knowledge can be put into practice.
- An educated and skilled population that can create, share, and use knowledge well. This is critical because as argued above, this is the key enabler to make effective use of knowledge as well as to produce it.
- A dynamic information infrastructure that can facilitate the effective communication, dissemination, and processing of information. This has become critical for access to knowledge and to reduce transactions costs.
- An efficient innovation system of firms, research centers, universities, consultants and other organizations that can tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology.

The KAM consists of a set of 80 structural and qualitative variables that serve as proxies for the four pillars that are critical to the development of a knowledge economy (roughly 20 per pillar). The comparison is undertaken for a group of 128 countries, which includes most of the developed OECD economies and over 90 developing countries.

A reduced index of the KAM—called the knowledge economy index (KEI), based on three indicative variables in each of the four pillars—has been developed to give a quick summary index of a countries overall position.[21] Figure 3 provides a world map where countries are coded according to their overall knowledge economy index. As can be seen, it is quite similar to a per capita income view of the world.

Figure 4 presents the KEI for the six developing regions of the world used by the World Bank as well as for the US and Western Europe.[22] It also gives the changes in the positions of the two largest countries in each of the developing region and the relative contribution of each of the four pillars to the overall KEI. Several interesting aspects stand out. First, there is a very large gap between the performance of the US and Western Europe and the least developed countries. The difference between the US and Ethiopia, for example is nearly 10 times, and in this case the difference is greatest in education. Second, as a whole the developed countries (with the notable exception of Finland) have lost some of their relative ranking as some middle income countries have made faster relative progress. Third, there is a significant variance in the performance of countries with in each Region. For Europe and Central Asian developing countries, Russia does

---

[20] See www.worldbank.org/kam. The KAM is designed to help countries understand their strengths and weaknesses in making the transition to the knowledge economy. The KAM provides a preliminary knowledge economy assessment of a country, which can form the basis for more detailed sector-specific work.

[21] The actual indicators used for each of the pillar are as follows. *Economic and institutional regime:* tariff and non-tariff barriers, regulatory quality, and rule of law. *Education and human resources:* adult literacy rate (percent age 15 and above), secondary enrollment, and tertiary enrollment. *Innovation system:* researchers in R&D, patent applications granted by the U.S. Patent and Trademark Office (USPTO), and scientific and technical journal articles (all weighted per million people).*Information infrastructure:* telephones per 1,000 persons, computers per 1,000 persons, and Internet users per 10,000 persons.

[22] For the full list of the countries included in each region see www.worldbank.org/kam.

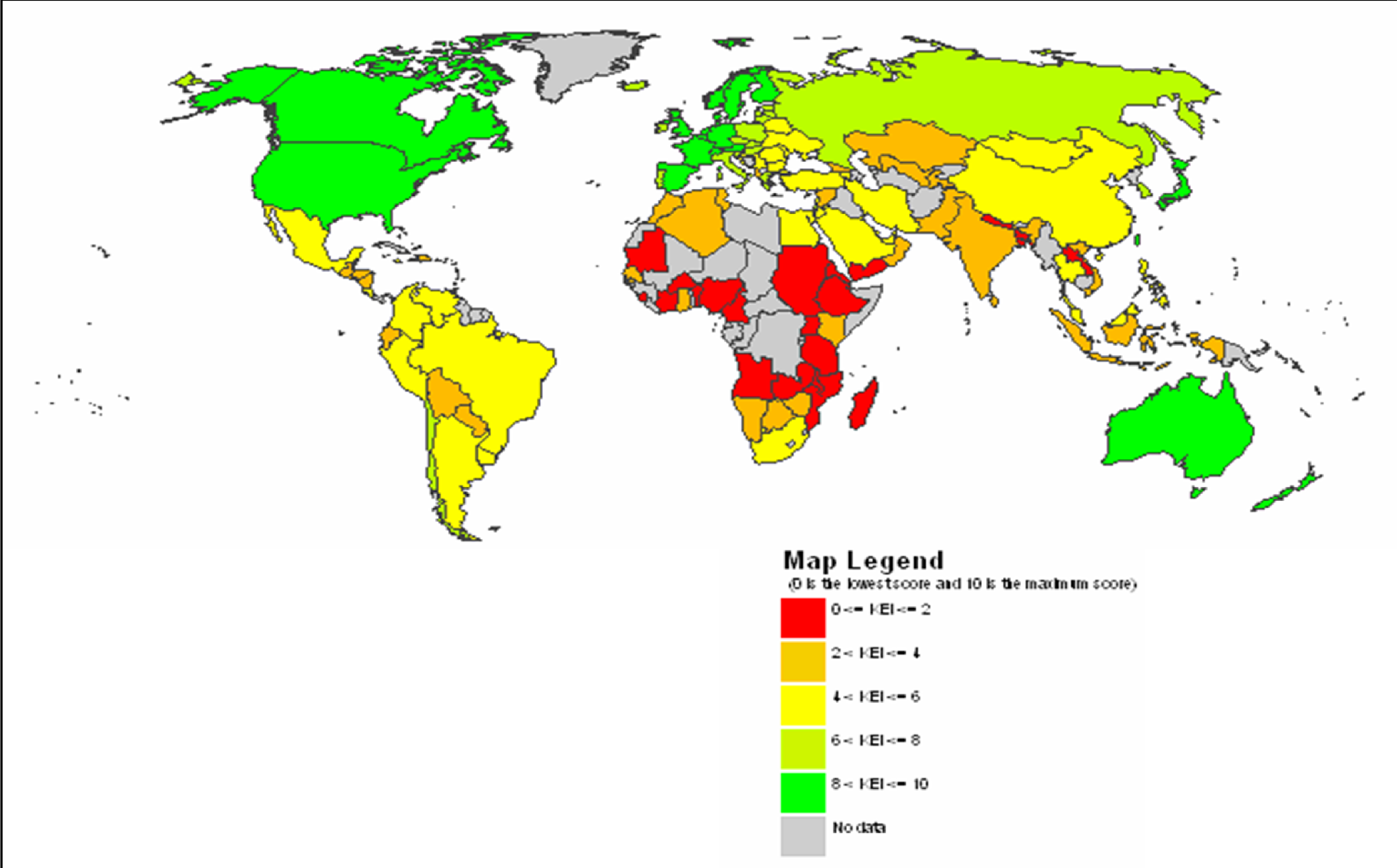
considerably better than Turkey. Within Africa, Ethiopia and Nigeria are considerably below the regional average.

Fourth some developing countries such as China and Brazil, (and Jordan, not shown in chart) have made significant relative improvements. Other middle income countries such as Russia, Pakistan and South Africa (not shown) have lost ground. Countries can lose ground in one of two ways. They may have an actual decline in an indicator or they may not improve an indicator as fast as other so they fall behind relative to the rest of the world. In South Africa for example both elements are at work. In secondary education, the actual enrollment rates declined. In the ICT indicators, even though South Africa made significant improvements in the penetration ratios increasing some by a factor of six times, the rest of the world moved much faster so South Africa fell behind relative to the rest of the word. The charts also show that Africa as a whole is particularly weak in the innovation pillar variables (see also figure 6).

Figure 5 presents the changes in the variables in the innovation pillar. Unlike in the overall charts given above, this time the innovation variables are scaled by population but kept in terms of their absolute size. The rationale for this is that critical mass is important in terms of the innovation variables, because knowledge is not consumed in its use so there are real economies of scale. Large developing countries, particularly China, India, Brazil, and Russia move up to the northwest quadrant with the developed economies. Some counties such as Kenya, Jordan, and Tanzania show very strong improvements in their position, while other such as South Africa and Uzbekistan show deterioration (particularly Uzbekistan). Moreover, the smaller least developed countries show much greater weaknesses.

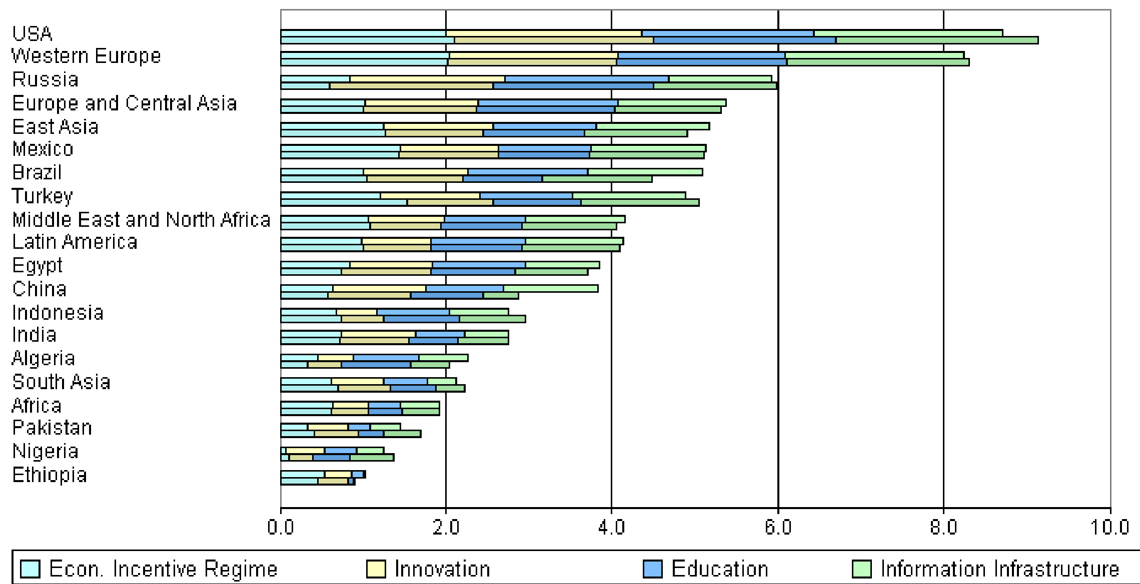
Because of the large variations across regions, figure 6 compares the full range of innovation variables in the KAM data set for the developing countries in East Asia with those for Africa. As expected, the countries in the East Asia Region are much better positioned than those in Africa. However, as noted, there are strong variances within regions. South Africa, for examples compares well on innovation variables the average for East Asia, and in many instances does better than a large Latin American countries such as Brazil or Mexico.

Figure 3 Global map of knowledge economy index



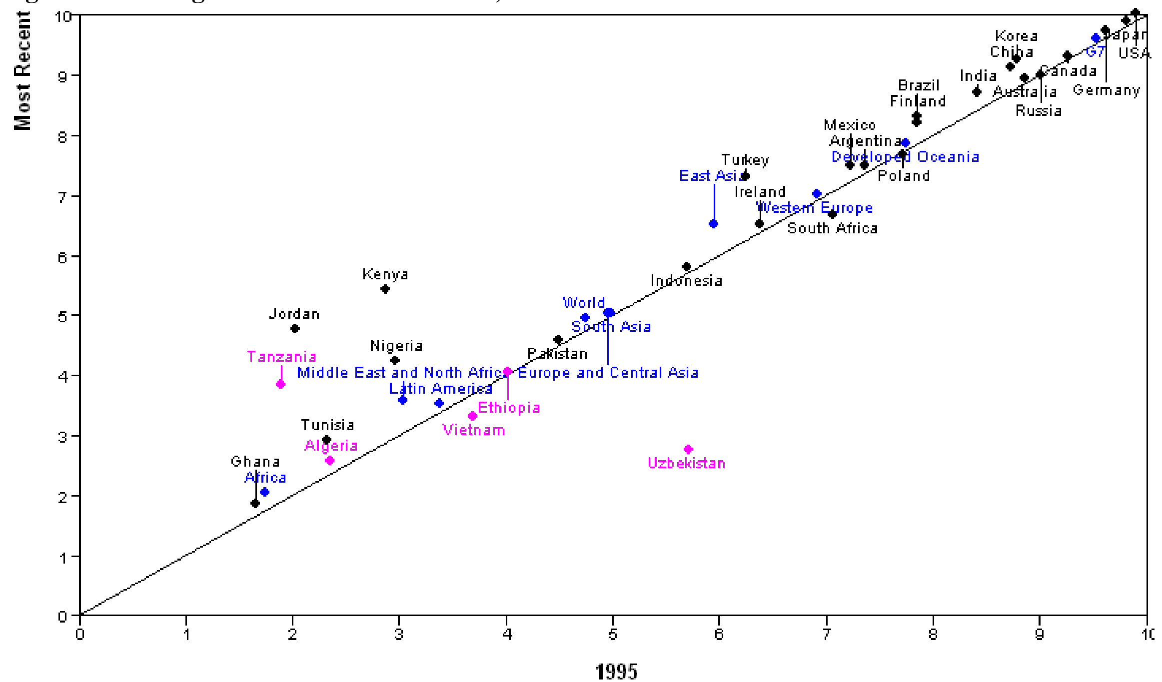
Source: World Bank, Knowledge Assessment Methodology, www.worldbank.org/kam.

Figure 4 Knowledge economy index: major world regions and largest country in each, 1995 vs. most recent



Note: Each bar chart represents the most recent aggregate KEI score for a selected region or country, split into the four KE pillars. Each color band represents the relative weight of a particular pillar to the overall country's or region's knowledge readiness, measured by the KEI. The first line for each country is its position in the most recent year for which data is available (generally 2002–03). The second line is for 1995.

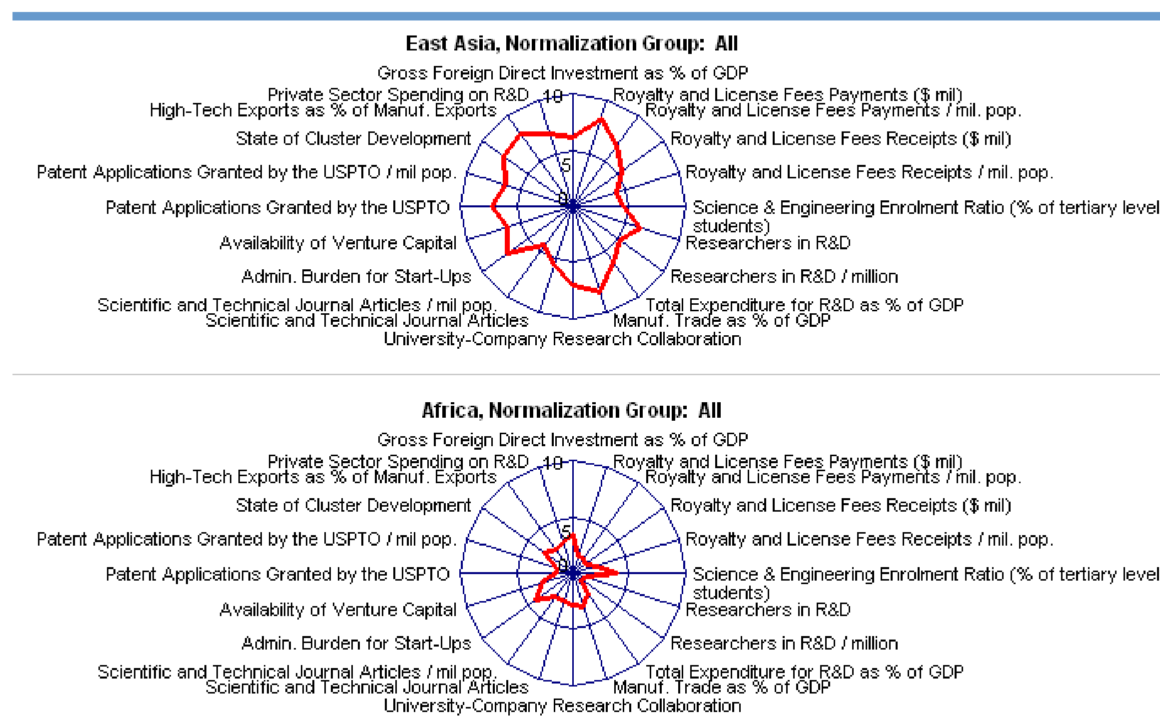
Figure 5 Changes in the innovation index, 1995-2002



Note: The horizontal axis represents the relative position of the country or region in 1995. The vertical axis represents the position in the most recent year (generally 2000–03. The graph is split by a 45-degree line. The most advanced countries are on the northeastern section of the diagonal. But the position relevant to the diagonal is also critical. Those countries or regions that are plotted below the line indicate a regression in their performance throughout time. The countries or regions that are marked above the line signify improvement throughout time, while those countries that are plotted on the line indicate stagnation. The KAM methodology allows the user check performance in the aggregate Knowledge Economy Index (KEI) or Knowledge Index (KI), as well as the individual pillars that define them: Economic Incentive Regime, Education, and ICT (Information Communications Technologies, and the Innovation index, as is done in this chart.

The KAM serves as a quick way of benchmarking how countries stand relative to others in the policies, structure, capabilities, and other indicators of readiness to use knowledge for development. The key contribution of this methodology is to force policymakers to think not just in term of what has to be done in one area such as education, or innovation, or ICT, but in what has to be done across these different sectoral areas and how it relates to the overall economic incentive and institutional regime. The interaction between the latter and the sectoral is critical because it determines the extent to which the economy faces pressures to improve its performance and the flexibility with which it can adjust to the constantly changing pressures of the increasingly competitive international environment. For examples of the application of this methodology to specific country cases see Dahlman and Utz (2005) for India, and Dahlman and Aubert (2001) for China.

Figure 6 Comparison of innovation system variable, Africa vs. East Asia



Source: www.worldbank.org/kam.

10. Costs and consequences of widening knowledge and technology gaps for global economic prosperity

Few economies have made a successful transition from developing country status to developed countries in the last 50 years. The notable exceptions are Hong Kong, Korea, Singapore, and Taiwan, China.[23] This indicates that in spite of the relative advantage of being latecomers in term of having the knowledge of the more advanced countries to draw on, the actual process is quite difficult to achieve.

Given the acceleration in the creation of knowledge, that catch-up process may be getting more difficult. There are a handful of economies that appear well on their way to achieve this catch-up. They include the 10 countries that joined the EU last year. They are benefiting from technical assistance to achieve the economic and institutional regimes of the European

---

[23] If the period is extended to the last 100 years, another very notable exception is Japan. Other countries which made the transition are the Southern European economies and Ireland.

community and at the same time getting significant structural aid funds to help them. Other countries that have been making great strides are some of the East Asian economies; Particularly China, Malaysia, Thailand, and Vietnam. The most impressive is China, because of the speed, scope, and strength of its growth. India has recently began to grow at rates of 8% a year, but it is not yet clear it will be able to sustain them. However, the prospects for most of the rest of the developing countries, including virtually all in Latin America (with the exception of Chile), the Middle East, the rest of Asia, and especially for Africa are not very promising. For the least developed among these, the gap is growing. As was seen in the preceding section, they benefit little from the increasingly globalized and competitive world economy.

The cost of this increasing inequality is that a large part of humanity will continue to be left behind at the average per capita incomes of the last two millenniums (as shown in figure 1). This raises the moral issue of whether this is acceptable when it should be with-in the reach of developed countries to improve the living standards of the poor in these countries. Jeffrey Sachs for one has argued that it changing this situation is within the scope of what can be done.[24]

Besides the moral argument is one of self-interest. Higher growth in the poor developing countries would mean more markets and the possibilities for greater specialization and exchange and more rapid overall global growth. In addition, greater growth in the poorest countries (and of poor regions within middle income countries), would also reduce some of the growing frustration which feeds the growing international terrorism and instability which we see today.[25]

The greater provision of global public goods and knowledge in particular, can help to redress some of this growing inequality and tensions. While it is difficult to estimate the precise costs it is quite clear that there is tremendous potential to increase the welfare of the developing world by making a more concerted effort to provide knowledge as an international public good. It could also probably be argued that this could be achieved without necessarily much of an increase in current aid budgets if the aid that is given would be used more effectively with a greater focus on the transfer of knowledge and the strengthening domestic knowledge capabilities, as well as with some concerted efforts to develop new international public good knowledge aimed at addressing some of them most devastating problems faced by developing countries.

11. What are the appropriate instruments and strategies to narrow the knowledge gaps?

Actions to narrow the knowledge gaps need to be taken at the country level as well as at the international level. This section focuses on the country level, the next on the international level.

A matrix of policies, instruments, institutions and capabilities

It is important to distinguish between the need to create more knowledge relevant to the needs of developing countries, from the problem of getting already existing knowledge to developing countries. The first requires allocating more effort to R&D. The second requires developing appropriate dissemination mechanisms and supporting institutions as well as the skills and capabilities for developing countries to acquire and to use knowledge. It has been argued in this paper that the later is as important, if not more, than the former. Therefore it is useful to examine in more detail the kinds of policies/instruments, institutions and capabilities most appropriate for the different knowledge processes. This is done in table 9 where the four

[24] See Sachs (2005).
[25] See for example the analysis in National Intelligence Council (2004).

knowledge actions set out in the framework of section two have been collapsed into three by including adaptation with creation.

As can be appreciated from table 9 the range of policies, instruments, institutions, and capabilities is quite rich and varied. One important implication of this is that the most appropriate policies/instruments, institutions, and capabilities depend on the particular knowledge actions that is targeted. Those for the creation or adaptation of knowledge are quite different than those necessary for the dissemination or use.[26] The second is that most of the policies, instruments, institutions and capabilities require primarily domestic actions. This is not to say that international actions are not important. They are important both in terms of direct actions to create and transfer knowledge as well as indirectly in helping to build up domestic institutions and capabilities. The point is that most of the action (with the exception of creating international public good knowledge) needs to take place at the local level. The third is that the most appropriate actions are also going do depend on a country's level of development (as well as specific economic structure and natural and human assets).

National strategies

Table 10 presents a stylized summary of some of the differences between the policies, institutions, capabilities and actions which may be most relevant for countries (or sectors with in countries) which are still very much in the catch up mode, from those for countries (or sectors) closer to the world frontier. In this table the acquisition of knowledge has been differentiated from the dissemination of knowledge to highlight some of the different focus of actions. The policies and institution summarized are only indicative of the type of actions that may be most appropriate in general. More specifics have to be tailored to the individual characteristics of the county or sector in question. Efforts aimed at the creation of new knowledge require different strategies, policies, institutions and capabilities from those aimed at acquiring disseminating, and making effective use of knowledge that already exists somewhere in the world.

Since the 1990s such inward oriented policies are becoming much less common. Most countries are opening up to the outside. However until very recently there was still a distinction between countries that had outward oriented trade strategies but still restricted FDI, emphasizing their own R&D efforts (such as South Korea and Japan) and outward oriented countries which relied heavily on FDI such as Hong Kong, Malaysia, Singapore, and Taiwan. China joined that group after its opening up at the end of the 1970s and in fact became one of the most open countries to direct foreign investment in the 1990s. Korea and Japan have also begun to open up much more to direct foreign investment as a way to get access to some of the rapidly moving cutting edge knowledge controlled by foreign multinationals. There is a growing recognition among most countries that to get access to cutting edge knowledge it is necessary to be attractive to FDI because the multinationals are the main creators and disseminators of commercial knowledge.

---

[26] This table does not develop what is needed for use as that is covered elsewhere.

Table 9 Policy institution and capabilities matrix for knowledge processes

	Policies/Instruments	*Institutions*	*Capabilities*
Creation (adaptation)	• Public spending on R&D - National Mission Programs - Competitive R&D Grants - Peer Review • Public policies for R&D - Matching R&D Grants - Tax Subsidies for R&D - IPR Regime • Promotion of more private R&D	• Public R&D - Labs - Universities • Private R&D labs • IPR institutions • Science Industrial Parks	• High level human capital for R&D - Scientists - Engineers - Technicians • Techno-entrepreneurship
Acquisition and dissemination	• Openness to outside - Trade - Foreign direct investment - Technology transfer policy • Foreign - Education - Travel - Trade shows - Publications - Databases - Internet access • Attracting Diaspora back home • Setting up R&D antennae abroad	• Technical information services • Extension services in - Agriculture - Industry and services • Productivity organizations - Metrology - Standards and Quality Control System - Technology transfer - Officers in public R&D - Labs and universities - Venture capital - Business incubators	• Engineering consulting firms • Business support services
Use	• Competition policy • Effective Regulatory Policy • Support for entrepreneurship • Good rule of law • Good macro stability	• Efficient Financial System • Flexible Labor Markets • Social Security System • Courts and Justice System • Effective Governance • Formal Education Institutions and System Lifelong Learning	• Literacy • Secondary and higher education graduates • Managers • Entrepreneurs

Table 10 Differentiated strategies for innovation

	Creating	*Acquiring*	*Disseminating*
Catch-up	Less relevant or feasible, but still need R&D capability to acquire and adapt. Critical to focus limited R&D efforts on most critical needs	Most critical: - Lots of knowledge in public domain - Also large stock to be purchased Therefore need good global scanning and acquisition ability	Very important: - Extension services - Technical information - Metrology, standards, testing and quality control - Specialized suppliers - Growth of most efficient firms
Countries nearer frontier or with large critical R&D mass	Refocus public efforts on commercially relevant research Strengthen IPRs Increase private R&D efforts	Continue tapping global knowledge - FDI/licensing - Strategic alliances - Foreign R&D as antennas to tap knowledge	Dissemination efforts continue to be critical But also need to commercialize knowledge - Technology transfer offices - Tech parks/spin-offs - Cluster development

At the strategic level are two critical parameters that countries need to decide on. One is the degree to which they are open or closed to knowledge from outside, particularly in the form of trade (table 11). The second is the extent to which they rely on foreign direct investment for new technology or on their own R&D effort. On the inward versus outward, in the past many developing countries followed very autarkic inward strategies, not only with respect to trade, but also with respect to doing their own R&D rather than to rely much on foreign R&D or to get foreign knowledge through direct foreign investment. Perhaps the most extreme versions of this were China (before the opening to the world in 1978), India, and Russia. Others like Brazil and Mexico (before NAFTA) were also inward in trade, but did rely on FDI to get access to foreign knowledge.

Table 11 Illustrative strategy matrix for some key developing countries

	Outward	*Inward*
FDI	Hong Kong Singapore Malaysia China (esp. in 1990s, but now increasing own R&D) Taiwan	Brazil Mexico, although it turned outward with NAFTA
Own R&D	Korea Japan	China (pre 1978 opening) India Russia?

But attracting FDI is easier said than done. In part, because of the general liberalization of trade regimes and the increase in globalization and international competition, foreign investment is no longer driven by the need to jump over trade barriers but by the intrinsic economic merits of putting up plants in those foreign locations. Other than special geographic location conditions or special natural resources these intrinsic advantages are now more because of lower wages or capital costs, closer ties to customer and market needs, and increasingly important, access to knowledge assets, or low cost knowledge workers, including scientist and engineers in countries such as China, India, and Russia. Moreover the ease of doing business and the stability of governments and economic policy are also important considerations.

On these latter issues many of the poorer developing countries are at a severe disadvantage. They can't attract FDI and don't have much technical human capital. They need to seek ways to integrate into global value chains or exploit specific assets such as natural resources, location for trade, climate, culture etc for tourism. Most less developed countries are going to fall into this category. But even be able to do this, they need greater domestic knowledge capability.

Another key strategic issue therefore is how to develop this capability. While poor developing countries face the challenge of low literacy rates and low primary enrollment rates and even poorer completion rates, they also need to create a critical mass of higher educated people. They are critical for the development of this domestic capability.

12. International actions for providing knowledge as a public good

There are at least five different types of international actions: efforts to create new international public good knowledge, efforts to improve development policy knowledge, efforts to improve intellectual property rights regimes, efforts to disseminate existing knowledge, and efforts to build local capabilities for nationals to create and use knowledge more effectively.

Creating new international public good knowledge

There is ample scope for increasing the production of international public good knowledge in specific areas where there are good expectations of high social returns. A recent analysis of 292 published studies shows that the median social return to agricultural research was 48% per year and that the average return was 100%. For agricultural extension services the returns were 63% and 85% respectively.[27] For medical research there have been fewer cost benefit studies. However, there are some dramatic examples of spectacular rates of return in some of the preventive medical areas. For example, the cost of eradicating smallpox in the US at an annual cost of $315 million over a twelve year period is estimated to have saved more than $360 million a year—for a rate of return of over 100%. Thus it is clear that allocating more money to research is a good investment in general and especially in areas such as preventive medicine (malaria and aids vaccines, in particular), tropical agriculture, and environmentally friendly technologies are obvious targets. The challenge is to develop appropriate incentives or funding mechanisms.

One obvious means to subsidize the production of this knowledge is global funds. This would be similar to what was done to fund the green revolution. The key issues here are how to generate such funds, as well as to put in place good mechanisms to monitor that these public funds are used effectively. Some initiatives have been taken along these lines. They include the Global Environmental Fund and various initiatives in the preventive health area, as well as extensions of the work of the CGIAR to work on tropical agriculture.

---

[27] Barton (2004a) citing Alston *et al.* (2000).

A second means comprises demand-pull mechanisms. These involve a commitment to purchase a new product such a new effective anti aids vaccine provided it is developed to certain performance parameter. A good example of this is the proposal to encourage R&D on an aids vaccine by commitments to purchase vaccines once they are developed.[28] The advantages of these mechanisms are that can be open to many potential developers, yet do not tie up money until there are concrete results. The disadvantages are that must specify the product characteristics before hand. That is more easily said than done, particularly as there is much uncertainty in what research will actually be able to develop. In addition there is the issue of whether the potential knowledge developers will find the purchase promise sufficiently credible or large to undertake the risky research.

Variants of demand-pull are government procurement contracts or prizes for the development of new technology. Government procurement perhaps has been the most used method of developing military technology. A similar approach could be used to develop technology relevant to the needs of developing countries. What is necessary is a fund and the technical specifications of what technology is desired. A special version of this is to sponsor contests and award prizes for the development of relevant technology. An example of this was the prize offered by the British Navy in the 1800s for the development of an instrument to measure longitude. This led to the development of the chronometer. A modern version of this is the program to develop agricultural technology relevant for African agriculture.[29]

Other mechanisms include building research consortia among potential public developers or even among public and private developers who are working or could be convinced to work on some of the needs. The problems here are coordination and also inevitably allocating the intellectual property rights for the successful products or services.

Improving development policy knowledge

The improvement of development policy knowledge as opposed to specific technical or organizational knowledge is another area that requires international public goods type support. The rapid rate of increase and dissemination of knowledge, as well as the increase in globalization are opening up new opportunities as well as foreclosing others. It is no longer good enough to advice countries to follow the historical patterns of the now successful countries such as to follow labor-intensive export strategies. As noted above, some of these are being foreclosed by the active participation of countries such as China, with low labor cost advantages combined with economies of scale and scope in production, logistics, marketing and distribution. In addition some of the traditional concepts no longer hold. Telecommunications was essentially a natural monopoly because of high fixed land line costs and network externalities, but this has been changed by the rapid development and roll-out of wireless cellular technology, which offers the opportunity for competition by the entry of new providers, if appropriate new regulatory structures are put in place to allow interconnectivity and interoperability. More research on the new trends and their implications for policy is critical. There are also opportunities for leapfrogging in other sectors including health and medicine. More systematic research is necessary to assess the new trends and their implications for policies for countries in different stages of development.

This kind of international public goods knowledge should be developed more systematically by the international development institutions. Think tanks in developed and developing countries, governments, companies, and nongovernmental organizations, national and local governments—all have a role here.

---

[28] See Kremer and Glennerster (2004) for a good discussion of the pull mechanism vs. push mechanisms and some specifics on the Global AIDS Vaccine Initiative.

[29] Cited in Barton (2004a) referring to http://www.earth.columbia.edu/cgsd/prizes.

Improving the intellectual property rights regime

A third area is to reverse or just even reduce the strong drive towards intellectual property rights. There is some recognition that regimes established as part of the TRIPS agreements for the WTO may be overly onerous for the least developed countries.[30] There is also some concern that the strong tendency towards privatization of knowledge is harmful even for developed countries.[31] The basic concern is that since knowledge is cumulative, it is hard to develop something absolutely new without drawing on previous knowledge. If that earlier knowledge is very strongly protected, it will be more expensive to develop new knowledge. In addition there is fear that the developer of the new knowledge may be taken to court by someone who claims patent infringement.[32] In the context of developing countries, the 1995 TRIPS agreement has been moderated somewhat through the 2001 Doha Declaration on TRIPS and Public Health and the 2003 Decision implementing that Declaration which lows differential pricing in pharmaceuticals to poor countries (Barton 2004a, 2004b).

This is clearly a contentious area. However to the extent that IPR regimes are made less strict and binding, the more knowledge will be in the public domain, and the more there will be for transferring. The drawback is that there may be a disincentive on the initiatives to create new knowledge. Although this has been argued by many based on first principles and economic rationales, no clear empirical studies confirm this expectation. The whole area of what would be the most appropriate intellectual property rights regime from a global perspective, rather than a narrow national perspective, deserves further research funding. This is particularly important now that the production and dissemination of knowledge is more a global than just a national activity.

Disseminating existing knowledge

Probably more significant than the creation of new technical or policy knowledge, at least in the short run, is the dissemination of knowledge that already exists somewhere in the world to meet the needs of developing countries. For example, it has been estimated that the benefits of using existing technology more fully to prevent and treat HIV aids and malaria are among the top economically desirable and cost effective interventions in developing countries.[33] More generally improving average local productivity across all sectors of a developing economy to the average productivity of developed economies would increase average incomes in developing countries by several factors—much more than by the development or introduction of any new technology could accomplish even over several decades.

The scope of action here is extremely large. International institutions can play a very important role in collecting and distilling what knowledge exists, and how it may be accessed. At a basic level this means making the information available.

One example is the Development Gateway. The idea behind it is to use to power of information and telecommunications technology to provide a gateway to development knowledge—including the technical, organizational and management, and policy knowledge.[34] Other organizations such as UNIDO, WHO and others also have developed websites with the knowledge that is available.

---

[30] See for example Barton (2004a, 2000b), as well as Fink and Maskus (2005).

[31] See for Mazzoleni, and Nelson (1998).

[32] See for example the work of Wesley M. Cohen who has also estimated patent litigation is tying up very large resources, not just in terms of legal and court fees, but also the high opportunity costs of high level managers and technical and scientific personnel have to allocate to trial preparation and participation.

[33] Barton (2004a) citing. Anne Mills and Sam Shillcut. Copenhagen Consensus, Challenge Paper on Communicable diseases. The ranking of interventions in several sectors can be seen at http://www.copenhagen consensus.com.

[34] See www.developmentgateway.org. It is a foundation that has 250 partners from around the world who share information on economic development.

The problem is not only the information about what is available, but what it is relevant for, how to access it, and how to actually use it. This usually requires distilling the knowledge to its essential bits, and then providing mechanism to facilitate the transfer. Even when knowledge is in the private domain, it is still useful to know what exists, what it can do, and what it costs to get access to it. In addition, international organizations could buy up the rights to relevant patents and then transfer the knowledge as part of development projects or as part of regular business or even to transfer the knowledge for free.[35]

Supporting the development of domestic capacity for effective use
Probably the most serious problem is the ability to use the knowledge locally. This requires local institutions, education and skills along the lines outlined in table 9. International institutions can help to establish or strengthen the relevant institutions, providing technical assistance and training. This can be done as part of development assistance or as part of investment operations in the developing country. In the case of development institutions or bilateral aid programs, there can even be free-standing projects to help a country develop specific institutions or capabilities—such as metrology and quality control centers, standards, research laboratories, extension and productivity centers, technology parks, business incubators, schools, universities, and specialized technical training institutions. More broadly, it also involves improving the whole economic incentive and institutional regime that is also at the core of the development challenge.

13. Roles of international institutions

UN and other multilaterals
The UN system institutions (such as UNDP, UNIDO, UNCTAD, WHO, UNENVP, UNESCO, WIPO, as well as multilaterals such as the World Bank), the regional development banks (African Development Bank, Arab Development Bank, Asian Development Bank, European Development Bank, Inter-American Development Bank), and major multilateral organizations (such as the OECD and WTO) can assist in funding the creation of new technical, organizational, and policy knowledge. There is also a very large role for specialized institution—such as the International Standards Organization and many professional and trade associations—in transferring organizational and management knowledge and specific technical knowledge and training and institutional development. The international financial institutions can also fund special knowledge related investment projects.

Governments
Governments of developed countries (and from other developing countries for that matter) can also join international efforts to fund international knowledge public goods. But they can play perhaps an even greater role in transferring existing knowledge through policy advice and training as well as in setting up institutions and building capabilities by helping educate and train persons in developing countries. Although there is some activity in these areas, the potential for this type of knowledge transfer is much larger if there were greater efforts to systematize the knowledge available and more was invested in developing appropriate mechanisms and agents to transfer it. Like the development banks governments can also make available investment funds to actually help build policy and management institutions as well as provide scholarships and training funds.

Non-governmental organizations
Non-governmental organizations such as private development oriented foundations—including Ford, Rockefeller, the Melinda and Bill Gates Foundation, and the Aga Khan Foundation—as well as smaller issue-oriented NGOs can also contribute to the creation of international public good knowledge. The Ford and Rockefeller foundations help with the

[35] For the development of this idea, see Krammer (2001).

creation of the new agricultural knowledge behind the green revolution. The Melinda Bill Gates Foundation is focusing its effort on health needs. These foundations and NGOs can also have a big role in the dissemination of existing knowledge and in the creation of appropriate institutions and creation of necessary human capital and skills in developing countries.

Multinational companies
Multinational companies are the most important creators of knowledge applied to production. As part of their normal incentives to earn profits for their investors, there is a strong potential to try to harness or enlist their considerable technological, management, organizational capabilities both to generate international public good type knowledge as well as to disseminate existing knowledge to developing countries.

On the creation of knowledge there is scope for getting them to develop more knowledge relevant to the needs of poor countries. For one, they are the principal target of efforts guaranteed purchase agreements, as proposed by Kremer. They may also participate in globally funded research consortia. They may engage is some of these efforts as part of their own better corporate social responsibility programs. And they may respond to public pressure to be more engaged in helping generate and disseminate relevant international public good knowledge to developing countries.

As illustrated by the recent book, *Fortune at the Bottom of the Pyramid,* by C.K. Prahalad,[36] there is money to be made in poor markets if multinational companies are willing to adapt their products to smaller purchasing powers. As stressed, the MNCs are the biggest disseminators of knowledge. What could be improved is to get them disseminate knowledge more broadly—not just what they need for their own operations. MNCs could, for example, use their great marketing and distribution networks to disseminate basic health knowledge as part of a social service function. That could buy them some good will while making a greater contribution to local development.

On building local capabilities MNCs can have a tremendous impact. They do a lot of this as part of setting up their foreign operations and training local workers, managers and researchers. They can make an even greater contribution when they develop backward and forward linkages and provide technical specifications, standards, technical assistance, and training. Sometimes they provide training even beyond their own training needs. For example in Singapore, in response to government incentives, they trained more than those required for their own needs. In China Motorola has been training the managers of the largest 1,000 state-owned enterprises. In Jordan Cisco and other companies have launched a major initiative to develop internet based mathematics and science education The project involves developing the full math and science curriculum from kindergarten to 12th grade. The math curriculum has already been developed and is being piloted in 400 “discovery schools” in Jordan.

14. Conclusion and implications for action

This paper has looked at knowledge in economic development and its relationship to knowledge as an international public good. The creation and effective use of knowledge is central to economic development. The paper has argued that while knowledge is often cited as a good example of an international public good, it is actually an imperfect public good because it can be kept secret and potential users may be excluded. It has noted that a tremendous amount of knowledge has been created and continues to be created every day. It has argued that an equally, or perhaps even more, important market failure for developing countries than the problem of the creation of relevant new knowledge is that a lot of the

[36] Prahald (2005) provides a framework including basic business principles, as well as good examples including: government services, housing, medical service, public heath, finance, retailing, salt, cement, and prosthetic feet.

knowledge that already exists, even knowledge that is in the public domain, is not being used by the people who need it.

Why? Because people may not have information that it exists; may not know that it is relevant for their needs, even if they know it exists; may not have the skills to be able to use it, even it they know it is relevant; or may not be able to put it to use, even if they have the skills, because they lack access to complementary inputs to be able to use it. This is part of the broader problem of underdevelopment—lack of access to capital, complementary inputs or services from supporting industries, difficulty of establishing or expanding business, poor rule of law, poor business environments, poor governance, and macro instability.

These failures imply that the agenda for action for international development institutions is much broader than the creation of new knowledge as an international public good. Equally important is getting existing knowledge out to people who need it and helping them to use it.

International institutions such as the UN agencies are very well placed to make great contributions to these efforts. They are well placed to lead a major advocacy drive for knowledge for economic development, making it a more central element of development efforts. In particular, they can play a greater advocacy role in getting governments, and especially the private sector, to do more in this area. They can fund research to look at the implications of increasing inequality, environmental sustainability, the poorest countries falling farther behind. They can use their convening power to raise awareness of the problems and to illustrate what kinds of actions are working.

The UN agencies could also provide more systematic information on the knowledge dimensions of the economic development challenge, and in coordinating the actions of the many international players. These efforts could be structured around six key actions:

1. *Proposing and sponsoring the creation more knowledge as an international public good*. Given the very high social returns to more R&D in preventive health, tropical agriculture, and environment there is very clear rationale for allocating more resources to these areas. Imagine that 10% of the total development assistance budget of $69 billion (in 2003) were to be allocated to the creation of new public good knowledge. That would be the equivalent of almost doubling the total R&D investment currently being made by low income countries. It would likely more than triple the total funding for these areas of very high impact If this money was also just used for straight subsidies, but combined with other mechanisms such as the demand pull mechanisms, prizes, research consortia the impact would be even greater and the likelihood of some concrete results in the not too distant future would be greater. To get this kind of a change requires a strong advocacy and coordination role, which the UN agencies should be able to undertake.

2. *Creating more policy knowledge*. As noted the world is becoming a much tougher environment for the least developed economies to be competitive and self-sustaining. As the development challenge is getting bigger and more complex, development institutions have an important role in this area. Some of them could be involved directly in helping to finance some of the needed research. Others could take a more active advocacy and coordinating role to raise more money for the research including harnessing policy knowledge from the experience of governments, NGOs, and multinationals.

3. *Funding more research on a better intellectual property rights regime*. This requires new thinking and collection of different perspectives as well as good empirical research on some of the facts. It will also require new negotiations to set up a more effective and equitable global system.

4. *Putting a shaper focus on transferring and disseminating knowledge*. Much more effort has to go to helping developing countries access and make effective use of knowledge. That is not just information, but also education, skills, and more broadly the capability to use knowledge, with all the broader development challenges that implied.

5. *Enlisting more directly the contributions of the private sector*. The really big player in the creation and dissemination of knowledge is the multinational corporation. More thought should go into how their tremendous capabilities to create and disseminate knowledge could be harnessed to address the knowledge needs of developing countries.

6. *Encourage all the international agents to do much more* to develop the domestic human capital, research, and institutional capabilities of developing countries for them to be able participate effectively in the knowledge driven international environment. This goes back to the old adage that it is much better to teach a man to fish than it is to feed him fish. This has big implications for reallocating the aid budget to focus more on building human and institutional capabilities.

Finally, much more needs to be done to address asymmetries in global governance structures which constrain the opportunities for developing countries to benefit in an increasingly competitive international system. This links with the other elements of this project on international public goods, including the trade system, the financial system, and the management of natural resources and the environment.

Annex 1

Millennium Development Goal targets and knowledge needs

Goals and targets		Knowledge needs
Goal 1	*Eradicate extreme poverty and hunger*	
	Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day	This is the broad development agenda focusing on the poor in developing countries. Reaching it requires: 1. Better development policy knowledge 2. More & better development aid targeting 3. Improved governance and rule of law 4. Improved education, skills and indigenous technological capability.
	Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	5. Development of improved crop yields and nutritional value in low income countries 6. Improvement in nutritional knowledge, including better food storage, preparation and distribution
Goal 2	*Achieve universal primary education*	
	Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	In the first instance this is primarily an economic issue (allocating more resources to primary education) and improving the efficiency of educational systems, which is a knowledge management issue. However more knowledge specific aspects are improving the content, quality and pedagogy of education, as well as improving and making more cost effective use of the potential of information technology based education.
Goal 3	*Promote gender equality and empower women*	
	Target 4: Eliminate gender disparity in primary and secondary education preferably by 2005 and in all levels of education no later than 2015	This is mostly an issue of education and governance.
Goal 4	*Reduce child mortality*	
	Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	In the first instance this is largely an issue of allocating more resources and making more effective use of existing medical knowledge that involves knowledge management, finance, and organization. However it is also an issue of developing better preventive medical knowledge such as improved and more robust vaccines, as well as better medical knowledge.
Goal 5	*Improve maternal health*	
	Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	Again, in the first instance, this is largely an issue of allocating more resources and making more effective use of existing medical knowledge and delivery systems. However improvement in medical knowledge would also be helpful.

Goal 6	*Combat HIV/AIDS, malaria, and other diseases*	
	Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	Addressing this is only partially the use of existing knowledge such as safe sex and existing drug treatments. Dealing with this epidemic does require a major international knowledge public good drive to produce a cost effective aids vaccine and better treatment technologies.
	Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	Again addressing this is only partially of using allocating more money and using existing medical knowledge to deal with the major diseases of the developing world. It is necessary to develop new vaccines such as for the preventive treatment of malaria, tuberculosis and others as well as to develop better diagnostic and treatment technologies not only for these diseases but also for possible new pandemics such as SARS.
Goal 7	*Ensure environmental sustainability*	
	Target 9: Integrate the principles of sustainable development into country policies and program and reverse the loss of environmental resources	In the first instance this is again primarily an issue of making more effective use of existing environmental knowledge and of developing effective incentive regimes to encourage better environmental management regionally, nationally and globally. However, given the growing population and economic pressure on limited natural resources, it is also important to have a major drive to produce more environmentally friendly technologies and new and better environmental management technologies.
	Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	Again in the first instance, this is primarily and issue of allocating more resources and making more effective use of existing technologies and knowledge to increase access to safe drinking water and basic sanitation. However, there is no doubt that it would be helpful to develop better technologies to purify water and deliver safe drinking water; as well as improved rural and urban technologies for waste treatment and improved sanitation.
	Target 11: Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers	As implied by the chosen target (secure property rights), this is primarily a political economy and legal issue, not a knowledge or technology issue. However improved housing and urbanization and public service delivery technologies would also help improve the lives of the poorest slum dwellers.

Goal 8	*Develop a global partnership for development*	
	Target 12: Develop further an open, rule-based, predictable, nondiscriminatory trading and financial system (includes a commitment to good governance, development, and poverty reduction—both nationally and internationally)	Addressing targets 12-16 are primarily issues of global political economy both in terms of improving the trading and financial system and in specific targets for increasing international development assistance or market access to poor countries and within that to different categories of poor countries and special programs. However, improvements in development policy knowledge would also be helpful.
	Target 13: Address the special needs of the least developed countries (includes tariff-and quota-free access for exports enhanced program of debt relief for HIPC and cancellation of official bilateral debt, and more generous ODA for countries committed to poverty reduction)	
	Target 14: Address the special needs of landlocked countries and small island developing states (through the Program of Action for the Sustainable Development of Small Island Developing States and 22nd General Assembly provisions)	
	Target 15: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	
	Target 16: In cooperation with developing countries, develop and implement strategies for decent and productive work for youth	
	Target 17: In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries	Addressing targets 17 and 18 is partly an issue of reducing the price of existing technologies drugs and ICT technologies for users in poorer countries. However it would also be important to encourage private companies to develop new and more appropriate and affordable drug, ICT and other technologies and products for the needs of developing countries.
	Target 18: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	

References

Alonso, José Antonio; et al. (2005) *State of the Art Paper.* UNIDO.

Alston, J; et al. "A Meta-Analysis of Rates of Return to Agricultural R&D, Ex Pede Herculem?" Research Report 113. Washington DC: International Food Policy Research Institute (2000).

Barton, John (2004a). "Follow up Study on Knowledge Management" International Task force on Global Public Goods" (July 7 2004 mimeo).

Barton, John (2004b). "Knowledge" International Task Force on Global Public Goods, (February 5 mimeo).

Bill and Melinda Gates Foundation (2002) "Developing Successful Global Health Alliances

Chang, Ha-Joon (2002). *Kicking Away the Ladder: Development Strategy in Historical Perspectiv*e. London: Anthem Press.

Cohen, Wesley; and Richard Merrill (2003). *Patents in the Knowledge Based Economy*. Washington: National Academy Press.

Cohen, Wesley, M, Richard R. Nelson, and John P. Walsh. (2000). "Protecting Their Intellectual Assets: Appropriability Conditions and Why US Manufacturing Firms Patent (Or Not)". NBER Working Paper 7552.

Dahlman, Carl; and Anuja Utz (2005). *India and the Knowledge Economy: Leveraging Strengths and Opportunities*, Washington, DC: World Bank.

Dahlman, Carl and Jean-Eric Aubert (2001). *China and the Knowledge Economy: Seizing the 21rst Century*. Washington DC: World Bank.

Fink, Carsten; and Keith Mascus, eds. (2005). *Intellectual Property and Economic Development: Lessons from Recent Economic Research.* Washington and London: World Bank and Oxford University Press.

Kremer, Michael' and Rachael Glennerster (2004). *Strong Medicine: Creating Incentives for Pharmaceutical Research on Neglected Diseases*. Princeton: Princeton University Press.

Kremer, Michael. (2002). '"Patent Buy-Outs', A Mechanism for Encouraging Innovation," in Tabarrok Alexander, ed. *Entrepreneurial Economics: Bright Ideas from the Dismal Science*. London and New York. Oxford University Press.

Maddison, Angus. (2001) *The World Economy: A Millennial Perspective*: Paris: OECD.

National Intelligence Council (2004). *.Mapping the Global Future*. Washington DC: Government Printing Office.

Perez, Carlotta (2002. *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden.* Northampton, Massachusetts: Age Edward Elgar Publishing.

Mazzoleni, Roberto, and Richard R. Nelson.(1998). "The Costs and Benefits of Strong Patent Protection: A Contribution to the Debate", *Research Policy* Vol. 27, pp. 273-284.

Pardee, Phil, and N. Beintman.(2001). *Slow Magic, Agricultural R&D a Century After Mendel*. Washington, DC: International Food Policy Research Institute.

Prahalad, C. K (2005). *Fortune at the Bottom of the Pyramid*. Wharton School Publishing.

Sachs, Jeffrey (2005). *The End of Poverty: Economic Possibilities of Our Time* New York: The Penguin Press.

Stiglitz, Joseph (1999). "Knowledge as a Public Good," in Inge Kaul, Isabelle Grunberg, and Marc A Stern, eds., *Global Public Goods: International Cooperation in the 21st Century*. New York: Oxford University Press. http://www.oxfordscholarship.com/oso/public/content/economicsfinance/0195130529/acprof-0195130529-chapter-15.htm.

Walsh, John, P; Ashish Arora, Wesley M. Cohen.(2003) "Working Through the Patent Problem" *Science*, Vol 299, Issue 5609, 1021.

World Bank (2005*). World Development Indicators 2005*. Washington DC: World Bank.

World Bank. Knowledge Assessment Methodology see www.worldbank.org/kam.

World Bank (2002). Global Economic Prospects and the Developing Countries. Washington DC.

Market Efficiency and Integration

The Implications of Agricultural Trade Liberalization and Preference Erosion for Developed and Developing Countries

Joseph Francois
Johannes Kepler Universität (Linz)
Centre for Economic Policy Research (London)
Institute for International and Development Economics

Abstract: This paper examines two related aspects of trade policy under the WTO-regulated multilateral trading system. Both issues are important for developing countries. The first is the likely impact of agricultural trade liberalization on incomes and export patterns. The second is the scope for preference erosion in this context. Liberalization of agricultural trade can be expected to have different effects on agricultural importers and exporters. For the poorest countries, these effects are linked to the erosion of tariff preferences that may follow from any reduction in tariffs by the OECD. The following messages emerge from the recent empirical literature on these effects. First, agricultural liberalization is most important, in terms of absolute gains, for the OECD. For developing countries, it is more of a mixed bag, as some countries will win from higher prices, and others will lose from those same higher prices. In total though, the overall impact it likely to be small. Studies that focus on industry and services, as well as agriculture, point to these sectors as being important as well. A second message is that most gains for developing countries follow from improved market access vis-à-vis other developing country agricultural markets. Broadly speaking, for the South to gain from trade liberalization, in agriculture and elsewhere, liberalization must take place in the South.

1. Introduction

This paper examines two related aspects of trade policy under the WTO-regulated multilateral trading system. Both issues are important for developing countries. The first is the likely impact of agricultural trade liberalization on incomes and export patterns. The second is the scope for preference erosion in this context. Liberalization of agricultural trade can be expected to have different effects on agricultural importers and exporters. For the poorest countries, these effects are linked to the erosion of tariff preferences that follows from any reduction in tariffs by the OECD.

Recent estimates of gains from trade liberalization in this area are generally modest (income effect well below 1% of GDP). Such effects are not enough to noticeably reduce the average incidence of poverty in developing countries. On top of this, because the greatest distortions are found in OECD countries, the greatest absolute potential gains in this area fall on the OECD countries. This does not belie the importance of agricultural trade, and trade preferences, for single commodity exporters. However, for the vast majority of the non-OECD population, while politically important, economically this simply is not the dominant issue in the trading system. Rather, trade policy in industrial sectors (esp. textiles and clothing), negotiations on services trade and FDI, and the evolution of rules on intellectual property are collectively a much set of bigger issues.

The paper is organized as follows. Section 2 starts with a discussion of the institutional context for further trade liberalization in agriculture. This involves the agricultural agreements within the WTO, and the issues covered by current negotiations. Section 3 then provides an overview of tariff preferences, again with emphasis on institutional context. Section 4 then provides an overview of recent economic studies (based on large scale computer models) of the implications of agricultural trade liberalization, both directly and in the context of preference erosion.

2. Agricultural policy after the Uruguay Round[37]

Agriculture has long been treated differently within the General Agreement on Tariffs and Trade (GATT). Almost from its inception in 1947, the GATT provided specific exceptions for agricultural products, and discussion of agricultural policy was kept largely outside of GATT negotiations. As a result, over time agricultural trade policies evolved in ways that differed from those for manufactured goods, with a host of non-tariff barriers emerging, including variable levies, minimum import prices, voluntary export restraints and quantitative import quotas.

The Uruguay Round, launched in 1986, concluded in 1993, and adopted in 1994, represented a concerted effort to move agriculture back into the mainstream of the trading system. The rules new rules that emerged are contained in the Agreement on Agriculture of the Uruguay Round (URAA). One innovation of the Agreement on Agriculture within the GATT/WTO framework is that it imposes rules not only for border measures but also on domestic support, where such support affects agricultural trade flows.

The stage for current and future agriculture negotiations was also set by the URAA. One key difference from industrial products is that essentially all agricultural tariffs are now bound. However, in both industrial and developing countries, there is a large degree of binding overhang resulting from "dirty tariffication" or the use of "ceiling bindings" (Hathaway and Ingco 1996; Francois and Martin 2004). The next round of agricultural negotiations was scheduled in the URAA, while the negotiating parameters (tariffs, tariff-rate-quota levels, subsidy commitments, etc.) must also be viewed in the context of the schedules of URAA commitments. The system that has emerged is complex and similar to past arrangements in the textile and clothing sectors, featuring a mix of bilaterally allocated tariff-rate-quotas (with associated quota rents) and tariffs. Viewed in conjunction with industrial protection, the basic pattern is that the industrial countries protect agriculture and processed food, while protection in developing countries is more balanced (though also higher overall) in its focus on food and non-food manufactured goods.

The URAA had a stated goal of no backsliding and modest liberalization. However, negotiating parties (generally the relevant agriculture ministries) gave considerable leeway to themselves with regard to selection of the appropriate reference period from which to measure export subsidy reductions. In addition, the move to a price-based system for protection has, in many cases, been subsumed into an effective adoption of explicit quotas. The disciplines on domestic subsidies have also been weakened by a relatively soft definition of the aggregate measure of support (AMS) vis-à-vis individual subsidies and the scope for reallocation of expenditures within the AMS. (See Tangermann 1998 for discussion.) Commitments not to erode current market access were meant to limit the scope for increased protection through dirty tariffication. As the name implies, dirty tariffication involved violations of the spirit, if not the letter, of the URAA text. It involved setting tariff bindings at rates far above then current effective protection rates. The practice of setting high bindings complicated the problem of measuring the impact of further commitments to reduce bindings. Basically, in agriculture, we are in a world that allows scope for great policy discretion and uncertainty as a result of the loose nature of the

[37] This section draws on Francois, van Meijl, and van Tongeren (2005).

commitments made. In addition, the setting of high bound rates made possible the conversion of NTBs into even more restrictive import tariffs. This in turn made quantity disciplines necessary to avoid backsliding. As a result, despite the stated goals of subsidy reductions and a shift toward price-based border measures, one of the more striking features of the regime that has actually emerged from the URAA is the prominent role that quantity measures have taken in the new architecture.

Summary statistics on protection rates in agriculture (including the conversion of specific tariffs to ad valorem equivalents) are shown in Table 1. The data in the Table come from Martin and Zhi (2005). Note that the simple average applied tariffs are higher in industrial countries than in developing countries. At the same time, there is little variation across regional groupings. There are some exceptions. In the Middle East and North Africa, applied tariffs are well above the average for developing countries. In the United States, average tariffs are well below the industrial-country average. Within the group of developing countries, protection is relatively low in exporting regions: Latin America and the Caribbean, Europe, and Central Asia.

3. Trade preferences[38]

Non-reciprocal trade preferences have been long granted by developed countries to various developing countries. Early in the post-World War II history of the GATT system, the pattern of these preferences reflected past colonial trade ties. In 1968, the UN Committed for Trade and Development (UNCTAD) recommended the creation of a 'Generalized System of Preferences' (GSP) under which industrialized countries would grant trade preferences to all developing countries on a non-reciprocal basis. While UNCTAD has addressed a wider spectrum of issues in international economic relations, in the area of international trade its primary goal was to modify the most-favored-nation (MFN) clause underpinning the GATT by (partially) exempting developing countries from this obligation, while at the same time encouraging developed countries to discriminate in favor of imports from developing countries. A key principle was (and is) the idea that such "special and differential treatment" be granted on the basis of "non-reciprocity", reflecting the premise that "treating unequals equally simply exacerbated inequalities" (UNCTAD, 2004). Whatever the intended and actual impacts of trade preferences, they are a central issue in ongoing efforts to negotiate further multilateral trade liberalization. Middle-income countries are increasingly concerned about the discrimination they confront in OECD markets as a result of the better access granted in these markets to other industrialized countries—because of free trade agreements—and to poorer or "more preferred" developing countries. Conversely, preferences are used as an argument by the LDCs and African countries against a general liberalization of trade and removal of trade-distorting policies in agriculture. These countries worry about the potential negative effects of an erosion of their preferential access.

In 1971, a waiver to the most-favored-nation clause was approved by the contracting parties to General Agreement on Tariffs and Trade (GATT) to permit GSP schemes. In 1979 they adopted the so-called 'Enabling Clause' in 1979, which established the legal framework for the GSP. Although Japan, Canada, Australia and several other countries implemented national GSP programs in favor of developing countries, the schemes of the EU and the US have been and continue to be the most important given the size of the two markets concerned.[39]

The first GSP preference scheme of the EU was implemented in 1971 for a ten-year period and has been renewed periodically. The scheme provides nonreciprocal preferences with lower tariffs or completely duty-free access for imports from 178 developing countries and territories into the EU market. GSP preferences are not part of contractual agreements with

[38] This section is based on Francois, Hoekman, and Manchin (2005).
[39] See Hoekman and Özden (2005) for a review of the extensive literature in this area.

the recipient countries.[40] The general arrangements cover roughly 7,000 products, of which 3,250 are classified as non-sensitive and 3,750 are classified as sensitive products. The tariff preferences offered by the general arrangements differ according to the sensitivity of the products concerned: non-sensitive products enjoy duty free access to the EU market, while sensitive products benefit from a tariff reduction. These arrangements provide, as a rule, for a reduction of MFN *ad valorem* duties by a flat rate of 3.5 percentage points. These products comprise around 36% of tariff lines (EC Council Regulation No.2501/01, 10 December 2001). As sensitive products are generally the ones with high MFN rates, the proportionate impact of the preference can be rather small. An important exception to this rule of a flat rate reduction is granted to the textiles and clothing sectors which enjoy a percentage reduction of 20%. For specific duties a percentage reduction of 30% is the general rule. Where duties include *ad valorem* and specific duties, only the *ad valorem* duties are reduced.

In 2001, the EU adopted new graduation criteria. All countries designated as high-income by the World Bank lose eligibility for all products automatically. A country can lose sectoral eligibility under two circumstances. First, the country in question has a development index *I* greater than –2 and it supplies more than 25% of EU total imports. Second, the country (i) has development index *I* larger than –2, (ii) has sectoral specialization index higher than a threshold level (depending on the actual development index) and (iii) it supplies more than 2% of EU total imports.

The EU GSP program has a safeguard clause that allows preferences to be suspended for certain products/countries if imports "cause or threaten to cause serious difficulties to a Community producer."[41] The EU has also instituted "special incentive arrangements" that reward compliance with International Labor Organization Conventions, protection of environment and combating drug production and trafficking. Countries that benefit from these special arrangements receive additional preferences on certain products in the sensitive list. Finally, human right violations, money laundering, corruption and violation of various international conventions on the environment may result in withdrawal of preferences.

A special arrangement under the Everything but Arms (EBA) initiative, which is incorporated into the GSP preference scheme, is provided for the 49 UN-defined least developed countries (LDCs). The EBA scheme provides duty-free access for all products covered and originating in the beneficiary country, with the exception of imports of fresh bananas, rice, and sugar.[42] Tariffs on these items will be reduced gradually to zero by 2006 for bananas and by 2009 for rice and sugar, with tariff quotas for rice and sugar increased annually during the transition. A key feature of the EBA is that, in contrast to the 'general' GSP, preferences are granted for an unlimited period and are not subject to periodic review.

In addition to the GSP, the EU has another preference program, which is limited to African, Caribbean and Pacific (ACP) countries under what is now the Cotonou convention. This scheme is less generous in terms of duty reduction than the EBA scheme. However in some other aspects, such as cumulation rules, it is more generous. The first agreement between the European Economic Communities (EEC) and the ACP countries dates back to 1963 when the "Yaoundé Agreements" were signed. These were in effect during 1963-75, with further renewals (Lomé I-IV). After the expiration of Lomé IV a new Partnership Agreement with the ACP states was signed in Cotonou in 2000. Cotonou is meant to change the trade

[40] A new GSP regulation (Council Regulation No. 2501/2001 as amended by Council Regulation No. 2211/2003) implements the current scheme from 1 January 2002 to 31 December 2005. New guidelines for the next 10-year cycle 2006-15 are currently being prepared.

[41] The US program, in effect, has the same rule in place: any US producer can petition the USTR for GSP privileges to be revoked due to real or potential injury.

[42] For a detailed discussion on the impact of EU preferences for LDCs under Everything But Arms see Brenton (2003).

relationship between EU and ACP partners. Non-LDC ACP members were to negotiate economic cooperation agreements under which the one-way EU trade preferences would be replaced by reciprocal market access commitments, i.e., more standard free trade agreements. These new trade arrangements are to enter into force by January 1, 2008, with the transition to a full implementation of the negotiated agreements to be spread over at least 12 years. ACP countries are granted preferences that often exceed those available under the GSP.

Preferences are equally complex in the United States, which offers non-reciprocal trade preferences the GSP as well as through the Caribbean Basin Initiative (CBI) (as amended), the Andean Trade Promotion Act (ATPA), and the African Growth and Opportunity Act (AGOA). The US GSP program was introduced in 1976. It divides eligible countries into two groups based on their income levels – all developing countries and the subset of LDCs. At the time of writing, all eligible countries pay zero tariffs on around 4,650 tariff lines; LDCs have duty-free market access for an additional 1,750 lines. The 1974 Trade Act allows the President to confer GSP eligibility on any country except those that (a) do not offer reasonable and equitable market access for American goods, (b) do not adequately and effectively protect US intellectual property rights, (c) do not reduce trade-distorting investment policies and export practices, (d) harbor international terrorists, (e) nationalize American property without compensation, (f) are members of a commodity export cartel causing "serious disruption to the world economy," or, are (g) communist states (except those that have been granted permanent normal trading status). The law stipulates other criteria that may be used in eligibility decisions, such as (a) level of economic development, (b) protection of workers' and human rights and (c) whether the country receives preferences from other countries. Certain articles are prohibited from receiving GSP treatment. These include most textiles, watches, footwear, handbags, luggage and certain apparel.

One of the key features of the GSP program is that a country *may* lose eligibility for a specific product if its exports exceed a certain “competitive need limit,” at the time of writing $110 million per tariff line. If the country in question has a market share larger than 50 percent of total US imports in that category, it may also lose the GSP eligibility.[43] GSP eligibility can be removed at the country, product, or country-product level. The President has discretion over when and how to apply these criteria. In practice, an Assistant US Trade Representative chairs an interagency committee which makes eligibility and graduation decisions after reviewing petitions from interested parties (the country in question, import-competing domestic firms, labor unions, other firms, human rights/environmental NGOs, etc.). Hudec (1987) concludes that a consequence is that import-competing lobby groups have made GSP a bastion of unregulated protectionism in the United States. Since the program first entered into force in 1976, 36 of the 154 eligible countries have "graduated" from the GSP program (including Singapore, Hong Kong, Taiwan, Korea, Malaysia, Mexico, and Botswana). Major countries remaining eligible include Brazil, India, Russia, Indonesia, Turkey, South Africa, and Thailand.

The AGOA initiative came into effect in 2000 with the aim to boost US bilateral trade with sub-Saharan African (SSA) countries. Currently 37 countries are eligible for preferential treatment under the AGOA. The preferential treatment consists of duty-free and quota-free access to the US markets for all products covered by GSP plus 1800 new items. Furthermore, AGOA entrenches the current preferences available under the GSP by guaranteeing benefits until September 2008. It also eliminates the GSP competitive need limitation for African countries and offers less restrictive rules of origin to eligible African countries, allowing them to import more of their inputs from third countries such as China.[44]

---

[43] However, there is a *de minimis* waiver. The President has the discretion to waive the Competitive Need Limit if total US imports in that category from all countries (both GSP eligible and ineligible) does not exceed $16.5 million (in 2003).

[44] See further details on AGOA in Brenton and Ikezuki (2004). The African Growth and Opportunity

The Andean Trade Preference Act was enacted in 1991 to combat drug production and trafficking in the Andean countries: Bolivia, Colombia, Ecuador and Peru. The program offers trade benefits to help these countries develop and strengthen legitimate industries. ATPA was expanded under the Trade Act of 2002, and is now called the Andean Trade Promotion and Drug Eradication Act. It provides duty-free access to U.S. markets for approximately 5,600 products.

The CBI is intended to facilitate the economic development and export diversification of the Caribbean Basin economies. Initially launched in 1983 through the Caribbean Basin Economic Recovery Act (CBERA), and substantially expanded in 2000 through the U.S.-Caribbean Basin Trade Partnership Act (CBTPA), the CBI currently provides 24 beneficiary countries with duty-free access to the U.S. market for most goods. CBTPA entered into force in 2000 and will be in effect until 2008.

Basically, there is significant "conditionality" associated with eligibility for preferences, including in non-trade areas and in terms of criteria that must be satisfied to benefit from preferential access. Recent evidence (Francois, Hoekman, and Manchin 2005) suggests that complying with such conditionality may add 4 percent to the cost of trade under trade preference schemes, and in many cases means available preferences are not actually used, as compliance costs are too high.

What does this threshold imply for trade preferences? We will focus on EU preferential trade as an example. Table 2 presents, for 2001, EU imports from LDCs. A further breakdown is provided in Table 3. The tables provide estimates of the rate of MFN protection that would be applied to LDC exports to the European Union, and underlying trade flows, and the share of imports by sector reported as actually entering the EU duty free. The following points are worth making at this stage. First, for LDCs the most important exports are manufacturing, followed by mining products (which are generally duty-free anyway). This is despite the fact that the highest utilization of preferences in 2001, as proxied by duty-free-eligible imports, was in agriculture. It is obvious that, in the case of agriculture, rates of protection are generally well above the threshold identified in the literature (again see Table 1). In addition, it is much easier to prove origin for food (and mining) products.[45] It is therefore in manufacturing that we expect rules of origin, and related administration burdens, to be harder to overcome.[46] In agriculture, we hence see much higher utilization rates.

4. The impact of trade liberalization

In this section, we examine the macroeconomic effects of agricultural trade policies in terms of their impact on national incomes and average wages across countries. We do this by drawing on recent studies carried out by international agencies and research institutions to explore theses issues. Such studies typically employ large computational models known as "CGE" (computable general equilibrium) models. We draw on the body of recent CGE-based studies of agricultural trade policy here, placing emphasis on the effects of agricultural trade liberalisation for countries in general, and for developing countries in particular.

Acceleration Act (AGOA III) extends the general timeframe for AGOA preferences until 2015 and the third-country fabric manufacturing provision for least developed AGOA beneficiary countries until 2007.

[45] See Stevens and Kennan (2004). Candau, Fontagné and Jean (2004) find that under-utilization of preferences is highest in textiles and garments (for EU imports under both the GSP and EBA programs). In the case of EBA, exporters in principle benefit from 100 percent duty-free access, but are found to pay up to 6.5 percent average tariffs.

[46] This is not to say agricultural preferences are not affected by administrative barriers. We would however expect these to be related more to prohibitive sanitary and phytosanitary regulations.

When economists use CGE models to help the policy community understand the effects of particular policies, they face two critical challenges. The first involves developing a reasonable, though stylized representation of the realities of complex policy, demand, and production relationships. (See Francois 2000). The trade-off here is between keeping the model workable, and keeping it realistic enough to actually be useful to the policy community. Out of necessity, this involves compromises regarding the sector and region coverage of models, the modeling of production and demand, representation of complex commercial policies, and the design of policy experiments. As a result of these compromises, there is no single or standard model. This is refleceted in the variety of models discussed in this paper. A second challenge involves interpretation of results, as the wide range of estimates produced by these models can be easily misread. This leads us to several important caveats. First, the comparative static analysis employed in these studies does not reveal adjustments processes and possible adjustment costs involved when far reaching policy changes are implemented. While adjustment costs may be inferred from model estimates, they are not generally estimated explicitly or empahsized. In addition, market imperfections, such as partial price transmission, are typically ignored. Information problems, lack of infrastructure, monopolistic market structures and similar frictions abound in the agricultural markets of developing countries. However, with the exception of imperfect competition, CGE models rarely include these in the analysis. In so far as market imperfections, and even missing markets, are a reality, CGE-based studies can be misleading about the net gains from agricultural trade policy reforms. In addition, because these models typically deal with commodity aggregates, important cases where a single commodity is important for the export earnings of a given country can be lost in the aggregates. This point is illustrated in Table 4. Table 4 lists countries, as reported by UNCTAD, that are particularly dependent on single export crops. Such dependency can be lost is the commodity aggregates common to CGE models.

5. Income effects

The macro economic effects of changes in policies are typically summarized by estimating the change in income that would be equivalent to the proposed policy change. In other words, if instead of implementing a certain policy change, we were to receive additional income, how much income should be given to (or taken away from) households to achieve the same welfare effect? This approach informs us about the *potential* welfare change on average (ignoring distributive effects). In principle, if the income effect is positive, we know that realized gains are sufficient to allow the winners from the policy move to potentially compensate the losers while still remaining ahead themselves. This presumes a social safety net, however, that does not usually exist in low income countries.

Table 5 summarizes a wide range of estimates of the potential global welfare gains from agricultural trade liberalization reported in a representative set of recent studies. This gives us a broadly comparable set of measures for assessing the impact of agricultural trade policies (current and proposed) on major country groupings. The results are not completely comparable because scenario definitions differ, the underlying dataset may be different, the time dimension differs and the model specifications are not uniform. Nevertheless, the table provides a useful overview of the range of potential welfare gains from policy reforms. Some of the studies concentrate on agriculture while others take a broader view and include non-agricultural market access, services and trade facilitation.

Some general observation may be derived from these studies. The largest part of estimated global income gains from agricultural liberalization accrues to industrial countries. Only in recent World Bank studies do we find that the absolute value of benefits for developing countries is higher. The higher greater benefits for industrialized countries are a consequence of the fact that these countries tend to have higher incidence of both bad and expensive

policies. Reduction, or even removal, of these policy interventions leads to elimination of deadweight losses and to more economically efficient resource allocation, which is fully counted as a welfare gain. Developing countries, in contrast, do not typically subsidize their domestic agriculture to the same extent. In short, because their policies are not as bad as those of the OECD, there is sometimes less scope for gain from own-reform of existing policies.

There is a considerable variation in the contribution of agricultural liberalization to estimates of global income effects. At the lower bound, one third of the total gains represent the low-range estimate (where manufacturing and services are included), while at the upper bound a share of more than two thirds is estimated in other studies. All such estimates tend to exclude intellectual property aspects of WTO negotiations, as well as FDI negotiations related to service sectors. Studies with broader scope find much smaller relative gains from agricultural liberalization.

Although the largest absolute gains (in dollar terms) accrue to industrialized countries, the largest relative gains in terms of GDP are obtained for developing countries. Welfare benefits for developing countries vary between $11 billion and $43 billion in the non-World Bank studies. This is equal to 0.2% and 0.7% of GDP of developing countries. In the World Bank study welfare effects vary between $101 billion (static) and $120 billion (dynamic). The most optimistic World Bank scenario adds 1.7% to the GDP of developing countries. It should be noted that the higher World Bank estimates are outside the range identified in other studies. The additional real income effects of agricultural liberalization in non-World Bank studies are very modest. The optimistic World Bank scenario ads 1.7%, which is substantial but not so high in comparison to estimates of the rates of growth required to significantly raise incomes per capita and reduce poverty. The gains for developing countries from more liberal agricultural policies in industrial (OECD) countries vary between $5 billion and $20 billion per year. This is equal to 0.1% and 0.3% of annual GDP in developing countries. The gains from liberalization are therefore limited.

At the broad level of country groupings into low-income and high-income countries, all the studies find that the benefits from own-reform of policy yields larger benefits than those the benefit derived from other countries liberalizing. This hides important cross-country differences. The important agricultural exporters in Latin America, Australia and New Zealand will tend to benefit most from improved market access in OECD countries. Even so, between 70 and 85 per cent of the benefits for developing countries is the result of their own reform policies in agriculture.

Because estimated own trade barriers in developing countries are higher than those in developed countries, the removal of those barriers leads to a relatively larger estimated impact in developing countries. This sheds some doubt on the assertion that developing countries would experience high gains from a further removal of trade barriers that is restricted to industrialized countries. As a consequence, some of the studies stress the importance of tapping the potential for increased south-south trade. Although trade volumes between developing countries have displayed a remarkable rising trend in recent years, especially African-Asian trade, it is still the case that developing country exports are biased towards trade with the EU and the USA. Lowering trade barriers between developing countries would open increased opportunities for exports from low-income countries to middle-income countries.

It needs to be stressed that, at a country level, the body of recent CGE studies identifies losers as well as winners. While theses studies generally estimate positive welfare gains for most participating countries, there are important exceptions. For net food importing countries the negative terms of trade effects, which occur through higher world food prices in the wake of the policy changes, are not outweighed by efficiency gains from reallocating resources. Another exception is the loss of rents from preferential market access or loss of quota rents

which may lead to reductions in welfare estimates for individual countries and sectors. This is addressed in the next section. In addition, the effects of removing agricultural subsidies alone are likely to be negative for many individual developing countries, specifically those depending on imports of agricultural products that are currently subsidized in industrialized countries.

Export subsidies have become relatively less important in recent years. Consequently the reduction of these payments alone does not yield grand effects. Of course, export subsidization cannot be viewed in isolation from domestic policies.

6. Wage effects

We next turn to wage effects. For illustration, we focus on the range of wage effects as reported in a set of recent papers by Francois, van Meijl, and van Tongeren (2003, 2005), as they consider a more comprehensive trade liberalization that includes domestic support in agriculture in addition to import protection and export subsidies. In addition, because this study also includes manufacturing and services liberalization, the broader impact of trade policy on incomes (and hence on income-related aspects of food security) can also be gauged.

Table 6 reports the impact of agricultural trade policy on low-skilled wages, as estimated through a 50% hypothetical reduction in agricultural subsidies and tariff and non-tariff barriers. In general, for the middle and low-income groupings shown, agriculture is far more important for unskilled labor earnings than it is for the OECD countries. At the same time, though, it is liberalization outside the OECD – in fact primarily own-policy reform – that leads to the great bulk or agriculture-related wage gains. These results suggest that what really matters will vary for different countries and regions. Hence, for North Africa and the Middle East, less-skilled workers stand to gain the most from agricultural policy reform at home. The same is also true in South Africa. In India, on the other hand, manufacturing liberalization (such as clothing tariffs in middle income countries) is at least as important as agriculture. The same holds for the group of other Asia and Pacific countries.

We should point out that low-skilled workers are not necessarily agricultural workers. In fact, low-skilled wages are often the underpinnings of income for urban households in low and lower middle-income countries. As such, rising low-skilled labor earnings in urban households may go hand-in-hand with falling earnings in rural households. Unraveling this mix of rural and urban households within CGE studies requires a move to models that include household data.

7. Export effects

We next turn to trade effects. Most CGE studies, and interpretation of such studies, focus on net real income effects. These are a combination of output and trade effects. It is important to remember that export expansion, depending on underlying economic policies, may be accompanied by income reductions if the export growth reinforces existing distortions. Even so, because trade effects are an important aspect of income changes, and because they are at the core of politics on trade, they are informative themselves.

Table 7 reports estimated total trade effects from the Francois, van Meijl, and van Tongeren studies. These are for their static 50% liberalization scenario. We report these because they allow us to compare the impact of agricultural trade expansion to that from trade liberalization in services and manufacturing, and to trade facilitation. What is clear from the table is that agriculture is generally about 25% of export gains, when viewed in the context of overall trade liberalization. Generally, about 60% of the gains are from manufacturing. Most of this follows from developing country tariff reductions. Services are important for North America, India, and South Africa, and Australia-New Zealand. Agriculture matters most for

the Mediterranean and Sub-Saharan Africa. However, the mechanics driving these results are not strictly positive. In Sub-Saharan Africa, non-agricultural exports expand to pay for the increased cost of food imports. Hence, the trade effects mask real income loss mechanisms that are at play.

8. Preference erosion

What do recent studies say about preference erosion? Preferences can only have an impact if there is a non-zero tariff in the importing market. Two-thirds of the major items Africa exports to Canada, for example, face zero MFN tariffs; and 69% of EU imports from Africa (by value) in 2000 were in items facing zero MFN duties (Stevens and Kennan, 2004). It is in the high tariff items (agriculture in particular) that we may expect to see important erosion.

Estimates of the dollar impact of full preference erosion on real national income are shown in Table 8. These are from Francois, Hoekman, and Manchin (2005), and include adjustments for compliance costs. The Table includes the impact on the LDCs in Sub-Saharan Africa, as well as other low-income countries in our sample (using the World Bank classification of countries by income). The table highlights the importance of EU preferences, as a bilateral measure, for Sub-Saharan African countries. Given the current trade policy landscape, EU preferences are estimated to be potentially worth some $460 million annually to African LDCs. Asian countries benefit less, with the exception of Bangladesh ($100 million). These are therefore countries that stand to lose—all other things equal—from a move by the EU to lower MFN trade protection. Other developing country groups stand to gain—these are the "less preferred" in the overall hierarchy of preferences.

We need to add caveats here, however. Potential preference rents might not actually accrue to the exporting countries. There is evidence (Olarreaga and Özden 2005) that trading companies other intermediaries actually capturemany of the rents from preferences. More critically, EU tariff reductions will take place in the context of broader reductions across the OECD. Hence, one really needs to look at the entire picture. The results in the table indicate that while EU preferences matter bilaterally, for Africa there is generally compensation if EU tariff reduction takes place in the context of broader OECD liberalization.

9. Price effects and downstream, food processing industries

The basis for criticism of OECD agricultural subsidies and their impact on developing countries relates to price effects. In particular, OECD agricultural policies, including subsidizing of production and subsidizing of exports, depresses world prices. Similarly, import protection diverts world trade, again depressing global market prices. For agricultural producers outside the OECD, these lower prices depress production and trade (see above). At the same time, lower world prices may help processed food industries outside the OECD, while driving up costs for food processors in the OECD.

Table 9 presents estimated price effects from a 40% (i.e. partial) liberalization of OECD agricultural subsidies, as well as a reduction of OECD border protection. These are based on an updated and extended version of the model outlined in Francois et al (2005). The price effects are changes in average world commodity prices. Border measures are most important for rice prices, while domestic support is more important for wheat and other cereals. Cotton price effects are relatively flat, amounting to only 0.6 percent. Critically, the system of quota rents from TRQs means that expanded quota-based trade, another aspect of the current Doha negotiations, offset some of the price effects following from reductions in support. In total, price effects are not large, as the mix of OECD agricultural policies in place has mixed effects on prices. Apart from rice and wheat, with estimated price effects of 3.3 percent and 5.6 percent under partial liberalization (and up to 10 percent with full liberalization), estimated agricultural price effects simply do not point to potentially large gains for agricultural

exporters outside the OECD. In other words, the only substantive price effects are concentrated in the grain products exported by major Latin American exporters.

What about the processed food industries? Estimated output effects from OECD liberalization for processed food industries are reported in Table 10. The basic picture that emerges is gains for the OECD processed food industries as liberalization leads to falling internal prices for primary food used as inputs for downstream food processing industries, and to an increased concentration of food processing in the higher income countries. This follows in part from a shift in upstream industries out of some of the more heavily subsidized activities and into others that in turn benefit downstream food processors. The increased demand for primary inputs and the shift in downstream production in the OECD are matched by (sometimes substantial) drops in the food processing industries outside the OECD. It is important to recognize that processed foods are a relatively high value added industry. Rationalization of OECD policies related to primary agriculture benefit the processed food industries in the OECD, allowing them to capture a larger global share of the higher value-added food processing industries.

10. Summary and Conclusions

This paper has examined the likely impact of agricultural trade liberalization on developed and developing countries. The discussion has focused on agricultural liberalization and in general, and the related issue of preference erosion. It has drawn on recent CGE studies of these issues.

The following messages emerge from the recent empirical literature. First, agricultural liberalization is most important, in terms of absolute gains, for the OECD. For developing countries, it is more of a mixed bag, as some countries will win from higher prices, and others will lose from those same higher prices. In total though, the overall impact it likely to be small. Studies that focus on industry and services, as well as agriculture, point to these sectors as being important as well. A second message is that most gains for developing countries follow from improved market access vis-à-vis other developing country markets. Broadly speaking, for the South to gain from trade liberalization, in agriculture and elsewhere, liberalization must take place in the South.

The net impact of OECD agricultural policies on the developing world is, therefore, relatively small. The major potential gains actually relate to the policy mix in the developing world itself. OECD liberalization will benefit some primary agricultural exporters, particularly exporters of rice and wheat. At the same time, estimated price effects for other sectors are actually quite limited, even for politically sensitive products like cotton and sugar. One important indirect effect of OECD liberalization of primary agriculture is the increased competitiveness this delivers to downstream food processing industries in the OECD. As such, OECD liberalization of primary agricultural policies may serve to further strengthen the competitive position of food processing industries in the OECD relative to the same industry in developing countries.

Different approaches are still being explored in terms of tariff reduction formulas and the mechanics for liberalization in the current round. (See Francois and Martin 2003 for a discussion of tariff formulas and the meaning of flexibility). These carry different implications for the obligations for developing countries in terms of actual tariff reduction in agriculture and elsewhere. Notwithstanding estimates of the limited and mixed nature of potential gains to developing countries from agricultural liberalization, estimates also indicate that a more broad based round promises substantial gains for the South. Estimates in the literature do suggest that multilateral, broad-based liberalization offers the opportunity for terms-of trade losses and gains to cancel, so that efficiency and pro-competitive gains (which tend to be positive) can dominate the net effects. To put the estimated national income effects

into perspective, Figure 1 compares the estimated income gains for developing countries from Francois (2001) to the 1995-98 average inflow of FDI to developing countries, and the 1995-98 average flow of official development assistance to developing countries, in Figure 1. (Note that MC and Cournot refer to two alternative versions of the model results reported in Francois 2001). The projected annual income real gains for developing countries would well outweigh recent annual flows of official development aid from the industrial countries. They would also be comparable to aggregate FDI inflows. In other words, the potential income gains for developing countries are greater than flows of official assistance and are roughly comparable to total FDI inflows. However, these gains follow almost entirely from liberalization by the South itself. This basic message can be found in the other studies covered here. A basic, implicit policy recommendation is that negotiators need to be tough in their setting of goals for developing countries. If "flexibility" and "special and differential" treatment in the context of current negotiations mean business as usual and no real liberalization in the South, then the estimated benefits to the South may be largely sacrificed.

Annex I:

Table 1 Agricultural Tariffs: 2000-2002

Countries	*Value of imports*	*Simple Average*		*Coefficient of Variation*		*Weighted average*		*Binding overhang*	*Lines bound at zero*	*Maximum Rate*	
	Million US Dollars	*Applied %*	*Bound %*	*Applied %*	*Bound %*	*Applied %*	*Bound %*	*% of bound rate*	*%*	*Applied %*	*Bound %*
Industrial countries	143,669	24.1	47.7	336.3	246.3	14.1	24.9	43.4	29.0	3,424	3,424
European Union	49,381	19.8	22.5	157.6	167.6	17.4	21.3	18.3	25.2	327	479
Japan	31,556	24.2	48.4	269.8	281.6	20.9	51.6	59.5	29.2	716	1,646
United State	41,304	5	6.1	220	203.3	5	6.6	24.2	28.5	97	100
All developing countries	87,896	16.3	61.7	189.9	136.7	24.4	60	59.3	1.2	3,788	8,334
High income: non OECD	13,996	14.4	57.8	499.4	238.6	61.8	79.6	22.4	1.1	3,788	8,334
Upper middle income	23,209	13.7	56.5	211.5	146.1	23.1	54.1	57.3	2.8	2,565	7,696
Lower middle income	36,091	18	51.4	122.4	176.6	14.4	41.8	65.6	1.2	600	3,000
Low income	14,600	17	75.7	80.6	64.2	15.5	95.6	83.8	0.3	150	550
East Asia & Pacific	30,503	19.1	48	325	274.1	37	58.7	37	2.3	2565	7696
Europe & Central Asia	4,441	11.9	27.8	115.6	148.3	16.1	50.9	68.4	7.0	248	333
Latin America & Caribbean	27,099	13.4	59.2	92.2	64.1	18.4	51.8	64.5	0.3	254	257
Middle East & North Africa	7,864	31	61	124.1	297.4	22.4	50	55.2	0.1	600	3,000
South Asia	6,163	23	100.9	60.1	66.5	22.3	132.4	83.2	0.3	150	300
Sub-Saharan Africa	5,780	17.5	74.6	75	53.6	16.2	73.5	78	0.5	133	200
World	231,564	17	60.5	224.2	145.1	18	38.2	52.9	3.6	3,788	8,334

Source: Martin and Zhi (2005).

Table 2 EU imports from the least-developed countries, 2001

	Total EU15 imports '000$US	*Duty free imports '000$US*	*Sector share of LDC total*	*Duty-free share of sector total*	*Share subject to specific duties*
Agriculture	905,722	611,791	7.6	67.5	14.0
Forestry, Fisheries	258,714	174,782	2.2	67.6	0.0
Mining	3,982,709	3,973,127	33.5	99.8	0.0
Processed foods	1,035,968	32,188	8.7	3.1	4.2
Other manufactures	5,720,632	394,087	48.1	6.9	1.4
TOTAL	11,903,744	5,185,974	100.0	43.6	2.1

Source: WTO integrated database, Francois Hoekman and Manchin (2005).

Table 3 Composition of EU15 processed food imports from LDCs

	Total EU15 imports '000$US	*Free imports (no duty applied) '000$US*	*Free import share of category total*	*Share of total processed food imports*	*EU average rate of protection, all extra-EU trade*
Animal products	92	0	0.0	0.0	16.0
Vegetable oils and fats	104,029	26,506	25.5	10.0	37.7
Dairy products	99	0	0.0	0.0	18.4
Processed rice	1,176	0	0.0	0.1	38.6
Sugar	37,818	0	0.0	3.7	36.7
Food producs nec	891,547	5,287	0.6	86.1	11.6
Beverages and tobacco	1,208	394	32.6	0.1	20.3
TOTAL	1,035,968	32,188	3.1	100.0	15.2

Source: WTO integrated database (trade), GTAP database (protection), and Francois, Hoekman and Manchin (2005).

Table 4 Single Commodity Exporters

Country	*Product*	*Export share*
Perpetual SCEs		
Comoros	Spices	100
Dominica	Fruits	85
	Vegetables	9
Gambia	Oilseeds	67
	Vegetables	9
Grenada	Spices	48
St Kitts-Nevis	Sugar	94
St. Lucia	Fruits	85
	Alcoholic beverages	12
St. Vincent and the Gren.	Fruits	52
	Wheat meal or flour	16
Transitory SCEs		
Benin	Cotton	83
	Oilseeds	7
Burundi	Coffee	97
	Tea	2
Central African Republic	Cotton	76
	Wood	13
Colombia	Coffee	51
Cote d'Ivoire	Cocoa	53
	Coffee	13
El Salvador	Coffee	55
	Sugar and honey	13
Ethiopia	Coffee	75
Ghana	Cocoa	67
	Wood	13
Honduras	Coffee	55
	Fruits	21
Mali	Cotton	94
	Live animals	3
Paraguay	Oilseeds	51
	Cotton	9
Togo	Cotton	66
	Coffee	12
Turkmenistan	Cotton	87
	Silk	4
Uganda	Coffee	63
Zimbabwe	Tobacco	47
	Cotton	12

Note: 1/ Countries with more than 50 per cent of agricultural export earnings from one or two commodities and with agricultural exports accounting for more than 30 per cent of total export earnings in 1998 Country Commodity Per cent of agricultural exports.
Source: UNCTAD.

Table 5 Recent CGE studies of agricultural liberalization (gains in billion USD)

	Benefits to low and middle income countries		*Benefits to high Income countries*		*Benefits to all countries*	
	Static	*Dynamic*	*Static*	*Dynamic*	*Static*	*Dynamic*
Anderson (1999)						
Developing countries liberalize	31		11		42	
Developed countries liberalize	12		110		122	
All countries liberalize	43		121		164	
Diao et al. (2002) (Road Ahead)						
All countries liberalize	3	35	28	35	21	56
Francois et al. (2003, 2005)						
Developing countries liberalize 50%	6	28	5	4	11	32
Developed countries liberalize 50%	5	-0.7	12	25	17	24
All countries liberalize 50%	11	27	17	30	28	57
World Bank GEP (2004)						
Developing countries liberalize	80	167	23	19	103	185
Developed countries liberalize	20	75	64	100	84	174
All countries liberalize	101	240	91	117	193	358
IMF & World Bank (2002)						
Developing countries liberalize	22		5		27	
Developed countries liberalize	9		93		102	
All countries liberalize	30		98		128	

Table 6 Low-skilled wage effects (percent) of a partial global trade liberalization

	AGRICULTURE				MANUFACTURES and SERVICES				TRADE FACILITATION	
	Total effect from agriculture	*OECD agriculture liberalization (border measures)*	*OECD agriculture liberalization (domestic support)*	*Non-OECD agriculture liberalization (border measures)*	*OECD manufactures tariffs*	*Non-OECD manufactures tariffs*	*OECD services liberalization*	*Non-OECD services liberalization*	*OECD trade facilitation*	*Non-OECD trade facilitation*
High Income										
European Union										
France	0.4	0.7	-0.1	-0.2	0.1	0.2	0.4	0.0	0.1	0.0
Germany	0.7	1.0	0.0	-0.2	0.1	0.2	0.2	0.0	0.1	0.0
Netherlands	0.5	0.7	-0.1	-0.1	0.3	0.3	0.0	0.0	0.3	0.1
Rest of EU15	0.6	0.8	-0.1	-0.1	0.1	0.2	0.0	0.0	0.1	0.0
EU10 (new Members)	1.0	1.6	-0.3	-0.3	-1.1	-0.4	0.1	0.0	-0.1	-0.1
North America	0.0	0.1	0.0	-0.1	0.1	0.1	0.0	0.0	0.1	0.0
Australia-NZ	0.2	0.2	0.0	0.1	0.2	0.2	0.2	0.0	0.2	0.1
Other High Income Asia-Pacific	1.7	-0.6	-0.1	2.3	1.1	0.9	0.2	0.0	0.1	0.3
Middle and Low Income										
South America	-0.3	-0.6	-0.1	0.4	0.0	0.1	0.0	0.1	0.0	0.1
Mediterranean and North Africa	6.7	-0.4	-0.2	7.2	0.2	0.1	0.1	0.0	0.2	0.2
Sub-Saharan Africa	2.2	0.1	-0.1	2.3	0.0	0.4	0.1	0.0	0.1	0.2
South Africa	3.5	-0.5	-0.1	4.1	0.1	0.6	0.1	0.3	0.2	0.3
China	3.2	-0.5	-0.1	3.9	-0.6	0.0	0.0	0.1	0.0	0.0
India	1.0	-0.4	-0.1	1.5	0.1	0.7	0.0	0.5	0.1	0.2
Other Asia-Pacific	1.7	-0.6	-0.1	2.3	1.1	0.9	0.2	0.0	0.1	0.3
Rest of World	-0.6	-0.5	-0.1	0.0	0.1	0.2	0.1	0.0	0.2	0.1

Source: Francois *et al.* (2003), based on static partial liberalization experiments. Policy experiments involve a 50% reduction in the border measure of domestic subsidies identified in the columns. Trade facilitation is based on a reduction in trading costs equal to 1.5 percent of the value of trade.

Table 7 Trade Effects of Trade Liberalization (value of exports)

Percent Expor: Effects of a 50% Reduction in Import Protection and Agriculture Subsudies					
	Total	*Agriculture*	*Manufacturing*	*Services*	*Trade Facilitation*
EU15	3.79	1.25	1.43	0.45	0.66
Central & E Europe	-2.47	0.36	-2.55	0.18	-0.47
Mediterranean	19.25	7.12	8.16	1.22	2.75
North America	11.55	2.32	4.59	2.43	2.21
South America	32.87	8.31	16.99	2.65	4.91
China	51.56	7.20	32.39	1.05	10.92
India	46.60	4.69	28.25	9.53	4.13
High Income Asia	17.96	4.20	8.65	0.58	4.54
Other Asia-Pacific	20.75	5.03	12.56	-0.30	3.47
Australia-NZ	13.96	3.34	5.11	2.63	2.88
South Africa	27.56	7.16	10.77	5.82	3.82
Sub-Saharan Africa	20.66	7.80	9.45	0.92	2.49
Rest of World	5.70	1.86	1.90	0.51	1.43
Share Allocation: Effects of a 50% Reduction in Import Protection and Agriculture Subsudies					
	Total	*Agriculture*	*Manufacturing*	*Services*	*Trade Facilitation*
EU15	100.0	33.0	37.7	11.9	17.4
Central & E Europe	100.0	-14.7	103.2	-7.4	18.9
Mediterranean	100.0	37.0	42.4	6.4	14.3
North America	100.0	20.1	39.8	21.0	19.1
South America	100.0	25.3	51.7	8.1	14.9
China	100.0	14.0	62.8	2.0	21.2
India	100.0	10.1	60.6	20.5	8.9
High Income Asia	100.0	23.4	48.1	3.2	25.3
Other Asia-Pacific	100.0	24.2	60.5	-1.5	16.7
Australia-NZ	100.0	23.9	36.6	18.8	20.6
South Africa	100.0	26.0	39.1	21.1	13.8
Sub-Saharan Africa	100.0	37.8	45.7	4.5	12.0
Rest of World	100.0	32.7	33.2	9.0	25.1

Source: Francois, van Meijl and Van Tongeren (2003, 2005), supplementary calculations.

Table 8 Preference Erosion with Adjustment for Compliance Costs

	Change in annual national income, $US million			
	Effects of EU liberalization, unadjusted	*Effects of EU liberalization, adjusted for compliance costs*	*Total preference loss, unadjusted*	*Total preference loss, adjusted*
African LDCs	*-458.3*	*-341.5*	*-110.5*	*6.3*
Botswana	0.2	-0.3	16.4	16.0
Madagascar	-7.1	0.1	9.8	17.0
Malawi	-22.6	-18.1	-7.0	-2.5
Mozambique	-27.3	-27.3	-14.3	-14.3
Tanzania	4.6	24.0	1.5	20.9
Uganda	-5.9	0.0	-4.3	1.6
Zambia	-18.9	-18.6	-21.3	-20.9
Other Sub-Saharan Africa LDCs	-381.2	-301.3	-91.3	-11.4
Asia/other LDCs	*93.4*	*155.8*	*-87.4*	-25.1
Bangladesh	-101.0	-40.0	-138.2	-77.2
Other Central/South Asia LDCs	194.4	195.8	50.8	52.2
Other Low-income	*587.4*	*507.3*	*2050.5*	1970.5
India	174.0	166.1	275.8	267.9
Vietnam	413.4	341.3	1774.8	1702.6
TOTAL	222.5	321.6	1852.6	1951.7

Note: adjustments relate to rules of origin and other compliance costs for EU preferences. LDC and low-income classification is based on World Bank designations.
Source: Francois, Hoekman, and Manchin (2005).

Table 9 World Price Effects of Agricultural Liberalization

	OECD agricultural tariffs, 40%	*OECD export subsidies, 40%*	*OECD domestic support, 40%*	*TRQ 15% expansion*	*non-OECD agricultural tariffs, 40%*	*TOTAL*
Rice	4.6	0.1	0.1	-1.4	-0.1	3.3
Wheat	2.3	0.2	4.4	-1.6	0.3	5.6
Other cereals	0.5	0.3	7.1	-10.1	2.7	0.6
Horticulture	0.5	0.0	-2.4	-0.4	-0.1	-2.3
Sugar	3.1	0.3	-1.1	-1.5	0.0	0.8
Meats	0.2	0.1	-3.1	-0.4	0.0	-3.1
Beef	0.5	0.3	0.1	-0.2	0.1	0.9
Dairy	1.3	1.1	-1.8	-1.6	0.1	-0.8
Cotton	0.2	0.0	0.5	0.1	-0.2	0.6
Other agriculture	0.0	0.0	-0.9	0.0	0.2	-0.7
Processed foods	-0.2	0.2	-1.3	-0.1	-0.3	-1.7

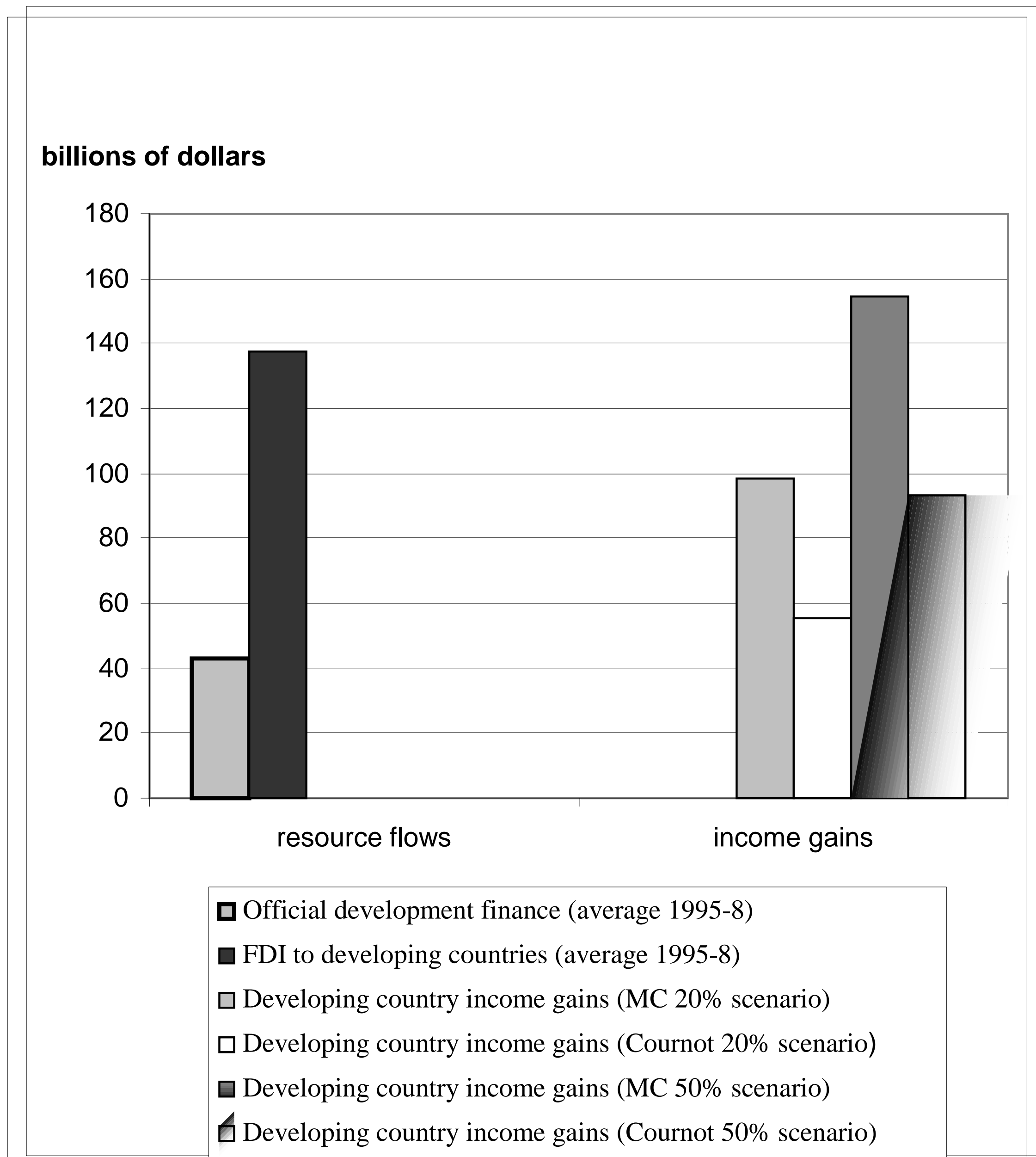
Source: Based on updated Francois, van Meijl and van Tongeren model (2005).

Table 10 Changes in Processed Food Production After OECD Liberalization in %

	OECD Ag import protection 40% liberalization	*OECD Export Subsidies 40% liberalization*	*OECD domestic support 40% liberalization*	*TRQ 15% expansion*
European Union	-1.32	-0.58	6.19	-0.14
Turkey	4.85	-4.04	-6.76	3.33
Russia	1.45	1.12	-9.92	-2.08
Other Europe	-4.17	-0.22	-0.26	0.36
Middle East	1.00	0.93	-7.50	-0.63
North Africa	4.24	-0.03	-7.40	-0.39
Botswana	-1.41	0.04	0.26	0.15
Madagascar	-2.85	0.51	-14.53	-3.31
Malawi	-1.67	0.22	2.73	-0.37
Mozambique	-2.72	0.28	-11.76	-1.66
Tanzania	-0.64	0.05	-1.82	-0.24
Uganda	-3.58	-0.23	-17.51	-0.99
Zambia	-0.08	0.00	0.45	0.00
South Africa	2.14	0.57	-3.43	-0.43
Sub-Saharan Africa	-0.77	1.39	-8.86	-0.56
Canada	-2.37	0.33	5.29	-1.04
United States	0.51	0.14	1.28	-0.51
Mexico	-1.05	0.09	-6.27	1.88
Central America	-1.15	0.24	-5.41	-1.14
Caribbean	0.15	0.14	-3.67	-0.50
Argentina	2.93	0.12	-4.54	-0.93
Brazil	7.01	0.22	-4.55	-0.57
Other South America	-0.36	0.18	-3.69	-0.87
Japan	-2.33	0.09	6.88	3.38
Other high income Asia	-3.02	0.11	0.66	16.69
China	2.34	0.14	-2.40	-0.18
Vietnam	3.75	0.46	-10.14	-6.34
Other South East Asia	4.74	0.55	-10.60	-4.44
Bangladesh	-1.06	0.08	-5.75	-0.15
India	0.58	0.11	-1.03	-0.58
Sri Lanka	-0.02	0.36	-4.51	-2.46
Other South and Central Asia	0.74	0.25	-0.96	0.08
Oceania and other Pacific	3.10	0.36	-34.59	-7.33
Australia and New Zealand	4.16	0.50	-0.41	-2.98

Source: Based on updated Francois, van Meijl and van Tongeren model (2005).

Figure 1 Comparison of income gains and resource flows for developing countries



Source: Francois (2001).

References

Alexandraki, Katerina and Hans Peter Lankes, 2004, "Estimating the Impact of Preference Erosion on Middle-Income Countries," IMF Working Paper, Washington, DC: IMF.

Anderson, K., B. Dimaranan, J. Francois, T. Hertel, B. Hoekman and W. Martin (2001), "The Cost of Rich (and Poor) Country Protection to Developing Countries", *Journal of African Economies* 10(3): 227-57.

Antweiller, W. and D. Trefler 2002. "Increasing Returns and All That: A View from Trade," *American Economic Review*, 96: March.

Anson, J., O. Cadot, A. Estevadeordal, J. de Melo, A. Suwa-Eisenmann and B. Tumurchudur (2003) "Assessing the Costs of Rules of Origin in North-South PTAs with an Application to NAFTA", CEPR Discussion Paper 2476.

Australian Bureau of Agricultural and Resource Economics, "Developing Countries: Impact of Agricultural Trade Liberalization." ABARE *Current Issues*, July 2000.

Baldwin R. and T. Murray, 1977, "MFN Tariff Reductions and LDC Benefits under the GSP," *Economic Journal*: 30-46.

Beghin, John C., D. Roland-Holst and D. van der Mensbrugghe (2002)"Global Agricultural Trade and the Doha Round: What are the Implications for North and South?", CCNM/GF/AGR(2002)5.

Brenton, P. 2003. "Integrating the Least Developed Countries into the World Trading System: The Current Impact of EU Preferences under Everything But Arms," *Journal of World Trade,* June, Vol. 37, no. 3; p. 623-46.

Brenton, P. and T. Ikezuki 2004 'The Impact of Agricultural Trade Preferences, with Particular Attention to the Least Developed Countries', World Bank Policy Research Working Paper 3262.

Brenton, Paul and Miriam Manchin. 2003. "Making EU Trade Agreements Work: The Role of Rules of Origin," *The World Economy*, 26, 755-769.

Bouet, A., Y. Decreux, L. Fontagné, S. Jean and D. Laborde, 2004, "A consistent, ad-valorem equivalent measure of applied protection across the world: The MAcMap-HS6 database," CEPII discussion paper No 2004–22, December.

Brown, Drusilla K. 1987, "General Equilibrium Effects of the US Generalized System of Preferences," *Southern Economic Journal* 54: 27-47.

Candau, Fabien Lionel Fontagne and Sébastien Jean. 2004, "The utilization rate of preferences in the EU," CEPII, mimeo.

Carrière, C. and de Melo, J., 2004, 'Are Different Rules of Origin Equally Costly? Estimates from NAFTA, CEPR Discussion Paper No. 4437.

Francois, J. and D. Roland-Holst, 1997, *Scale Economic and Imperfect Competition* in Francois, J. and K. Reinert, eds., *Applied Methods for Trade Policy Analysis: A Handbook*, Cambridge University Press: Cambridge.

Francois, J. 2001, *THE NEXT WTO ROUND: North-South stakes in new market access negotiations*, CIES: Adelaide and Tinbergen Institute:Rotterdam.

Francois, J.F. and W. Martin, 2003, "Formulas for Success? Formula Approaches to Market Access Negotiations," *World Economy.*

Francois, J. and K. Reinert, 1997, *Applied Methods for Trade Policy Analysis: A Handbook*, Cambridge University Press: Cambridge.

Francois, J., D. Spinanger, and J. Woertz, 2005, "The impact of ATC quota elimination on LDC exports," mimeo.

Francois, J.F. and I. Wooton, 2001, "Trade and Competition in Shipping Services and the GATS," *Review of International Economics*, 9(2).

Francois, J.F., H. van Meijl and F.W. van Tongeren (2003), *Economic Benefits of the Doha Round for the Netherlands*, report submitted to the Ministry of Economic Affairs, Directorate-General for Foreign Economic Relations, Netherlands.

Francois, J.F., H. van Meijl and F.W. van Tongeren (2005), "The Doha Round and Developing Countries," *Economic Policy* (April).

Francois, J.F. and I. Wooton 2005, "Market Structure in Services and Market Access in Goods," CEPR discussion paper: July.

Francois, J.F., B, Hoekman and M. Manchin, 2005, "Preference Erosion and Multilateral Trade Liberalization," CEPR discussion paper: August.

Hansen, B. E. 2000, 'Sample Splitting and Threshold Estimation', *Econometrica,* 68: 575-603.

Herin, J. 1986, 'Rules of Origin and Differences Between Tariff Levels in EFTA and in the EC, European Free Trade Association', Economic Affairs Department, Occasional Paper No. 13.

Hoekman, Bernard. 1993. "Rules of Origin for Goods and Services: Conceptual Issues and Economic Considerations," *Journal of World Trade*, 27(4), 81-100.

Hoekman, Bernard. 2004. "Dismantling Discrimination Against Developing Countries: Access, Rules and Differential Treatment," CEPR Discussion Paper No. 4694.

Hoekman, B. and C. Özden. 2005. "Trade Preferences and Differential Treatment of Developing Countries: A Selective Survey," Policy Research Working Paper 3566, World Bank.

Hudec, Robert, 1987, *Developing Countries in the GATT Legal System* (London: Trade Policy Research Centre).

Ianchovichina , Elana, Aaditya Mattoo and Marcelo Olarreaga, 2001. "Unrestricted Market Access for Sub-Saharan Africa: How Much Is It Worth and Who Pays?," *Journal of African Economics* 10(4), 410-32.

IMF. 2003. "Financing of Losses from Preference Erosion, Note on Issues raised by Developing Countries in the Doha Round," Communication to the WTO from the International Monetary Fund, No WT/TF/COH/14, 14 February.

International Monetary Fund and The World bank (2002), Market access for developing countries exports – Selected issues. Mimeo, September 2002.

Langhammer, R. and A. Sapir, 1987, *Economic Impact of Generalized Tariff Preferences* (London: Trade Policy Research Center).

Limão, Nuno and Marcelo Olarreaga. 2005, "Trade preferences to small countries and the welfare costs of lost multilateral liberalization," Policy Research Working Paper 3565, The World Bank.

OECD (2003), "Doha Development Agenda: Welfare Gains from Further Multilateral Trade Liberalisation with Respect to Tariffs", TD/TC/WP(2003)10/Final, Paris.

Olarreaga, M. and C. Özden. 2005, "AGOA and Apparel: Who Captures the Tariff Rent in the Presence of Preferential Market Access?" *World Economy* 28(1), 63-77.

Özden, C. and Gunjan Sharma. 2004. "Price Effects of Preferential Market Access: the Caribbean Basin initiative and the apparel sector," Policy Research Working Paper 3244, World Bank.

Page, Sheila. 2004. "Preference Erosion: Helping Countries to Adjust," ODI Briefing Paper, available at www.odi.org.uk.

Panagariya, A. 2000. "Preferential Trade Liberalization: The Traditional Theory and New Developments," *Journal of Economic Literature*, 38(2), 287-331.

Stevens, Chris and Jane Kennan. 2004, "Making Preferences More Effective". Institute for Development Studies briefing paper.

Tangermann, S., 2002 "The Future of Preferential Trade Arrangements for Developing Countries and the Current Round of WTO Negotiations on Agriculture," Rome: FAO.

UNCTAD (2004), "Beyond Conventional Wisdom in Development Policy: An Intellectual History of UNCTAD (1964-2004)," UNCTAD/EDM/2004/4.

U.S. Department of Agriculture (USDA), "The Road Ahead: Agricultural Policy Reform in the WTO, Summary Report." *Agriculture Economic Report* No. 797, Washington, DC: Economic Research Service, U.S. Department of Agriculture, January 2001.

USTR, 2003 "2003 Comprehensive Report on US Trade and Investment Policy Toward Sub-Saharan Africa and Implementation of the African Growth and Opportunity Act," USTR, Washington DC.

United Nations Economic Commission for Africa (2004), Trade Liberalization under the Doha Development Agenda: Options and Consequences for Africa, draft.

World Bank *Global Economic Prospects 2004* The World Bank: Washington, DC, October 2003.

For Whom is a Level Playing Field a Global Public Good?

Raphael Kaplinsky
Institute of Development Studies
University of Sussex

Summary

Trade liberalisation has been widely supported as a global public good in the expectation that it will provide benefits to the majority of participants in the global trading system. However, the theoretical case for this policy agenda is based on three key assumptions – full employment; the immobility of capital; and resource transfers to facilitate restructuring and dynamic comparative advantage. Each of these assumptions defies reality, particularly with China's increasing participation in the global economy. The consequence is the growth of global excess capacity, declining prices of many manufactures (particularly those produced by low-income economies) and possibly in the manufactures/commodities terms of trade, and the growing unequalisation of incomes. These outcomes challenge the case for trade liberalisation as a global public good, that is understanding "good" in its normative sense as a welfare outcome. This calls for alternative policy agendas designed to rebalance the structural mismatch between supply and demand, to encourage upgrading and the growth of dynamic capabilities in low-income economies, and to manage global market access. UNIDO has an important role to play in the development and support of these latter two policy agendas in low-income economies.

1. The level playing field as a global public good

Three main characteristics define public goods. The first is that there are externalities, which may either be positive or negative. The second is that they are non-excludable (it is difficult to limit access) and non-rivalrous (they are not used-up in their consumption). And, third, they lend themselves to common action (although the domain of this cooperation may vary).

As Sagasti and Bezanson note, "[i]n reality, public goods are rarely 'pure' and, in practice, non-excludability and non-rivalry are attributes that characterise a public good, to varying degrees (this is what gave rise in the economic literature to the concepts of 'impure' and 'mixed' public goods). Thus, a line has to be drawn, somewhat arbitrarily, to define how much of these two features are required for a resource, service or commodity to be considered a public good" (op. cit: 52). The World Bank's perspective on global public goods reflects these ambiguities – "global public goods are commodities, resources, services – and also systems of rules or policy regimes with substantial cross-border externalities – that are important for development and poverty-reduction, and that can be produced in sufficient supply only through cooperation and collective action by developed and developing countries" (World Bank, 2001: 110).

Efficiently functioning markets display many of the characteristics of public goods. In particular their costs and benefits are considered to be non-excludable and non-rivalrous. These properties apply equally to global markets and hence, for many, trade liberalisation has come to be considered as a global public good – "The [global trading] regime's benefits and costs are non-rival and non-excludable for actors in member countries. Moreover, the larger

the number of nations joining the regime and adhering to its rules, the firmer and more important the rules are for already existing members. Thus, the multilateral trade regime has the properties of a public good "(UNDP, 2002: 17).

Two related problems have been identified for low-income economies with regard to this particular form of global public good (UNDP, 2002: Mendoza, 2003). The first is the issue of under-provision. That is, many low-income economies find themselves trading in an asymmetrical trading environment, forced to liberalise their markets to incoming manufactures, whilst at the same time finding their access to external markets for raw and (especially) semi-processed commodities limited by various forms of protectionism. Hence the widespread call for an "even playing field". The second is the demand that low-income economies play a more prominent role in the definition of the global trading system in order to ensure that these inequities are not sustained.

Both of these policy-related responses to global trade liberalisation are premised on the gains to be realised from global integration. These, in turn, are based on an intellectual architecture which whilst mindful of the redistributional character of trade policy reform and renewed patterns of specialisation and trade, lives in a positive-sum world of mutual gains from trade. But what happens if this intellectual architecture is flawed, and if there is a significant number of trading partners in the global system who are structurally excluded from the benefits of trade and suffer adversely from the extension of a liberalised trading system as a global public good?

This Chapter considers the circumstances in which this adverse outcome to trade liberalisation might emerge, and briefly sketches out some of the policy implications which arise. It departs from the "efficient-markets-as-public-goods" school by questioning the extent to which global markets clear. Section 1 sets out the intellectual case for the gains from trade. This is followed in Section 3 by a questioning of three key related assumptions in this theoretical framework, namely that there is full employment in all trading nations, that there is immobility of capital, and that funds are available to facilitate respecialisation as economies deepen their participation in global markets. The fact that these assumptions do not hold has led to a number of adverse outcomes, affecting low-income economies in Africa and Latin America particularly adversely. And these are considered in Section 4. The implications for policy and the case for trade liberalisation as a global public good are the subject matter of the final section.

2. Intellectual architecture: the gains from trade

There is widespread support for trade liberalisation as a means of meeting the objectives of the Millennium Development Goals and particularly as a mechanism for reducing global poverty. For example, the World Bank's 20002 report entitled *Globalization and Poverty: Building an Inclusive World* (World Bank, 2002) argues that the two billion people living in absolute poverty reside in countries reluctant to deepen their participation in the global economy. If globalisation deepens further, the argument goes, then eventually all (or nearly all) of the world's poor will be lifted out of absolute destitution. It pursues the case both for further globalisation (notably through rapid growth in developing country exports of manufactures) and for a programme of policy reform which pushes marketisation and deregulation. In this view, globalisation "has generally supported poverty reduction" and "would not have been feasible without a wide range of domestic reforms covering governance, the investment climate and social service provision" (pp ix-x). Although the Bank recognises that there is some dispute about these issues, it pulls few punches - "the doubts that one can retain about each individual study threaten to block our view of the overall forest of evidence. Even though no one study has established that openness to trade has unambiguously helped the representative Third World economy, the preponderance of

evidence supports this conclusion." (p. 37). Consequently, "[i]n sum, global economic integration has supported poverty reduction and should not be reversed" (p. xi).

The view that trade liberalisation has broadly supported economic growth and poverty reduction is supported by the basic building blocks of much economic theory. The first of these tenets can be traced to Smith's views on the benefits of specialisation. The Wealth of Nations begins as follows: "The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgement with which it is any where directed, or applied, seem to have been the effects of the division of labour" (Smith, 1776: 13). For Smith, there were three components to this division of labour which facilitated productivity growth. The first was familiarity and specialisation of task by the individual labour; the second was that specialisation meant that workers did not waste time by downing tools and picking up new tools as they performed multiple tasks; and the third was the specialisation of machinery manufacture which led to the development of capital goods firms producing equipment to mechanise production.

A necessary corollary of this division of labour is the development of markets in which products can be bought and sold. (This, of course, lies at the centre of Smith's model of economic growth). For Smith, a key component of the link between markets and specialisation is scale – "as it is the power of exchanging that gives occasion to the division of labour, so the extent of this division must always be limited by the extent of the market" (ibid.: 31). The larger the market, the greater the opportunities for specialisation and productivity gains.

Although Smith argued that international trade was an important component of economic growth, the benefits of specialisation and the division of labour *between countries* is most closely associated with Ricardo. In the theory of comparative advantage, Ricardo established the case for mutual gain through inter-country specialisation and international trade.

It is this combination of division of labour and inter-country specialisation in comparative advantage that provides the intellectual underpinnings for the mutuality of gains arising from globalisation. But, woven into this framework is a critical assumption that "markets clear", that is, that what is produced is consumed in an unproblematic way. Ricardo was explicit about this, leaning on the work of the eighteenth century French economist Jean-Baptiste Say, who argued that supply necessarily creates its own demand - "In an economy with an advanced division of labour, the means normally available to anyone for acquiring goods and services are the power to produce equivalent goods and services. Production increases not only the supply of goods but, by virtue of the requisite cost payments to the factors of production, also creates the demand to purchase these goods. 'Products are paid for by products' in domestic as well as in foreign trade; this is the gist of Say's Law of Markets".[47]

A final plank in the construction of a case for the mutual gains arising from globalisation and specialisation is the argument that comparative advantage is dynamic, and this requires firms and countries to graduate from low-technology and labour-intensive sectors to higher-technology and more capital-intensive sectors. In the 1930s, the Japanese economist Akamatsu developed a "flying geese" model to describe the proposed dynamic trajectory of the region in Japan's "Greater east-Asian Co-prosperity Sphere" (Akamatsu, 1962); more recently, Balassa developed the idea of a step-ladder, with second-tier newly industrialising countries filling the sectors vacated by Japan and the first-tier newly industrialising economies as their wages rose and as they, in turn, moved into higher technology sectors (Balassa, 1989).

---

[47] This is Blaug's summary of Say – Blaug, 1985: 149.

3. Questioning the case for openness

There are three critical assumptions in this intellectual architecture for the gains from trade liberalisation. The first is the existence of full employment in both exporting and importing economies. Without this it makes less sense for each country to specialise in its area of comparative advantage, especially if (as in the case of Ricardo's original – and fanciful - example of wine and cloth) a country has an absolute advantage across a range of products. A second linked and key assumption is in regard to the mobility of capital. Ricardo argued that if capital (and skilled entrepreneurship) was mobile, then in the case that a particular country had unemployed resources and an absolute advantage in all products it "would undoubtedly be advantageous to the capitalists of England, and to the consumer of both countries, that under such circumstances, the wine and the cloth should both be made in Portugal, and therefore that the capital and labour of England employed in making cloth, should be removed to Portugal for that purpose" (Ricardo, 1817: 136). In other words, it would not only pay "Portugal" as an economic entity to produce all the products it needed, but also that it would provide English entrepreneurs with a higher rate of profit if they produced in Portugal and exported the output to England. And, third, although Ricardo was not explicit on this, the pursuit of the dynamic comparative advantage which Balassa and others argue is necessary for a win-win outcome to globalization, requires income transfers to facilitate producers moving from one activity to another.

How realistic are these assumptions in the contemporary world?

3.1 Questioning the assumption of full employment

As we saw, Ricardo's framework of comparative advantage explicitly rested on Say's assumption of full employment. This assumption that labour markets have a tendency to clear continues into the twenty-first century, and is validated by Keynesian macroeconomic policies which have been so influential since the depression years of the 1930s. Keynes departed from the thinking of his day by problematising the phenomenon of unemployment. But he did so in a framework which saw unemployment as a manageable and *temporary* departure from a world of full employment. He argued that Say's assumption that supply created its own demand was essentially true, but that there was often a temporary misalignment between supply and demand which required active state intervention to resolve.

There is, however, an alternative body of thinking on labour markets which instead of assuming a systemic tendency towards full employment, argues that there is a systemic tendency towards a reserve army of labour. This is to be found in the writings of classical economists such as Malthus and Marx. It was Marx in particular, who argued that technological change would lead to a disproportionate saving of labour inputs as output grew much more rapidly than labour demand. But the labour-surplus economy is also a central component in the W. A. Lewis model. Lewis argued that in most developing countries there was a dual economy – one segment comprised a modern sector with near-full employment, and the second comprised a sector characterised by heavily disguised unemployment, where people undertook all kinds of work at very low (and often zero) productivity. Lewis believed that over time the modern sector would seep up labour from the secondary low-productivity sector, and that in the long-run there would be a tendency towards full employment. This, he believed had occurred in the rich countries who, faced with a labour shortage, could either encourage immigration (which he thought politically unlikely) or export capital to countries which continued to have a labour surplus – "When the labour surplus disappears our model of the closed economy no longer holds. [However] in the real world … countries which achieve labour scarcity continue to be surrounded by others which have abundant labour … available … at a subsistence wage"(Lewis, 1954: 435). Lewis's analysis of cane sugar showed that despite sustained productivity growth, wages of sugar workers failed to grow between 1870-1954 due to reserve army of labour. One final observation of Lewis is worth keeping in mind

– his model, he argued, only applied to unskilled labour, since it was evident to him that skilled labour was indeed a scarce input, both in rich and poor countries.

To summarise Lewis, in a closed economy there may be circumstances in which labour markets become tight. But once global barriers are reduced, either migrant labour saturates the labour market in countries formerly characterised by near-full employment, or imports from labour-surplus economies have the same effect. The net effect of either of these outcomes will be to depress the incomes of all of those whose livelihoods depend on the work which can be performed by this surplus labour force. This may either be because wages in the formerly tight labour market are depressed, or because the global labour pool forces widespread unemployment.

Our argument is that this is precisely what is happening in the current phase of globalisation, and that the full effects of what will become a major phenomenon are only being hidden in the rich countries by the trade deficits which allow labour to be absorbed into the non-traded service sectors of the rich country economies. Moreover, the spectre of a global reserve army of labour is emerging to affect medium- and long-term employment and wage rates as the large labour surplus in China, India and elsewhere is made available to support global production networks.

Let us consider the evidence, beginning with the recent period. A striking feature of the massive recent expansion in manufacturing output and trade globally has been that it has been a process of jobless growth. More than that, as we shall see, it might be termed a process of job-destroying growth. From the perspective of the high-wage economies this is perhaps not surprising, since they have been experiencing linked processes of offshore-outsourcing and labour-saving technical change. But it is surprising when, as in the case of low-income exporters of manufacturers, employment-displacement is associated with a very rapid growth of industrial production and manufactured exports.

During the 1990s there was a vigorous academic debate amongst economists as to how much the job-loss in the US and the EU was due to trade with developing countries. Authors such as Wood had argued that much of this job-displacement (and the concomitant worsening of income distribution) was due to the rapid rise in imports from developing countries (Wood, 1994). The riposte to this trade-based explanation was that it was rapid labour-saving technical change rather than the rapid growth of imports in labour-intensive sectors which explained the loss of jobs in manufacturing (Lawrence and Slaughter, 1993). In fact these two explanations are not entirely disconnected, because to some extent the spur for labour-saving technical change was the growing threat of import competition.

Whatever the reason for this job-displacement in manufacturing, it has indeed been significant. Table 1 shows that in the largest 14 OECD economies – the economies with high-wages threatened by imports from low-wage economies – employment in formal-sector manufacturing fell by eight percent between 1995 and 2002. But what is perhaps even more surprising is that contrary to expectations, there was an even more significant fall in employment in China (by 15 percent), and by 20 percent in the third largest developing country manufacturing sector (Brazil). The overall picture for these 17 largest manufacturing economies was a decline in total employment in formal sector manufacturing from 200m to 176m, a fall of 12 percent in seven years.

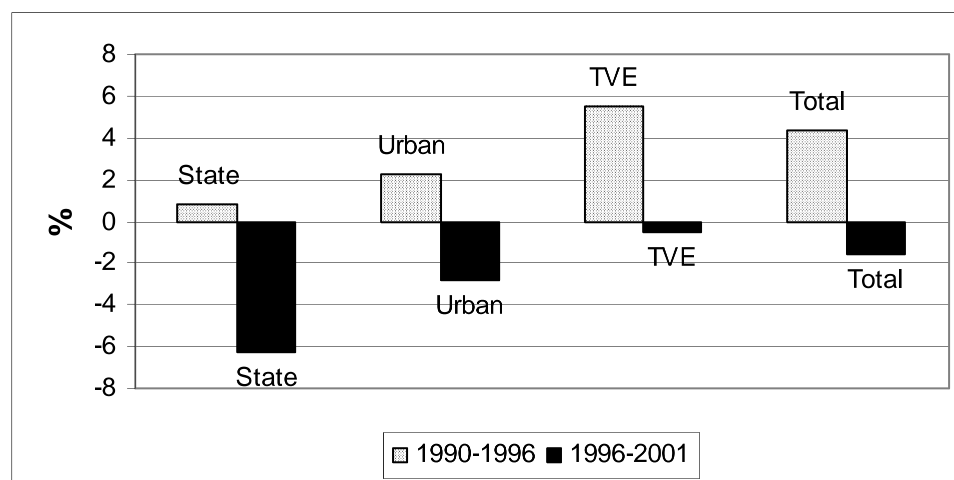
Table 1 Employment in formal sector manufacturing

	Employment ('000)				*Index of employment (1995=100)*			
	*OECD 14**	*China*	*India*	*Brazil*	*OECD 14**	*China*	*India*	*Brazil*
1995	85,623	98,030	6,500	9,438	100	100	100	100
1996	84,508	97,360	6,800	8,739	99	99	105	93
1997	83,003	96,120	6,900	8,381	97	98	106	89
1998	81,728	83,190	6,800	7,882	95	85	105	84
1999	81,266	81,090	6,700	7,420	95	83	103	79
2000	81,486	80,430	6,600	7,478	95	82	102	79
2001	80,535	80,830	6,400	7,565	94	82	98	80
2002	78,761	83,080	6,500	7,556	92	85	100	80

* =US, Canada, Germany, UK, Japan, Russia, Italy, France, Taiwan, Korea, Spain, Netherlands, Austria, Sweden.
Source: Calculated from Carson, 2003.

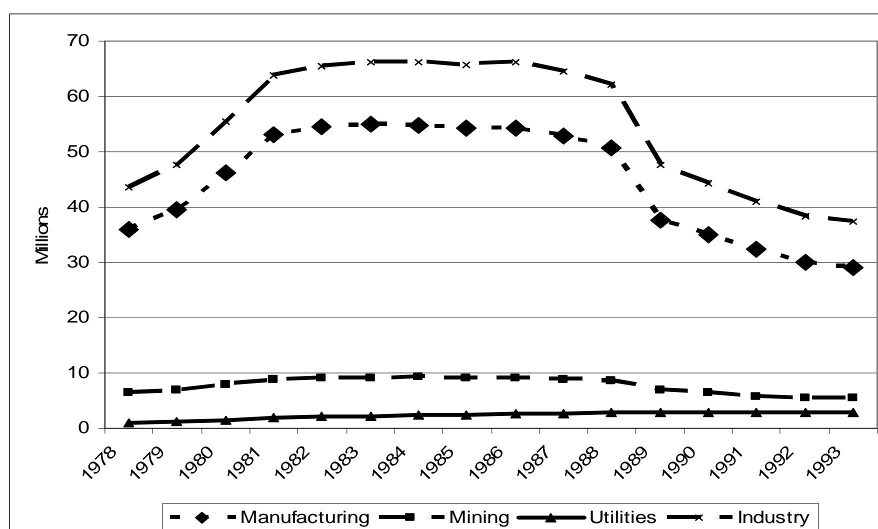
The picture for China is particularly surprising since it has been such a successfully growing economy. It is also a particularly important economy due to its size, with a formal sector employed labour force larger than that in the combined 14 largest OECD economies. Figure 1 shows how the rapid growth in employment during the first half of the 1970s gave way to a process of employment displacement during the 1990s, particularly in state-owned enterprises and township and village enterprises (TVEs). Figure 2 shows that as China entered the global economy after the early 1980s, this labour displacement was particularly acute in manufacturing. But it is also evident in mining. Even these numbers underestimate the extent of real labour displacement in China, since many people in the state-owned and township and village enterprises remain on the books but are effectively unemployed. This is because there remains a residue of enterprises which continue to keep workers on their payroll (so that they can get access to social security services) even though there is no sense in which they are actually working productively (Gu, 2003).

Figure 1 China's growth in employment (% p.a.)



Source: Rawski, 2003.

Figure 2 The evolution of sectoral employment in China, 1978-1993 (million workers)



Source: Rawski 2003.

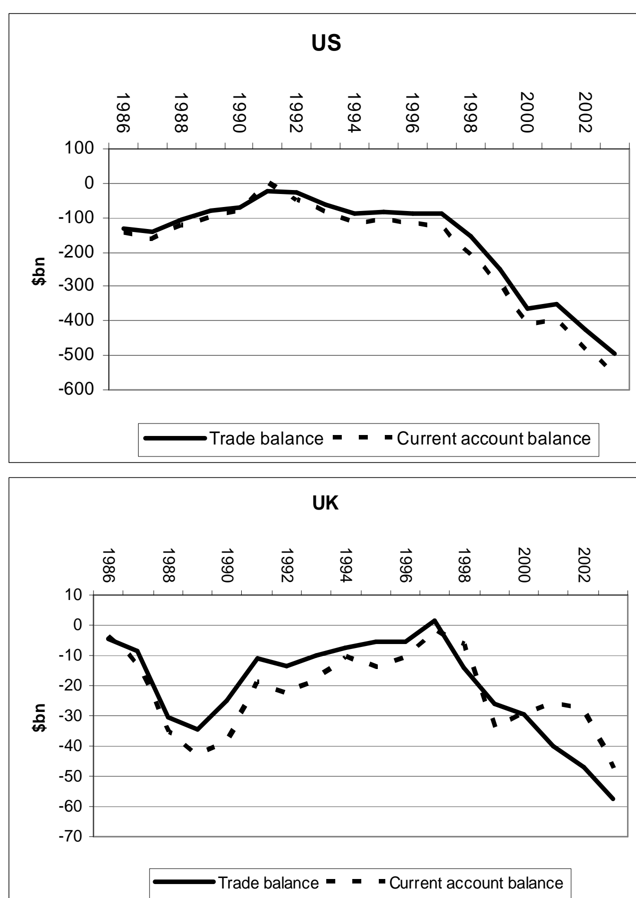
Nevertheless, despite this widespread job-displacement in manufacturing, unemployment has not surfaced as a major issue in most of the high income world. After all, the US economy, the world's largest, continues to experience relatively low rates of unemployment, as does the UK and (to a lesser extent) the EU. Although the rate of unemployment grew in most of the major OECD economies during the early years of the 21st century, this was nowhere near the rates of the depression years in the 1930s when unemployment reached and often exceeded more than 20 percent of the active labour force.

However, this rosy picture on employment is masked by an important structural feature of the global economy, in that two of the very largest economies (the US and the UK) have been fuelling both domestic and global employment growth through a rapid descent into balance of trade deficits (Figure 3). Moreover, despite earnings on the export of services, in both the US and the UK there have also been sustained balance of payments deficits. This has been particularly evident for the US, where the deficit on the current account increased rapidly from around two percent of GDP in 1997 to more than five percent in 2003; in the UK, the current account deficit averaged more than two percent of GDP between 1999 and 2003. The growth of these trade and payments deficits coincides with the massive growth in China's manufactured exports and India's service sector exports (largely of software) during the 1990s. It is notable that the US trade deficit in 2002 of $424bn was almost as large as its total manufactured exports ($569bn) and significantly exceeded the total of China's manufactured exports ($293bn) and those of Japan ($388bn).

These trade deficits have allowed consumers in these two countries to go on a buying spree. In the US, for example, on aggregate, from the late 1990s, private consumers have been spending around five percent more than they saved, and net personal savings rates in the UK have also fallen. Much of this consumption boom has been in labour-intensive personal services and this has helped to maintain domestic employment, despite the decline in manufacturing employment. But it has also helped to sustain employment in those countries exporting to the US and the UK (particularly in Asia, and especially in China), as well as in other countries (such as continental Europe and in east Asia) who have exported machinery and equipment and other inputs to those countries with sustained trade surpluses. In effect, these balance of payments deficits have had the same effect on an international plane as the Keynesian deficit-financing used by governments to stimulate domestic demand during the Great Depression of the 1930s. Were the surplus countries such as China, Japan and India to

"cash-in" these surpluses (leading perhaps to devaluations of the dollar and sterling, or through other measures to reduce demand, and thus for imports), then domestic demand – and employment - in the US and the UK would fall. (This is analogous to governments deciding to balance their books after a sustained period of deficit financing). The sustained nature and size of these savings and balance of payments deficits in the US and the UK are such that this situation cannot continue. The short- and medium-term prognosis on global employment is thus not good.

Figure 3 Balance of trade deficits, US and UK, 1986-2003

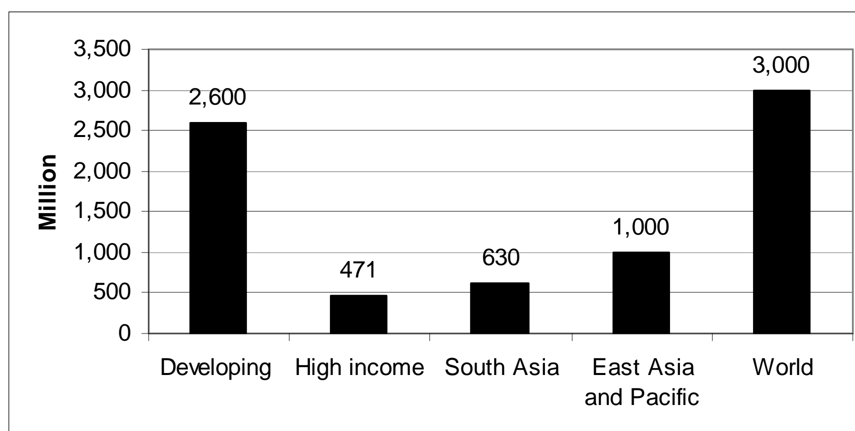


Source: www.OECD.org.

The long-term prognosis is probably even worse. Figure 4 shows the size of the global labour force, from which it is evident that the number of people available to work in low-income economies dwarfs that in the high-income high-productivity economies. Much of this developing country labour force, as Lewis indeed argued, is either unemployed, or works at very low-productivity and is often in the informal sector. In many developing countries, the effective rate of unemployment is high. In some countries such as South Africa the effective rate of unemployment is more than 30 percent.

But it is China, and to a lesser extent India, that the numbers are so startling. The two countries have labour forces of 770 million and 470 million respectively. As we have seen, China's formal sector manufacturing employment is already larger than that of the 14 largest high-income economies combined. This is something less than 100 million jobs. Yet, a variety of observers concur that there are something like 100-150 million people in China currently working at very low levels of productivity and who are waiting to be absorbed into the global economy. This surplus labour force, as can be seen in relation to Figure 4 is equivalent to more than one-quarter of the total labour force in all high-income economies.

Figure 4 The global labour force (2002)



Source: World Bank World Development Indicators.

Yet this labour surplus does not show-up in Chinese labour statistics: "The officially released low (formal) unemployment figures, however, do not reflect the severity of the actual high unemployment … [which] .. takes place in urban China not in the form of open unemployment, but rather in the form of lay-offs. Laid-off workers, according to an official definition, are those who loose (sic) their jobs as their employing units encounter economic difficulties, while still maintaining their nominal employment relationship with their employees" (Gu, op. cit: 2). Rawski concludes that "[e]xpansion of formal employment during the 1990s is entirely attributable to increases in rural jobs. [and] employment prospects deteriorated dramatically after 1995, with large numbers pushed out of the formal sector" (Rawski, 2003: 4-5). One of the consequences of the opening-up argues Rawski, is that the barriers to domestic migration have dropped sharply, so that up to 100m people moved their place of residence during the 1990s.

The Chinese labour market is a segmented one. Recent figures (although the numbers should be treated with a great caution) suggest a conflicting picture on the evolution of real wages. Some observers conclude that the effect of this labour surplus has been to reduce wage pressures - "Unlike the situations in Japan and the newly industrialising Asian economies, where the supply of labour quickly hit the limits with wages shooting up, China's market wages for the unskilled labour in major manufacturing centres such as Guangdong have been stagnant at a subsistence level around $100 a month for more than a decade" (Cheong and Xiao, 1993: 129). However others dispute this. In Guangdon in 2002, with a sample of 21,543 firms, (of which roughly half, 46.5%, were exporters), average wages were $138, those for exporting firms were $145, and those for non-exporters were $120 (Rawski, personal communication). What appears to be happening is that enterprises which are moving into higher value added products and technologies are indeed raising wages in the coastal regions, albeit at a rate which is much lower than the growth in GDP. In addition, new migrant workers are streaming into the coastal regions and keeping marginal wages low in the coastal regions. At the same time, the vast interior is being opened-up, and new investments which require low wages to compete globally, are moving into the hinterland. A the Japanese managing director of a Chinese subsidiary observed - "If we run out of people we just go deeper into China" (Financial Times, February 4, 2003). It is this labour market segmentation which explains the fact that despite rising wages in some parts of the economy, the US International Trade Commission concluded that global apparel production was likely to shift to China when clothing protection is removed in the major high-income economies (USITC, 2004).

All of this accords with the Lewis (and indeed Marx's) model except that Lewis had argued that the reserve army would be gradually absorbed. If the numbers we have documented above are correct, this absorption will take a very long time, particularly as technology is becoming ever more labour-saving in nature. But, secondly, Lewis also argued that this reserve army of labour was predominantly unskilled in nature, and it is here that the global picture is changing structurally. Many developing economies have invested substantially in skill development. For example, Table 2 indicates the extent of this skill development in China. Almost all children of school age are enrolled in schools, with high levels of progression to secondary and senior secondary schooling. The aggregate numbers having completed schooling are very substantial, and the quality of schooling (as reflected in teacher-pupil rates) compares well with many high-income economies. But China, although probably much more advanced than other low-income economies, is not unique. India has a long history of tertiary education, and this has been reflected in recent years by very strong growth of information technology exports. The consequence is that the job-displacement previously experienced by the manufacturing sector in the US has now begun to also affect professional services. As Figure 6 shows, whereas historically electrical engineers and computer scientists experienced an unemployment rate less than half that of the US labour force in general, by 2001 this pattern no longer held and they experienced similar rates of unemployment as in the economy in general. In other words, the reserve army of labour of Marx and Lewis is no longer confined to unskilled workers.

3.2 Questioning the assumption of capital immobility

In Ricardo's world, countries continued to trade because investment was immobile. But if it were mobile, and if Portugal had unused resources, then Ricardo believed that capital would move to Portugal in the search for higher profits. The result would be expanding activity in Portugal, and declining production in England. Abstracting from this theoretical mind-construct of Ricardo, a similar story can be developed for the actuality of the contemporary world. Given the lower costs of production in a region – across a range of sectors – and given the mobility of investment capital, production will become increasingly concentrated geographically. In reality this has meant a flow of investment resources to the Asian region in general, and to China in particular.

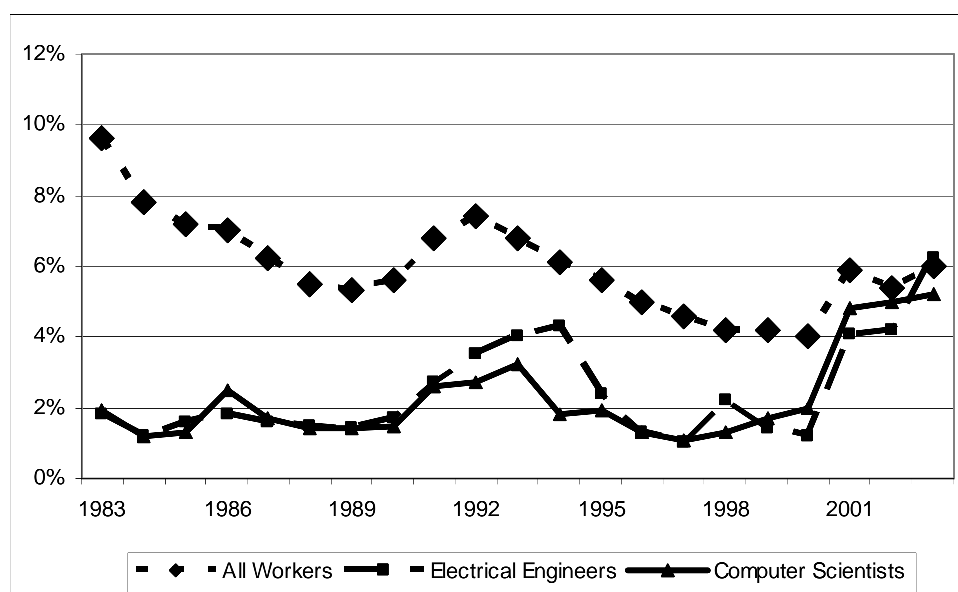
Although much of the capacity expansion in low income economies in general and China in particular was financed domestically, a considerable proportion was externally sourced, by a combination of indirect private portfolio-investments into stock markets, and direct foreign investment into enterprises. For example, throughout this period, inward flows of investment accounted for more than 10 percent of all gross fixed capital formation in China. Table 3 shows the extent and distribution of these flows of foreign direct investment between 1991 and 2002. Following the 1997 Asian crisis, the proportion of FDI going to the developing world fell, as investor confidence was dented. But a striking feature of these investment flows was their concentration. For almost all of this period, more than half of total FDI going to the developing world went to Asia, and a rising proportion of this was directed to Hong Kong and China, playing a significant role in its expansion of manufactured exports. Indeed, China and Hong Kong absorbed between one-third and two-fifths of all FDI going to the developing world for most of this period.

Table 2 Development of the Chinese educational system, 1985-2002

	1985	*1990*	*1996*	*2000*	*2002*
% of school age in primary education	96.0	97.8	98.8	99.1	98.6
% of primary school graduates entering junior secondary school	68.4	74.6	92.6	94.9	97.0
% of junior secondary school graduates entering senior secondary school	41.7	40.6w	48.8	51.1	58.3
Numbers in technical secondary schools	61,000*	1,567,000	3,348,000	4,125,000	3,962,000
Number of students studying abroad	2,124	2,950	20,905	38,989	125,179
Numbers with:					
University education			6,140,000		
Three years of college education			9,620,000		
Completing specialised secondary school			17,280,000		
Completing senior secondary school			72,600,000		
Completing junior secondary school			263,000,000		
Completing primary school			420,000,000		
Number of full time teachers					
Higher education	247,000	395,000	403,000	463,000	618,000
Secondary schools	3,171,000	3,492,000	4,040,000	4,723,000	5,030,000
Primary schools	5,499,000	5,582,000	5,736,000	5,860,000	5,779,000
Pupil teacher ratio					
Colleges and universities	5.0	5.2	7.5	12	14.6
Secondary schools	17.2	14.6	16.4	18.2	18.7
Primary schools	24.9	21.9	23.7	22.2	21
Number of books published	21,621	80,224	112,813	143,376	170,962

* 1980
Source: China Statistical Abstract, 1997; China Statistical Yearbook 2003.

Figure 6 US unemployment rates, 1983-2003



Source: Hira (2004).

3.3 Income transfers to fund restructuring

In a world of rapidly changing global specialisation, and even more rapidly changing technology, dynamic comparative advantage necessarily becomes a central component of development strategies providing for sustainable income growth. This requires the capacity to endogenise processes of upgrading by building dynamic capabilities in production. The upgrading challenge targets not just products and process technology, but also positioning within value chains and the capacity where necessary to move from highly competitive chains to chains which are characterised by higher barriers to entry.

Table 3 The size and geographical distribution of flows of foreign direct investment, 1991-2002

	1991-6 avr	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*
World annual flow ($bn)	254,326	481,911	686,028	1,079,083	1,392,957	823,825	651,188
Developing economies share of world total (%)	36	40	28	21	18	25	25
Africa as % developing	5.0	5.5	4.7	5.3	3.5	9.0	6.8
LAC as % developing	29.6	37.9	42.9	47.2	38.8	40.0	34.5
Asia as % developing	64.9	56.5	52.3	47.3	57.7	51.0	58.6
China and Hong Kong as % developing	34.5	28.8	30.6	28.3	41.7	33.7	41.0
India as % developing	1.2	1.9	1.4	0.9	0.9	1.6	2.1

Source: UNCTAD World Investment Survey (2003).

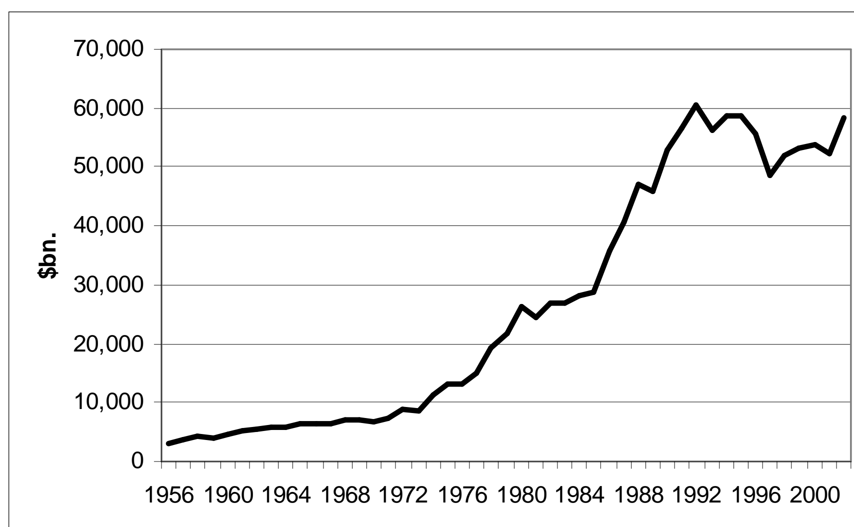
Achieving dynamic comparative advantage and the systemic capacity to upgrade requires appropriate industrial and technology strategies and policies. This strategic and policy framework includes the development of a stable macroeconomic operating environment with low rates of inflation, currency stability and affordable investment. It also requires the effective provision of resources required to cope with particular market failures across a range of sectors, for example in supporting training, research and development and investments in information technology. And, in some cases where governments are particularly effective, industrial restructuring can also be facilitated by sector-specific policies which target particular branches for concentrated support.[48]

However, underlying these industrial and technology policies designed to promote restructuring - particularly in the case of the poorest countries - is the availability of a pool of restructuring funds which governments can draw on, which are not short-term in nature, and which do not have to achieve a commercial rate of return. Aid-flows – transfer from rich-country governments and international institutions to poor-country governments - potentially provide just this form of restructuring resource.

During the late 1960s and early 1970s the rich countries committed themselves to increase aid-flows to the developing world in order to assist long-run growth processes. The spur for this was in part the massive transfer of resources from the US to Europe designed to aid reconstruction in the immediate post-war period – Marshal Aid Fund transfers to Europe accounted for more than two percent of US GDP between 1951 and 1955. Spurred by President Kennedy in 1961, the United Nations unanimously committed its rich-country member states to a flow of official, government aid equivalent to 0.7 percent of their GDPs. As Figure 7 indicates, however, after a period of growth between 1956 and the late 1980s, the absolute level of transfers of aid from rich-country governments to developing countries actually fell during the 1990s. This occurred despite a growth in the GDP in rich countries, so that aid transfers in aggregate had fell from 0.33 percent of rich country GDP in 1986-1992 to 0.22 percent between 2000-2003. To make matters worse, much of this aid destined for "developing countries" was targeted at countries which met key strategic interests. For example, in 2003 the major beneficiaries of US aid were almost all a reflection of geo-strategic considerations – in order of importance they were Egypt, Russia, Israel, Pakistan, Serbia and Montenegro, Columbia, Ukraine, Jordan, Peru and Afghanistan.[49] Similarly, the bulk of EU aid is destined for the European periphery (North Africa and Central and Eastern Europe) rather than to those countries in greatest need. Compounding these problems, the developing world (and particularly those economies which require the greatest assistance with restructuring) are mired in debt, so that most of the new, incoming aid funds are destined for the repayment of past inflows (since much "aid" does not come in grant form, but as loans which need to be repaid).

[48] For a discussion of the central components of technology policy, see Lall and Teubal, 1998; for the application of this framework to industrial policy, see Barnes, Kaplinsky and Morris, 2004; for a discussion of the four central components of industrial upgrading (process and product technology, repositioning within value chains, and switching value chains, see Humphrey and Schmitz, 2001 and Kaplinsky and Morris, 2001.
[49] http://www.oecd.org/dataoecd/42/30/1860571.gif.

Figure 7 Global aid flows to developing countries, 1956-2003*



* Includes debt-forgiveness
Source: www.oecd.org.

4. Challenged assumptions: with what consequences?

The unreality of these core assumptions has a number of consequences. Due to space limitations only three will be considered here, and briefly. (For more detail, see Kaplinsky, 2005). The first is the growth of global excess capacity, the second is the possibility of significant changes in the commodities/manufactures terms of trade, and the third is the extent to which this explains the differential fruits of globalisation.

4.1 Structural excess capacity

As we have seen, the rising flow of investment ambitions in the developing world has coincided with the search for new production outlets by foreign investors and for new sources of supply by global buyers. The consequence has been a significant growth in capacity in many sectors which in many cases exceeds all feasible demand. For example, in the auto sector, global production capacity (65m units p.a.) exceeded global demand (48m units p.a.) by more than 25 percent in 2004.

There are two major reasons for this systemic overcapacity. The first, and narrower reason, is the political will which sustains sunken investments despite their low profitability (Brenner, 1998). This has been the case in a number of sectors in the rich countries. Most markedly it occurs in agriculture, where each of the major triad economies (the US, the EU and Japan) provide substantial subsidies and effective protection to domestic producers, forcing global prices down to sub-economic levels. But it also occurs in manufacturing. For example, in the steel sector, many governments have responded to the threat of job-displacement by providing various forms of protection, including in the case of the US through the use of anti-dumping tariffs despite the lack of evidence that countries were exporting to the US at prices below costs. The scrapping decisions which help to bring supply into balance with demand have thus been undermined by the adverse political reaction to capacity reduction.

But, more broadly, there are periods in history in which investment surges. This longer-run perspective on investment is most closely associated with the writings of Schumpeter and Freeman who provided a theoretical framework for explaining the longer-term rhythms of the global economy (often referred to as Kondratieff long waves) (Schumpeter, 1961; Freeman, *et al.*, 1982). They argued that these long-run investment surges were associated with major enabling technological innovations such as the railways in the nineteenth century, and

information technology in the late twenieth century. But, more recently, Perez has provided a coherent explanation for the relationship between investment and production. She distinguishes four phases of each of the major technologically-based long waves. The first of these is that of “irruption”, when the new technology arrives, generally with a “big bang”, offering massive potential for use and profit. This is followed by a second phase, involving a frenzy of diffusion and a third phase in which this diffusion is extended. Phase four is one of maturity, when the potential of the previously new technology is diminishing and the gestation period of the new wave begins.

Why the distinction between the second and third phases if they both involve processes of diffusion? The answer is to be found, Perez argues, in the disjuncture between financial and productive capital. In the first phase there is a close correspondence between their interests. But towards the latter part of the second phase they move out of synch – finance capital gets locked into wild speculation and we observe bubble-economies – the dotcom bubble of the late 1990s, and the bubbles of earlier long cycles (for example, canal mania and railway mania). This leads to a period of crisis, a turning point in which there is a recoupling between the needs of productive capital which now in the third phase harnesses a more modest financial sector for its own needs. Then, in the fourth phase, as the cycle matures, financial capital begins to separate out from the dominant technological paradigm and to search for new opportunities, facilitating the gestation and irruption of the new cycle.

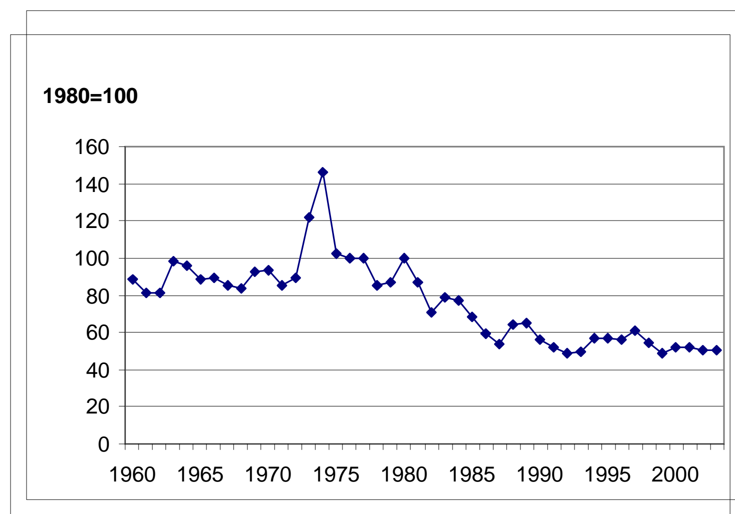
Perez argues that the investment boom of the late twentieth and early twenty-first century is precisely this period between the end of the second and the beginning of the third phase of the cycles. Financial instruments have been created which provide virtually unlimited investment funds, supporting ventures which cannot conceivably be justified by historic returns on investment. Capital is thus widely available to support new ventures, funnelled either through the foreign direct investment flows or the indirect portfolio investment flows documented above, or though the creation of finance in countries such as Japan and China whose banking systems have lent money to enterprises which have no prospect of repaying their loans. Lack of effective bankruptcy laws in China (enabling the scrapping of excess capacity) mean that banks are reluctant to enforce liquidation since they will lose all assets. In 2002 the official figure for all China’s bank loans showed that 23 per cent were non-performing, but the real figure was said to be around 40 per cent (Financial Times, 5th February 2003).

This overcapacity is reflected at a global level in a number of sectors. But it is in China where this frenzy of investment has been carried to the most extreme lengths, and where growing overcapacity is becoming a major problem. For example, in the first 10 months of 2002 China made 24m air-conditioners, but only sold 14m. At the same time, leading firms were expanding capacity even further – Midea, for example, doubled capacity from three to six million units in 2003. As a result prices fell at 15 percent p.a. and Midea increased its exports between 2001 and 2002 by 70 per cent (to $340m) and planned to increase further to $500m in 2003. In the production of microwaves where there was a similar pattern of excess capacity, prices fell from an average of Yuan 2,000 ($240) in 2001 to Yuan500 ($60) in 2003. The price of a 29-inch colour television fell from Yuan 6,400 ($770) in 1997 to Yuan 2,000 ($240) in 2002, again on the back of excess capacity (Financial Times, 5th February 2003).

4.2 The commodities-manufactures terms of trade

Much of the second half of the twentieth century was a period of inflation in the global economy. Although the price of most commodities rose, price inflation for manufactures was even higher. Consequently, the commodities/manufactures terms of trade fell by almost forty percent between the 1960s and mid-1990s (Figure 8). Since most developing economies tended to import manufactures and export commodities, they experienced an adverse trend in their barter terms of trade.

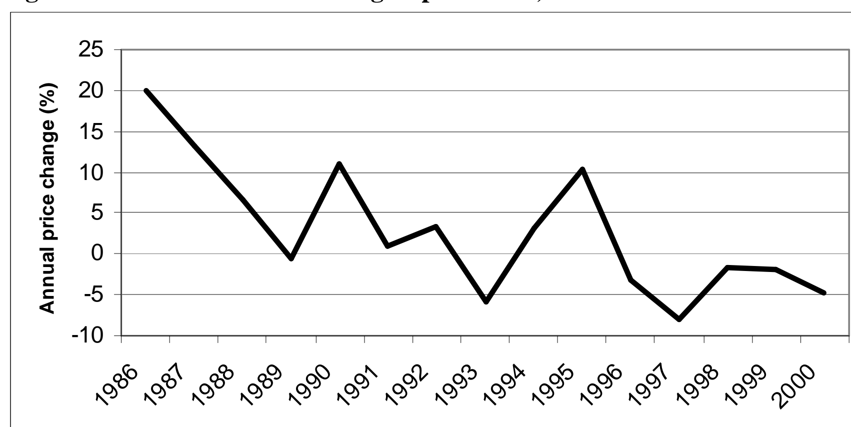
Figure 8 Commodities/Manufactures terms of trade



Source: Drawn from UNCTAD-database.

But at the turn of the millennium, new patterns in price formation began to emerge which threaten to change these terms of trade. By the mid 1990s, most economies had begun to get on top of high rates of inflation and for the OECD economies as a whole the rate of inflation at the turn of the millennium was less than 3 percent. This decline in the aggregate level of inflation reflected a gradual slowdown in the rate of price inflation of manufactures in the late 1980s, and then after 1998, in the absolute nominal prices of manufactures (Figure 9).

Figure 9 World Manufacturing Export Price, 1986-2000



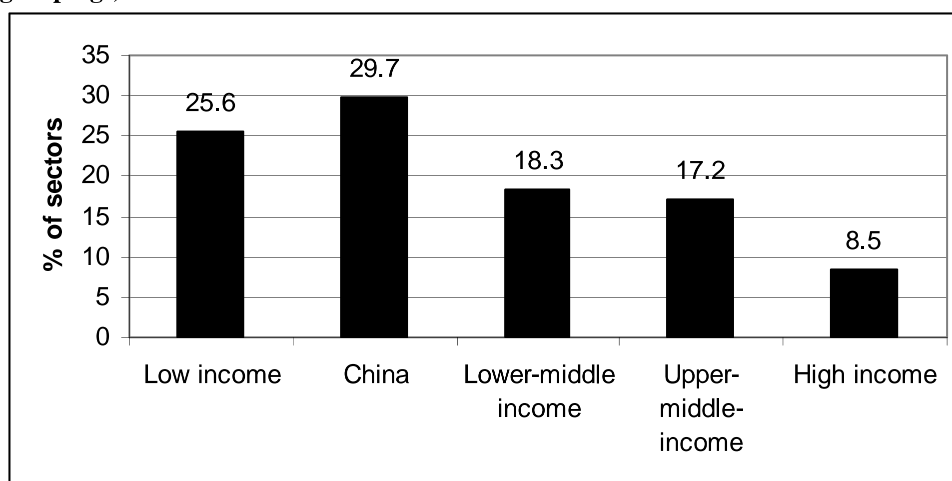
Source: IMF, World Economic Outlook Database, September 2003.

The literature on global prices of manufactures is almost entirely based on the use of aggregated data, mostly using SITC 3- and very occasionally SITC 4-digit classifications. This is not adequate for a detailed examination of prices. The HS trade classification system introduced in the late 1980s has a much finer degree of disaggregation and provides greater scope for the detailed tracking of product prices. At the 8-digit level there are more than 10,000 different HS product categories. An analysis of these product categories tracked the extent to which prices of EU imports fell in the period 1988-2001 (Kaplinsky, 2005; Kaplinsky and Santos-Paulino, forthcoming). The EU provides a unique data-set on international trade and is large enough to use as a surrogate for the behaviour of global product prices.

Figure 10 presents the results of this analysis. It focuses on the major product-groupings (classified at the 8-digit level) imported into the EU where developing country exporters were prominent. It reports the proportion of the sectors for which the unit-price of imports from different income-groups (and China) fell between 1988 and 2001. It can be seen from this that in almost one-third of these sectors, the price of Chinese-origin products fell. In the case of products emanating from low-income economies, the proportion of product group in which unit-prices fell was around one-quarter. As a general rule, the higher the per-capita income group of the exporter, the less likely unit-prices were to fall. Thus, within a significant number of product groups, the prices of products exported into the EU by China and low income economies were more likely to decline than the prices of the same products-groupings sourced from other high income economies.

We draw two conclusions from this analysis of the price of globally traded manufactures. First, the greater China's participation in global product markets, the more likely prices will fall. And, second, this seems to have a disproportionate impact on the low income country group who face intense competition from Chinese producers.

Figure 10 Percentage of sectors with negative price trends, 1988/9-2000/2001 by country groupings)



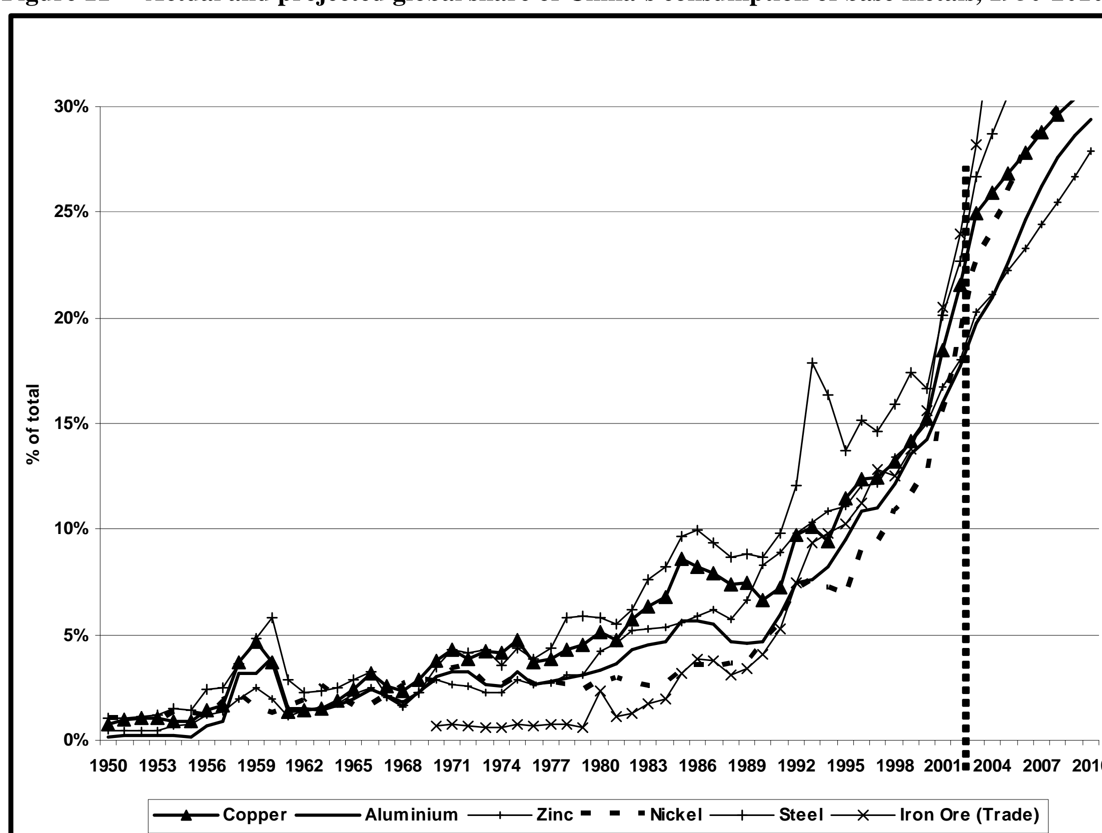
But at the same time that the price of traded manufactures has begun to fall, there was also a change in the trend price of many commodities. By definition, manufactures involve the transformation of inputs into outputs – in the case of automobiles, for example, more than 5,000 components are involved, and each of these in turn requires the input of a variety of raw- and semi-processed materials. The advance of global value chains over the last two decades of the twentieth century, resulted in a significant increase in global trade in components and hence in a growth of import intensity in export production in almost every country. For example, in the case of China, the proportion of export revenue which reflected direct imports into production processes rose from eight to 12 percent between 1980 and 1998, and in the case of direct and indirect imports (that is, taking account of the imports going into the production of domestically-sourced inputs), it rose from 15 to 23 percent in the same period (Martin and Manole, 2003).

Consequently, with rapidly-growing production destined for both the domestic and export market, it is not surprising that China has become a very large market for the exports of other countries. In many cases, it has imported manufactured products, particularly capital goods from Japan. In addition, Chinese exports of products such as consumer electronics, have

involved the assembly of components sourced from the East Asian region.[50] However, from the perspective of developing economies, it is China's sourcing of "hard" and semi-processed commodities which represent a particularly significant impact on prices in the global economy.

Focusing on basic metals as an example, China's demand for imports has been fuelled by three factors. The first has been the rapid growth of domestic demand for household consumer goods and autos (where production has grown at a dramatic pace). Secondly, there has been very substantial investment in infrastructure, both in the public and private sector, and this has been particularly basic-metal intensive. And, thirdly, many of China's exports have been of metal-based products. Consequently**,** China's share of global demand for the main base metals (aluminium, copper, iron ore, nickel, steel and zinc) grew from seven-ten percent of global demand in 1993 to 20–25 percent in 2003. In the case of steel, its share has grown from less than 10 percent in 1990 to more than 25 percent in 2003, equivalent to three times that of Japan, and more than either the EU or the US (around 20 percent each). Between 2000 and 2003, China's share of the increase in global demand for aluminium, steel, nickel and copper was 76 percent, 95 percent, 99 percent and 100 percent respectively. As Figure 11 shows, its projected utilisation of these basic metals is likely to grow even further in the future, in part because of its relatively low per-capita consumption of these materials (Table 4) – bear in mind, China accounts for more than 20 percent of global population, and it is inevitable that as incomes grow and the minerals-intensity of consumption grows as it has in other countries, this will continue to lead to rising demand for imported materials.

Figure 11 Actual and projected global share of China's consumption of base metals, 1950-2010



Source: Macquarie Research Metals and Mining, personal communication (2004).

[50] China's trade deficit with East Asia grew from $4bn in 1990 to $40bn in 2002, and the region's share of China's merchandise imports grew from 55 to 62 percent in the same period (Lall and Albaladejo, 2004).

This thirst for mineral imports is also reflected in the food sector, where falling land availability (a consequence of rising industrialisation) and stagnant agricultural productivity have led to rising food imports. In the first half of 2004, China had a trade deficits on foodstuffs of $3.7bn., including imports of 4.1m tonnes of foodgrains. It is predicted that this deficit will soar in the future - in the case of foodgrains, to around 40m tonnes by 2007 (Financial Times, 23rd August, 2004).

Table 4 The scope for China's increased consumption of basic metals, 1955-2003

	Kgs/capita			*GDP per capita ($US1995)*
	Aluminium	*Copper*	*Steel*	
Japan				
1955	0.6	1.2	80	5,559
1975	10.5	7.4	599	21,869
Korea				
1975	1.0	1.3	84	2,891
1995	15.0	8.1	827	10,841
China				
1990	0.7	0.6	59	342
1999	2.3	1.2	108	756
2002	3.3	2.0	160	933
2003	4.0	2.4	200	1,103

Source: Macquarie Metals and Mining, personal communication (2004).

Considering these trends in the prices of manufactures and hard commodities in tandem, it is possible that the early 21st century is witnessing a shift in the secular terms of trade. Instead of a decline in the barter terms of trade of manufactures against commodities we observe a much more complex picture of falling terms of trade of exporters of some manufactures against the exporters of some manufactures and some commodities. This poses considerable policy challenges not just for existing exporters of manufactures and commodities, but for potential exporters of these products.

4.3 Gainers and losers

In considering the incidence of gains and losses in the recent era of globalisation, we focus only on the differential in economic growth rates, classifying economies by their geographical region (see Kaplinsky 2005 for a more elaborate treatment). Table 5 shows the pattern of per capita income growth by these regions, The story is quite clear. East Asia appears to be a winner. South Asia does less well, but nevertheless achieves sustained per capita income growth. The significant casualties are Latin America and the Middle-East and North-Africa (a growth in the number of both the absolutely poor and low growth rates), and especially sub-Saharan Africa (large growth in the absolutely poor and declining per capita incomes for most of the 1980s and 1990s) and, to a lesser extent, Eastern Europe and Central Asia.

The notable performance of East Asian growth rates reflect in large part China's extraordinary growth of GDP (at around 10 percent annually) and manufactured exports (expanding at 17 percent per annum) after 1985. But it is more complex than this. Many of the raw materials, equipment and intermediate inputs underlying China's rapid growth (much of which is processed for exports to other regions) has been sourced from the East Asian region. China's trade deficit with East Asia grew from $4bn in 1990 to $40bn in 2002, and the region's share of China's merchandise imports grew from 55 to 62 percent in the same period (Lall and Albaladejo, 2004).[51] By contrast, the good performance of the South Asian region

[51] Lall and Albaladejo, 2004.

which reflects India's sustained and rapid growth, has not witnessed a similar process of intra-regional trade expansion.

Table 5 GDP/capita growth rates (1995 $PPP)

	1980s	*1990s*	*1997-2002*
East Asia & Pacific	6.2	7.1	5.6
Europe & Central Asia		-3.2	4.2
Latin America & Caribbean	-0.6	1.6	-0.4
Middle East & North Africa	-0.9	1.1	1.7
South Asia	3.3	3.4	3.2
Sub-Saharan Africa	-1.0	-0.6	0.6
World	1.6	1.5	2.0
China	8.3	9.3	6.7

Source: World Bank World Development Indicators (2004).

An indication of the potential impact of this East and South Asian competition on incomes in other developing countries can be gauged from recent Brazilian experience. A middle-income economy with a history of industrial production and manufactured exports. It has come to be caught in a pincer movement between competition from low-wage and efficient competitors from below, and higher-wage and efficient competitors from above. This has had important and adverse implications for the distribution of income amongst Brazilian wage earners. Comparing the period before and after 1992 (when trade was liberalised significantly and Brazil could be said to have decisively entered the globalising economy), the impact of this competition can be seen clearly (Arbache, Dickerson and Green, 2004). Between 1992 and 1999, despite an increase in the level of education in the labour force, real wages fell by 15.9 percent in traded sectors and 8.1 percent in non-traded sectors. The fall was greater the higher the degree of tradedness. The ratio of wages in the traded goods to the non-traded goods sectors was constant during the 1980s, with a value of 74 percent in 1992. But after its deepening participation in the global economy, this ratio fell to 69 percent in 1995 and to 64 percent in 1999. Moreover, although wages fell disproportionately in the traded- sectors, it also fell in the non-traded sectors, a consequence of declining wages and surplus labour in those sectors directly affected by imports. Significantly, the only category of the Brazilian labour force not to have experienced a decline in real income was the college-educated skilled group.

5. In what circumstances should global public goods be resisted?

What implications can we draw from this analysis of the limitations of the intellectual framework underlying the drive for trade liberalisation as a global public good? We begin by briefly addressing the theoretical implications, and follow this with a discussion of the policy implications which arise.

5.1 Conceptual issues

Strictly speaking, trade liberalisation does not qualify as a global public good. Although it is a good characterised by non-rivalry with extensive externalities and plenty of scope for common action, it is by its nature open to excludability. In this sense it is more clearly defined as a club good, which is an "intermediate case between a pure public good and a pure private good. A [club good is a] public good with non-rivalry consumption but for which, because of an institutional arrangement, consumption is restricted to members" (Sagasti and Bezanson, 2001: 217). Nevertheless, as we observed in the Introduction, in the face of the many ambiguities confronting public goods, "a line has to be drawn somewhere" (ibid: 52) and, for many, trade liberalisation is widely considered to be a global public good. The "good" in this

case is both a positive concept in the sense that trade liberalisation is an outcome of inter-governmental action, and a normative concept in that it is widely considered to have positive externalities with a beneficial welfare impact.

The key assumption underlying this normative approach towards trade liberalisation as a global public good is the tendency for markets to clear. Due to space constraints, we have considered these assumptions largely in relation to labour markets (both skilled and to a lesser extent unskilled labour), but this is a surrogate for productive and innovative capacity. China's growing dominance in the global market for many manufactures rests not only on its labour force, but also on its capacity to draw-in investment, to provide effective policy support, to make infrastructure work, and to provide other inputs required to grease effective production. We have argued, that the global availability of these productive capacities far exceeds feasible effective demand and that this is a systemic problem. The consequence has been either to exclude many producers in other parts of the world from the fruits of trade liberalisation or to diminish the incomes which they receive from participating in the global economy. So far this has largely affected economies in SSA and Latin America, but it is an increasing problem in Central Asian and Eastern Europe, and in a number of manufacturing sectors in the high-income economies. Moreover, to the extent that China (and India) become sources of knowledge-intensive innovative capabilities (as is increasingly the case), the growth of these competitive capabilities threatens the incomes of knowledge-intensive sector workers in high income economies as well.

A second and related conceptual conclusion concerns the determinants of global poverty. The neo-liberal framework argues that global poverty is residual. As globalisation extends, so the poor will be gradually absorbed into the global labour market and drawn out of poverty. The analysis offered above offers a different explanation, at least for many of the poor (both relatively and absolutely poor) in SSA and Latin America, but also in other regions. For them, poverty is relational to globalisation, that is, it is a direct outcome of global processes. Excess global production capacity means that they either produce in sectors subject to intense competition and falling incomes (for example, coffee and many labour-intensive manufactures), or that they lack the capacity to participate in any meaningful way in global markets. Another factor causing global poverty are changes in the terms of trade and here as we saw above in the case of Brazil after liberalisation, there is evidence that the falling price of manufactures has had adverse consequences for both distribution and poverty.

5.2 Policy issues

Given the fact that many of the externalities flowing from trade liberalisation as a global public good are negative rather than positive externalities, what policy implications flow?

The first is the need to manage the relationship between supply and demand in a manner which recognises this as a structural rather than a Keynesian cyclical issue. The proponents of the open-economy schema argue that the problem of excess capacity will be readily resolved, for a number of related and complementary reasons. It might result from greater inward-orientation in China and India which will expand their domestic consumption. Another possibility is that as demand in the US, the UK and other high-income markets contracts, so the demand by China for inputs from other countries will increase. Further, it is possible that renewed redistributive global Keynesianism (that is, significantly expanded aid transfers to poor economies) will enhance consumption power in currently stagnating low-income economies. These developments, it is argued, will enhance demand and bring Say's Law into operation at a global level.

But there are a number of problems which throw cold water on this outcome. For one thing, there is little sign of the political commitment required to reverse – and *significantly* alter – the trajectory over the past two decades of a decline in real resource transfers to poor countries to allow for a major expansion in global demand from low-income economies.

Moreover, to the extent that these income transfers involve redistributed consumption from the north to the south (rather than global Keynesian deficit financing), there will be no augmentation of global demand, merely a change in its composition For another, China and India are so large – together accounting for around 40 percent of global population - that the reserve army of labour which we have observed is currently evident at the global level, will also manifest itself at the sub-continental level. In other words, they will have difficulty balancing consumption and production domestically, even as they turn their economic trajectory into a more inward focus. We have no reason to suppose that the systemic trajectory towards excess capacity and the breakdown of Say's Law will be altered in the context of domestic market expansion in China and India.

A second set of policy prescriptions affects policies towards innovation. Whatever the supply-demand balance at the macro level, all countries require the capacity to innovate. In a world of excess capacity, competition intensifies and sustainable income growth – whether it occurs in the context of global openness or more restricted trade environments – requires the capacity to produce efficiently and to innovate effectively. The greater the capacity to appropriate rents in these productive and innovative activities – that is, to produce and innovate more effectively than competitors – the greater the likely rewards. With the growing complexity in the pattern of price formation for different types of goods documented above, sustainable income growth cannot be delivered by merely switching from commodities to manufactures. Instead it requires the capacity to upgrade from commodities and manufactures with low barriers to entry to those benefiting from higher barriers to entry and thus earning higher rents.

Here, as in the case of the management of the global economy, the "public-good-as-efficient-markets" argument breaks down. There is abundant evidence that the upgrading dynamic capabilities in production cannot be delivered by markets alone. It is true that states have failed in "picking the winners" but so too have markets (Rodrik, 2004). Thus, effective innovation requires a holistic approach, encompassing a vibrant private sector and effective policy support. Lall and Teubal provide a helpful architecture for this policy framework (Lall and Teubal, 1998), distinguishing between functional macro policies, horizontal cross-sectoral policies targeting generic market failures, and vertical sector-specific policies. It also requires that economies develop effective processes of innovation, crossing over sectoral boundaries and addressing value chains. This invariably requires facilitation by the national or regional government (Kaplinsky and Morris, 2001; Rodrik, 2004). An example of the effective use of sector-specific industrial policies in the context of appropriate macro-economic policy and cross-sectoral policies targeting market failures can be seen in the case of the South African Automobile Industry (Box 1).

Thirdly, there is the issue of policies towards openness. Effective innovation regimes do not work for all producers in an open economy and excess capacity and heightened competition lead to the consequent marginalisation of many producers. The externalities in the extension of trade liberalisation as a global public good may simultaneously be positive for many global citizens (in the current era in East Asia and in the north), and negative for others (predominantly in Africa, Latin America and the Caribbean and in Central Europe). For this latter group, two strategic approaches are indicated, both challenging the central tenet of the current phase of globalisation – market-access. The first is to argue the case against openness in external markets. Instead of the *level* playing field much in demand in the development community and policy circles, what poor producers requires is exactly the opposite. They need an *uneven* playing field, but one which is tilted in their favour. They require preferential access in external markets, often at the expense of other low-income, but more competitive developing economies. For example, further expansion of clothing exports to high income economies can no longer be achieved (as it was during the 1990s) by displacing producers in these consuming countries – it is now a battle against other developing economies, most notably China and India (who the USITC judges to have an absolute advantage in most

product categories). Special and Differential Treatment must endure, even if it is to change in nature as different low-income economies show differential capabilities over time.

Box 1 Effective Sectoral Industrial Policy in SSA: South Africa's Motor Industry Development Plan

Since the early 1960s South Africa has had policies designed to foster the growth of the auto industry. However, from the late 1980s, this sectoral policy went through a significant change, with the focus switching from inward-looking import substitution for domestic consumers to a more outward-oriented programme designed to achieve economies of scale and dynamic comparative advantage. s built on three related drivers:

- Macro-policies (the Growth Employment and Redistribution Strategy, GEAR) adopted after Transition in 1994 provided for a stable macroeconomic environment and a reduction in inflation and the real cost of investment and, crucially, providing a framework conducive to FDI and exporting

- A series of cross-sectoral supply-sided policies were introduced to foster innovation, including those targeted at strategic focusing, work-reorganisation, incentives encouraging firms to work together to achieve collective efficiency and technology policies

- A sector-specific Motor Industry Development Programme (MIDP) which had a number of components designed to encourage firms to export, and to achieve economies of scale

The outcome of these related policies has seen a major success in the industry's performance which has contributed to a record period of sustained economic growth. The industry produced autos at world quality levels, and in 2002 domestic prices were on average no higher than those in the EU (stripping out all taxes). On the back of a very rapid growth in exports, the balance of trade deficit in autos and components fell from $3.3bn in 1996 to $930m in 2001 (despite significant increases in consumption). Employment remained stable in the sector despite falling in manufacturing as a whole and the sector's share of gross output and manufacturing value added grew significantly between 1994 and 2002.

Source: Barnes, Kaplinsky and Morris, 2004.

The second challenge to global openness arises in relation to access to low-income economy markets. Since these economies cannot compete with production from China, India and other newly dynamic low-income economies, they may need to reintroduce forms of protection which they have been forced to yield over the past two decades of neo-liberal reform. But if they are to do so, they will need to learn the lessons from a previous era of import substituting industrialisation. In many cases, domestic markets are too small to allow for either the reaping of scale economies (of scope and in production) or effective competition. Thus, in the absence of integration into global markets, there will be a need to foster sub-global openness with economies at a similar stage of competence, and probably within their geographical regions (to allow for the regional externalities which are such an important component of modern competitive production). And they will also need to attune their policy agendas to the competences of their state sectors since weak state bureaucracies are unable to cope with the detailed and prescriptive policy regimes used so successfully in Korea and Taiwan during the 1960s and 1970s.

What role does the UN system in general and UNIDO in particular have to play in regard to these failings of trade-liberalisation-as-a-public-good? The macro-economic management of global demand and supply cries out for multi-lateral cooperation and here the UN system and the IFIs obviously have a leading role to play. However, it is not a policy arena which addresses the competences of UNIDO and other specialised agencies in the UN family.

For UNIDO there is a clear role to play in regard to the second and third areas of policy response – the support for innovation (often within value chains), and the development of clustered areas of regional innovation and trade. Particularly with the advance of systemic efficiency, where the boundaries of competitiveness can no longer be drawn around the firm, but involve value chains and/or regionally clustered economic actors, market failure is endemic. Firms need to be not only encouraged to work in collaboration with each other (and their regional and national systems of innovation) but also to be provided with the skills to do so. The skills to not come naturally and involve the development of dynamic learning capabilities. Particularly in low-income countries, this involves the development of tacit skills and this places considerable emphasis on support for capability building, drawing on the lessons of global best-practice.

But since the indicated path involves various forms of regional cooperation, many of these innovative capabilities are best pursued in a regional context. This support can be allied to the development of regionally-clustered industrial, agricultural and service sectors, appropriately linked to trade regimes which promote enough openness to facilitate competition and innovation and the reaping of consumer surplus through cross-border trade without the adverse implications following from full trade liberalisation.

References

Akamatsu, K. (1962), "A Historical Pattern of Economic Growth in Developing Countries", *The Developing Economies*, No.1, pp.3-25.

Arbache, K. S., A. Dickerson and F. Green (2004), "Trade Liberalisation and Wages in Developing Countries", *Economic Journal*, Vol. 114, No. 493, pp. 73-96.

Balassa, B. (1989), *New Directions in the World Economy*, New York: New York University Press.

Barnes, J., R. Kaplinsky and M. Morris (2004), "Industrial policy in developing economies: Developing dynamic comparative advantage in the South African automobile sector", *Competition and Change*, Vol. 8, No. 2, 2004, pp. 153-172.

Blaug, M. (1985), *Economic Theory in Retrospect, (*4th edition), Cambridge: Cambridge University Press.

Brenner, R. (1998), "Uneven development and the long downturn: the advanced capitalist economies from boom to stagnation, 1950-1998", *New Left Review*, 229.

Cheong, Y. R. and G. Xiao (2003), "Global Capital Flows and the Position of China: Structural and Institutional Factors and their Implications", in Teunissen, J. J. (Ed). (2003), *China's Role in Asia and the World Economy*, The Hague: FONDAD.

Freeman, C., J. Clark and L. Soete (1982), *Unemployment and Technical Innovation: A Study of Long Waves and Economic Development*, London, Frances Pinter.

Gu, E. (2003), Labour Market Insecurities in China, SES Papers 33, Geneva: ILO.

Hira, R. (2004), "Implications of Offshore Sourcing", *mimeo,* Rochester Institute of Technology.

Humphrey, J. and H. Schmitz, (2001), "Governance in Global Value Chains", in G. Gereffi and R. Kaplinsky (eds.), *IDS Bulletin Special Issue on The Value of Value Chains*, Vol. 32, No. 3, pp. 19-29.

Kaplinsky, R. (2005), *Globalisation, Poverty and Inequality: Between a Rock and a Hard Place,* Cambridge: Polity Press.

Kaplinsky, R. and M. Morris (2001), *A Handbook for Value Chain Research,* http://www.ids.ac.uk/ids/global/pdfs/VchNov01.pdf.

Kaplinsky, R. and A. Santos-Paulino (forthcoming), A disaggregated analysis of EU imports: Implications for the study of patterns of trade and technology", *Cambridge Journal of Economics.*

Lall, S. and M. Teubal (1998), "Market Stimulating' Technology Policies in Developing Countries: A Framework with Examples from East Asia", *World Development*, Vol. 26, No. 8, pp. 1369-1385.

Lall, S. and M. Albaladejo (2004), "China's Competitive Performance: A Threat to East Asian Manufactured Exports?", *World Development*, Vol. 32, No. 9, pp. 1441-1466.

Lawrence, R. Z. and M. J. Slaughter (1993), "International Trade and American Wages in the 1980s: Giant Sucking Sound or Small Hiccup?", in M. N. Baily and C. Winston (eds.), *Brookings Papers on Economic Activity: Microeconomics 2.*

Lewis, W. A. (1954), "Economic Development with Unlimited Supplies of Labour", The Manchester School, May., reprinted in A.N. Agarwala and S. P. Singh (eds.) (1958), *The Economics of Underdevelopment*, Oxford: Oxford University Press.

Martin M. and V. Manole (2003), "China's Emergence as the Workshop of the World", *mimeo*, Washington DC: The World Bank, http://scid.stanford.edu/events/China2003/Martin%209-18-03.pdf.

Mendoza, R. (2003), "The Multilateral Trade Regime: A Global Public Good for All?" In I. Kaul, P. Conceição, K. Le Goulven and R. U. Mendoza (eds.), *Providing Global Public Goods: Managing Globalization*, New York: Oxford University Press.

Perez, C. (2002), *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages*, Cheltenham, Edward Elgar.

Rawski, T. G. (2003), "Recent Developments in China's Labor Economy", mimeo, Dept. of Economics, University of Pittsburgh.

Ricardo, D. (1817), *The Principles of Political Economy and Taxation,* London: Dent (Reprinted 1973).

Rodrik, D. (2004), "Industrial Policy for the Twenty-First century", *mimeo*, Cambridge, MA: John F. Kennedy School of Government.

Rowthorn, R. and K. Coutts (2004), "De-Industrialization and the Balance of Payments in Advanced Economies", *Discussion Paper, No. 170*, Geneva: UNCTAD.

Sagasti, F. and K. Bezanson (2001), *Financing and Providing Global Public Goods: Expectations and Prospects*, Report prepared for Swedish Ministry for Foreign Affairs, Brighton: Institute of Development Studies.

Schumpeter J (1961), *The Theory of Economic Development*, Oxford: Oxford University Press.

Smith, A. (1776). *An Enquiry into the Nature and Cause of The Wealth of Nations.* (4th Edition), republished in 1976 by Oxford University Press, and edited by R. H. Campbell and A. S Skinner.

UNCTAD (2002), *Trade and Development Report*, New York, United Nations.

USITC (2004), *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market,* Investigation No. 332-448, USITC Publication 3671, Washington, United States International Trade Commission.

Lall, S. and M. Teubal (1998), "Market Stimulating' Technology Policies in Developing Countries: A Framework with Examples from East Asia", *World Development*, Vol. 26, No. 8, pp. 1369-1385.

UNDP (2002), *Profiling the Provision Status of Global Public Goods*, New York: United Nations Development Programme.

Wood A. (1994), *North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-Driven World,* Oxford: Clarendon Press.

World Bank (2001), *Global Development Finance 2001*, Washington DC: World Bank.

Preferential Trade Areas: An International "Public Bad"?

Arvind Panagariya
Columbia University

1. Introduction

The General Agreement on Tariffs and Trade (GATT), both as a treaty and institution, is one of the most important international public goods available to the world economy for the last five decades. It came into existence on January 1, 1948 and was folded into the World Trade Organization (WTO) at the latter's inception on January 1, 1995. As an institution, GATT served as the negotiating forum for a series of rounds aimed at liberalizing trade among the major economies of the world and as a treaty, it provided a set of multilateral rules for the smooth flow of global trade. Today, 148 countries accounting for more than 90 percent of the world trade in goods and services are members of WTO.

The Most Favored Nation (MFN) principle is the centerpiece of the GATT/WTO system. Enshrined in Article I of GATT, this principle requires that each member nation accord all other member nations the same treatment it accords its most favored nation. That is to say, if a member nation grants another member nation a tariff concession, it must extend that concession to all other member nations. The outcome is a uniform tariff across all trading partners without discrimination.

There are two key advantages of the MFN principle. First, if discrimination were permitted, each member nation could potentially subject a product to as many rates of tariff as the number of trading partners. A bureaucrat would then decide the national origin of the product and assess the duty accordingly. With thousands of products and hundreds of tariff rates applicable to each product, this would be a nightmare of the businessman and dream come true for the bureaucrat. Moreover, with the components of each good produced in a number of different countries, as is the practice in today's highly globalized world, the establishment of the origin of a good would itself be subject to arbitrariness. The MFN principle cleans up this potential mess in the policy regime in a single stroke.

Second, the MFN principle promotes efficiency. A product is imported from the nation that can deliver it the cheapest. We buy automobiles from Japan if it can deliver them cheaper than all other trading partners. Likewise, if China is he cheapest supplier of shirts, we buy them from it. Preferential tariffs, on the other hand, give rise to inefficiency by allowing high-cost sellers to out compete low-cost sellers by taking advantage of the preference. Economists refer to this phenomenon as *trade diversion*.

Thus, the MFN principle represents an important public good available to the world economy. Preferential Trade Areas (PTAs) allow their members to lower tariffs among themselves without lowering them against other WTO members. Free Trade Area (FTA) and Customs Union (CU) arrangements as exemplified by NAFTA and the European Union (EU) respectively are special cases of PTA that entirely eliminate internal trade barriers.[52] All PTAs

[52] The only difference between an FTA and CU is that under FTA, each union member is allowed to choose its own external tariffs while under a CU, union members harmonize the external tariff thereby imposing a common external tariff (CET) on any given good.

naturally involve discrimination against outsiders in favor of insiders and, thus, violates the MFN principle. Nevertheless, two key forms of PTAs—FTA and CU—have been accommodated within the GATT/WTO system through an exception contained in GATT Article XXIV. Additionally, under the so-called Enabling Clause, adopted initially in 1970 as a ten-year exception to GATT Article I but later in 1979 as a "decision" without expiration date, two or more developing countries may engage in virtually any exchange of trade preferences.

The United States, which was firmly committed to the MFN principle at the time of the founding of GATT, supported the inclusion of Article XXIV into GATT principally to accommodate the formation of the European Economic Community (EEC) that was on the horizon. It had realistically assumed that such arrangements would be formed at most on a limited scale and therefore would not greatly undermine the MFN principle.[53] Even when the Enabling Clause was adopted, it was not seen as a serious threat to the global trading system since it was confined to arrangements involving only developing countries, which accounted for a relatively small proportion of the world trade at the time.

Thus, the First Regionalism that flourished during 1950s and 1960s and more or less petered out in the 1970s produced only two effective arrangements—the European Economic Community (EEC) and European Free Trade Area (EFTA)—, which were both in Europe.[54] Several arrangements were tried in Africa and Latin America but they were either ineffective or failed to sustain. As a result, the objectives behind the MFN principle were largely achieved until the recent proliferation of PTAs.

The experience with the Second Regionalism, kicked off with the U.S-Canada Free Trade Agreement and continuing to march forward since then, has been altogether different. For example, prior to 1990, there were only 32 arrangements notified to GATT that were in force. By July 2005, this number had risen to 180. Until recently, Asia was the only continent that resisted forming PTAs. But lately, it too has jumped on the bandwagon with Singapore taking the lead and signing such agreements with Japan, South Korea and India.

EU has been by far the most active in signing free trade agreements. It recently expanded its membership to 25 and has FTA agreements with numerous countries. Its Euro-Mediterranean Association Agreements extend to Tunisia, Israel, Morocco and Jordan and it has FTA agreements with Switzerland, Denmark, Iceland, Mexico and Chile.[55] Under the Barcelona Process, launched in 1995, EU plans to have FTAs with all of its 12 Mediterranean partners and establish a WTO consistent Euro-Mediterranean free-trade area by 2010. Likewise, under the Cotonou Agreement, which replaced Lomé IV in 2001, it plans to establish FTA agreements with a large number of countries in Africa, Caribbean and Pacific (ACP) that are not the least developed countries.

The United States moved slowly after the conclusion of NAFTA but it too has intensified the process recently. It now has FTAs with Jordan, Chile, Singapore, Morocco, Australia, Dominican Republic and five nations of the Central American Common Market (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua). Future plans include Free Trade Area of the Americas (FTAA) comprising the entire Latin America except Cuba.

---

[53] Despite its detrimental effect on the multilateral trade regime, the United States saw EEC favorably because it offered the opportunity to promote harmony among former foes and made future tariff-reduction negotiations easier by turning the six member countries of EEC into a single negotiating unit.
[54] Bhagwati (1993) introduced the terms First regionalism and Second Regionalism in his celebrated paper.
[55] Both Europe Agreements and Euro-Mediterranean Association Agreements are wider in scope and include FTAs as one of their provisions.

Within the developing world, Latin America has been the most aggressive in forging new FTAs. Since NAFTA, the countries in the region have concluded more than two-dozen agreements. In Asia, ASEAN FTA is now operational with China and India having framework agreements for negotiating FTAs with its member countries. India has also signed FTA agreements with Sri Lanka and Thailand. Singapore has also concluded an FTA agreement with Japan. The countries in Africa have also moved forward with similar though less effective agreements.

Just as the Second Regionalism was beginning to take off, many analysts argued that these arrangements would promote the cause of free trade. At the time, led by Bhagwati (1991, 1993), those arguing that the arrangements could be harmful for the member countries themselves and would undermine the multilateral trading system were a small minority.[56] But today virtually all trade economists and the bulk of policy analysts have come to accept the view of the minority with the WTO (2005) recently publishing a report that is highly critical of PTAs and the Pascal Lamy, then the EU commissioner on trade and now the Director General of WTO, remarking that half the world's economists are opposed to bilateral free trade arrangements.

In the following, I discuss why PTAs are more likely to be a "public bad" rather than "public good". In Section 2, I discuss why the politics of PTAs is such that it is the arrangements that hurt the overall national welfare that are more likely to be politically acceptable. As such, PTAs are likely to be public bad even at the national level. In Section 3, I discuss how PTAs are serving as international public bad by affecting adversely the non-member countries through adverse terms of trade effects and increased external protection as well as undermining the multilateral trading system through fragmentation of the trading system, making multilateral liberalization more difficult and advancing the non-trade issues into trade agreements. In Section 4, I subject the claim made by PTA devotees (e.g., Bergston 1997) that that today's regionalism is "open" and therefore not in conflict with multilateral opening of trade to a critical examination. Finally, I conclude the paper in Section 6 with the argument that the only practical option to blunt the PTA movement and repair the damage already done by it is to work towards an agreement for complete multilateral free trade within the next 10 to 15 years.

2. PTAs as National Public Bad

The existing theories of PTAs lead to the conclusion that PTAs that are largely trade diverting and welfare worsening are endorsed while those that are trade creating and welfare improving are rejected. The underling reason is that producers rather than consumers are the key driving force behind policy changes and they benefit from trade diverting PTAs while losing from trade creating PTAs. This is the central message of the important paper by Grossman and Helpman (G-H) (1995).

To illustrate the G-H result, consider a three-country world with countries A and B being potential union partners and C representing the rest of the world. Assume A and B are small relative to C and therefore take the border prices as given. Consider two products X and Y with the two countries being mirror images of each other in them in terms of their demands and supplies.[57] Focus first on X and assume it is imported by country A and exported by B in

[56] The author was among those who argued for a nondiscriminatory approach to liberalization and against PTAs (see Panagariya 1994, 1996, 1999 and Bhagwati and Panagariya 1996).

[57] In the background, we assume that each of these goods uses a sector-specific factor and labor and there is a third good, Z, which uses only labor and serves as the numeraire. The utility function is linear in the consumption of Z, the numeraire good, and additively separable in all goods with diminishing marginal utility in the consumption of each of X and Y. These assumptions fully justify the partial-

the initial, MFN equilibrium. Using the G-H political economy model which is equivalent to the government maximizing a political support function represented by the weighted sum of national welfare and producers profits, we obtain a positive tariff in A and export subsidy in B.[58] Ruling our export subsidies by assumption and denoting by t_A and t_B the tariff rates in A and B, respectively, we have $t_A > t_B = 0$. Denoting the price in C by P_C, domestic prices in A and B under the MFN tariff are P_C+t_A and P_C, respectively.

When A and B form an FTA, the price of X in A being initially higher than in B, producers in the two countries choose to sell their entire output in A. To see the implications of this fact explicitly, suppose M_AM_A in Figure 1 (Annex) represents the import demand by country A (i.e., M_AM_A represents the difference between the total demand and supply by A at each price). The price of imports from C is P_C while the domestic price in A is P_C+t_A. Attracted by the higher price in A, producers in B divert their entire supply to A. Depending on the total supply of B, two cases are worthwhile to distinguish: first, the supply curve of B lies to the left of point S as shown by $S_B^1S_B^1$ and second, it lies to the right of point R as shown by $S_B^2S_B^2$.

Case 1: Purely Trade-diverting FTA is Endorsed

In the first case, the FTA is purely trade diverting in the sense that from point J to F, country B is a less efficient producer of the product than C but it replaces the latter as the source of supply within the union under the FTA. The change leads to a deadweight loss as measured by triangle EFJ. But country B itself is better off since the FTA results in the transfer of tariff revenue EFGH from A to its exporting firms Even after we net out the deadweight loss EFJ, B and its exporting firms make a net gain of FGHJ. Country A is, of course, worse off on account of the loss of the tariff revenue.

If this were the only change the FTA brings about, country B would endorse it while country A will reject it and the outcome will be no FTA. But remember we have another product Y in which the roles of A and B are exactly reversed with B being a net importer with a positive MFN tariff and country A being an exporter with zero MFN tariff. In this product, the FTA benefits country A and its exporters through trade diversion and the accompanying tariff revenue transfer. Of course, the FTA hurts B through the tariff revenue transfer. Based solely on this product, product Y, A would endorse the FTA while B would reject it.

But what is the outcome when we consider both products simultaneously? Given the assumed symmetry across X and Y, the effect of the tariff-revenue transfer on welfare is a wash. The welfare effect is determined solely by the deadweight losses. More precisely, the deadweight loss in X makes A worse off and that in Y makes B worse off. Both countries lose from the FTA.

But what can we say about the political viability of the FTA? Because the import-competing firms (firms producing X in A and firms producing Y in B) do not experience a decline in the price and the exporting firms (firms producing Y in A and firms producing X in B) experience a rise in the price, in aggregate, producer profits rise. Thus, with welfare declining and producer profits rising, the effect on the political support functions in the two countries is ambiguous. But if producers receive sufficiently high weight in the government’s political support function, the latter’s value would rise and both countries would endorse the FTA. The FTA is a public bad but receives endorsement because it is privately good for producers in both countries.

---

equilibrium analysis presented in the text.

[58] The national welfare here equals the sum of the consumers’ surplus, producers’ surplus and tariff revenue.

Case 2: Purely Trade Creating FTA is Rejected
Next, suppose the supply curve of B for product X is represented by $S_B^2S_B^2$ in Figure 1 (Annex). In this case, the FTA brings the price in A down to the world price, P_C and the outcome is identical to that under free trade. Therefore, welfare necessarily rises: country A and the union as a whole gain triangle SVR. In terms of the preferential trading terminology, FTA leads to trade creation: it increases imports into A by the amount VR with country B's more efficient firms driving out A's less efficient firms or expanding its consumption over the range VR. A similar analysis in product Y yields symmetric benefits for country B. The FTA necessarily improves welfare in both countries.

Interestingly, however, this FTA is necessarily rejected. The reason is simple. Recall that the initial, protected equilibrium had been chosen over the free trade option. But since the FTA reproduces the free trade equilibrium, it will be rejected. The FTA unambiguously lowers the value of the political support function in each country.

Relevance to the Real World
At first, this analysis may seem a theoretical curiosity with relatively little practical relevance since in reality we expect sectors resembling both trade-creating and trade-diverting cases. Yet, further reflection suggests that the force of the argument captured in the above examples plays a crucial role in the design of PTAs. In particular, three devices can and are commonly applied to contain competition between member country firms and maximize the benefits to these firms at the expense of outside firms. First, in so far as FTAs admit sectoral exceptions, they focus on excluding precisely those sectors in which trade creation would dominate. For example, the recent systematic study of sectoral exceptions within Sri-Lanka-India FTA by Baysan, Panagariya, and Pitigala (2004) offers persuasive evidence that the two countries used the relatively long negative lists to avoid liberalization that would threaten one's own inefficient firms rather than the more efficient outside countries' firms. A study of the sectoral exceptions in the ASEAN FTA may reveal similar pattern.

Second, countries use stringent rules of origin to contain competition in sectors that are subject to trade creation. The recent theoretical analysis of Duttagupta and Panagariya (2005) that explicitly models inputs and rules of origin underlines this outcome. They show that trade-diverting and welfare-reducing FTAs that are rejected in the absence of the rules of origin may become politically acceptable once rules of origin are introduced. Moreover, trade-creating and welfare-improving FTAs that are rejected in the absence of the rules of origin may also become acceptable in the presence of the rules of origin but the rules of origin supporting this outcome may be so stringent that the FTAs turn welfare reducing. NAFTA offers some evidence supporting these outcomes: given the presence of MFA quotas, competition from Mexico was bound to out compete some of the US inefficient firms in textiles and clothing and this sector was subjected to some of the most stringent rules of origin. The paper by Baysan et al (2004) cited above offers similar evidence from the Sri-Lanka-India FTA.

Finally, liberalization in sectors subject to trade creation may also be back loaded. Once again, NAFTA offers an interesting example. The automobile sector in Mexico was highly inefficient at the time the agreement was signed with all three major U.S. manufacturers having presence there. They feared that liberalization by Mexico will allow foreign automobile manufacturers in the U.S. to threaten their Mexican operations and successfully lobbied to have the liberalization placed on the slowest possible track.

3. PTAs as International Public Bad

In the previous section, we saw that within union private producer interests can come together to forge PTAs that turn out to be national public bad and thwart those that promise to be national public good. But from the viewpoint of the design of the international trading system,

even greater danger of PTAs comes from their adverse effects on non-members. McMillan (1993) has argued this point succinctly and forcefully. He argues that if two or more countries enter an arrangement that hurts one or more of them, it is their business. In the design of the rules of international trade, it is the impact of such arrangements on the rest of the world that should receive the highest priority. To quote him, (McMillan 1993, p. 295), "Trade theorists have usually evaluated RIAs [Regional Integration Arrangements] either from the point of view of the world as a whole (asking whether the trade creation outweighs the trade diversion) or from the point of view of the members (asking how to maximize the gains from trade creation). I suggest that, for the rules of international trade, the size of any trade creation among member countries is irrelevant. In practice, it is possible that some member countries will not benefit from a RIA. But it seems reasonable to have a hierarchy of concerns: to put preventing harm to third countries ahead of preventing members from hurting themselves."

PTAs can adversely impact the outside countries and the multilateral-trading system through five major channels: (i) terms of trade; (ii) increased extra-union protection; (iii) fragmentation of the trading system through what Bhagwati calls the spaghetti-bowl effect; (iv) the stumbling blocks effect on multilateral liberalization; and (v) proliferation of non-trade issues. In the following, I consider each of these in turn.

Terms of Trade

In the G-H model considered in the previous section, the member countries are assumed small so that their actions have no effect on the outside countries. Within the strict confines of this model, PTAs are neither international public good nor international public bad. If PTAs were confined to a small number of relatively small countries as was approximately true in the 1950s and 1960s, they could be ignored as benign in so far as the global trading system was concerned. But if they are widespread as is the case currently, we can scarcely ignore their impact on the rest of the world and the global trading system.

Evidently, the most direct impact of PTAs on outsiders is through the terms of trade. At the initial terms of trade, if a PTA consisting of large countries diverts trade from outside countries, it would induce the latter to lower the prices of their exports to stay competitive within the PTA market. In other words, the outside countries would experience deterioration in their terms of trade.[59] In effect, the PTA would amount to a “beggar-thy-neighbor” policy and represent a public bad.

Krishna (1998) offers an interesting analysis of the adverse terms of trade effects on the outside countries.[60] He uses a Cournot oligopoly model in which firms belonging to three countries compete in one another's market for a single, homogeneous good. Asymmetries across countries are admitted both in terms of the market size and number of firms in a given country. Producers are given the decisive role in determining the policy outcome via the assumption that governments base their policy decisions on the home firms' profits. Initially, each country imposes a nondiscriminatory tariff on imports from all sources. The tariff is the same across all countries. Two countries, A and B, must decide whether or not to form an FTA which, given equal initial tariffs, is equivalent to a customs union. For the FTA to be accepted by both governments, profits of home firms must rise in each potential member.

Like Grossman and Helpman (1995), Krishna (1998) finds that the greater the degree of trade diversion, the more likely that the FTA will be accepted. The intuition behind the result is

[59] Correspondingly, the PTA member countries experience an improvement in their terms of trade. As I noted in my comprehensive survey of the theory of PTAs (Panagariya 2000), this improvement in the terms of trade can turn a trade-diverting PTA from welfare reducing to welfare-improving arrangement for the union members. But from a political-economy standpoint, the reduction in the price of the importable also works against the political viability of such a PTA.

[60] The discussion of Krishna (1998) here is taken from Panagariya (2000).

straightforward. When an FTA is formed, each member benefits (in terms of profits of its firms) from obtaining preferential access to the partner's market but loses from giving a similar access to the partner in its own market. In the absence of trade diversion, this is more or less a zero-sum game. But if the members can capture a part of the outside country's share in the union's market (trade diversion) without a corresponding loss of their share in the outside market, they can generate positive net benefits. The FTA is more likely to be accepted. A key additional point that emerges from Krishna's model is that the PTA has an adverse impact on the terms of trade and hence welfare of the outside country.

Extra-union Protection

How does the decision to form a PTA by a country impact its external-union protection? In first raising the question, Bhagwati (1993) argued that such a decision would result in a rise in the extra-union protection either via an increase in tariff or more vigorous implementation of anti-dumping measures against outside countries.[61] He argued that within the traditional three-country framework, increased imports from the PTA partner that threaten a member country's firms will lead the latter to seek higher protection against extra-union imports.[62]

Models that give rise to increased outside protection upon bloc formation are due to Panagariya and Findlay (1996) and Krugman (1991). In the former, tariffs are supplied upon demand by producer lobbies. The FTA closes the avenue to protection on the partner country good and increases pressure for protection on the other goods. In Krugman (1991), FTA increases the market power of the member countries and raises the external tariff.

Richardson (1993), on the other hand, provides an interesting argument that goes the other way: FTA leads a country to *lower* the external tariff.[63] His argument can be illustrated with the help of Figure 2 (Annex) where country A's import demand is downward-sloped and export-supplies of B and C are horizontal. In the initial equilibrium, A has an FTA with B, which is the less efficient supplier of the product in comparison with C.

In this setting, if A reduces the tariff on C to P_BP_C-ε where ε is infinitesimally small, it can switch all its imports from the less efficient B to more efficient C and collect areas e and k in tariff revenue. If the government maximizes a political support function to which tariff revenues contribute positively, it will necessarily take this course. Richardson shows that this basic argument remains valid in a general equilibrium setting.

A key limitation of the argument, however, is its reliance on a model in which imports come from either B or C but not both; This specialization in the source of imports results from the assumption that supply curves of both B and C are infinitely elastic. A moment's reflection shows that the result break down as soon as we allow for imports from both B and C by assuming, for example, B's supply curve to be upward sloped. As is easily verified with the help of Figure 1, lowering the tariff on C just enough to allow it to sell in A at a price slightly below P_C+t_A yields no more than the conventional gains from unilateral liberalization. At the margin, B is able to compete with C at a slightly lower level of output and cannot be eliminated as a source of supply.

Theory aside, the critical question concerns the empirical evidence. Here we have some evidence pointing to increased extra-union protection following the formation of PTAs. Panagariya (1999) documents the increase in external tariffs by Mexico, Israel, and

[61] For developed countries, GATT bindings do not permit an increase in tariff so that increased barriers must take the form of safeguard measures such as anti-dumping or voluntary export restraints. For virtually all developing countries, tariff bindings have water so that they can raise tariffs.
[62] A formal presentation of this point can be found in Bhagwati and Panagariya (1996).
[63] Bond and Syropoulos (1996) offer a modified Krugman (1991) model in which the effect of FTA on the external tariff is ambiguous.

MERCOSUR following entry into PTAs. Brian Hindley and Patrik Messerlin (1993) provide evidence showing that the European Union reacted its expansion by implementing anti-dumping more vigorously against outside countries. More indirectly, unilateral liberalization in Latin America, which has achieved great momentum during the 1980s, came to a virtual standstill after this region began to aggressively forge PTAs during the 1990s and beyond.

Recently, Limao (forthcoming) has asked the question whether the presence of NAFTA made the US less willing to liberalize tariffs on those products in multilateral negotiations in which Mexico had the greatest export interest. He finds the answer in the affirmative. This analysis is probably not conclusive for at least two reasons. First, Mexico is an exporter of labor-intensive products in which the U.S. lobbies have been traditionally more influential. And second, the external liberalization also depends on the bargaining power brought to bear on the negotiations by other countries in the multilateral forum. In so far as developing countries lacked such power, liberalization in the labor-intensive sector was less likely to succeed. Even then, in one important sector, textiles and apparel, U.S. did liberalize substantially by agreeing to end the Multi-fiber Arrangement (MFA) quotas. These qualifications notwithstanding, the weight of the overall evidence is in favor of the view that bilateral liberalization has an adverse effect on the extra-union liberalization.

The Spaghetti Bowl Phenomenon

In the FTA rather than CU arrangements, member countries fear that imports from outside countries destined to a high-tariff member may enter through a low-tariff member. Or more subtly, entrepreneurs in the low-tariff country may import a product in almost finished form, add a small value to it and export it to the high tariff country free of duty. To avoid this trade deflection, FTA agreements usually include the rules of origin according to which products receive the duty-free status only if a pre-specified proportion of value added in the product originates within the union.

In addition, a large number of countries now have multiple PTAs with different transition timetables. This fact makes the tariffs dependent on the origin even in the absence of the rules of origin until the transition to the FTA is complete. For example, NAFTA has a 15-year transition and in the meantime, all NAFTA members have gone on to sign many other FTAs with different dates of complete implementation.

Thus, crisscrossing FTAs have led to the replacement of the nondiscriminatory, MFN tariff by what Bhagwati has called the “spaghetti bowl” of tariffs whereby tariffs vary according to the ostensible origin of the product. Initially in the early 1990s when the term first entered the public consciousness, it probably seemed exotic but unreal. But that is no longer so: with an extremely large number of PTAs in virtually all regions of the world, the spaghetti bowl of tariffs has become very much a reality. The point is best illustrated by the European Union with which so many countries now have special deals that only five countries pay its MFN tariff. Effectively, the MFN status in EU has turned into LFN or least favored nation status.

The Stumbling Block Effect

From the international goods perspective, the most important question is whether PTAs promote or hinder multilateral liberalization. The issue has received attention in both formal models and informal arguments. I first consider two formal models and then several informal arguments.

Using the median voter model, Levy (1997) asks two main questions: (i) Can presenting the option to form an FTA make a previously infeasible multilateral liberalization feasible; and (ii) Can it render a previously feasible multilateral liberalization infeasible. Levy addresses the question within a multi-country world in which voters in two countries are given the option to vote on an FTA and multilateral liberalization in that order. The FTA is modeled as complete free trade between union members with a prohibitive tariff on nonmembers. For reasons of tractability, the options are restricted to autarky, FTA and complete multilateral free trade. Levy

shows that the answer to the first question is necessarily negative. The reasoning is straightforward: if two or more countries form an FTA, the change necessarily raises the median voter's utility over the autarky equilibrium. But this raises his reservation utility and makes him even less willing to go for multilateral liberalization that he was going to reject in preference to autarky.

Answering the second question turns out to be more complicated. Levy shows that within the Heckscher-Ohlin set up, a previously feasible multilateral liberalization cannot be rendered infeasible by the FTA option. Under the H-O set up, when multilateral liberalization is feasible, two possibilities arise. First, FTA makes the median voter in each country better off but not as much as multilateral liberalization. In this case, both members endorse the FTA but they also vote for multilateral liberalization when they are given to chance to vote on that option. The FTA does not turn into a stumbling block. Second, the FTA offers higher utility than autarky to both median voters but exactly one of them receives an even higher utility than under global free trade. In this case, the median voter who expects to enjoy lower utility under FTA than under global free trade blocks the FTA since he knows that if he goes along with FTA, the median voter in the other country will block global free trade when that option is offered.

Levy shows, however, that if the model is modified to allow for product differentiation and economies of scale in one of the two sectors, the FTA can turn into a stumbling block to global free trade. With the gains from trade deriving from differences in factor endowments as well as increased variety, it now becomes possible for median voters in both countries forming the FTA to achieve a higher level of utility under this alternative than available under the multilateral option. Therefore, these voters both vote for the FTA and then reject global free trade even though absent FTA they would have voted for the latter.

Krishna (1998) offers another example of FTAs turning into stumbling blocks to global liberalization. He uses a three-country, partial-equilibrium, oligopoly model in which trade policy is chosen to maximize national firms' profits. He shows that more trade diverting the FTA between two countries in this set up, the greater the backing it receives and more it reduces the incentive to eventually liberalize with the third country. With sufficiently large trade diversion, an initially feasible multilateral liberalization can be rendered infeasible by the FTA option.

In addition to these formal analyses, several informal arguments have been made to support the building blocks or stumbling blocks hypothesis. First, it has been suggested by Summers (1991) and others that multilateral negotiations will move more rapidly if the number of negotiators is reduced to approximately three via bloc formation. The argument is that due to a large number of members involved at the WTO and the associated free rider problem, negotiations there are slow and difficult. If the world is first divided into a handful of blocs, multilateral negotiations will become easier.

There are at least two problems with this argument. First, theoretically speaking, if blocs take the form of FTAs, they have no effect on the number of participants. For FTA members retain their own external tariffs and must negotiate these tariffs individually. So far, the only PTA that participates as a single unit in multilateral negotiations is European Community (EC). Second, as a practical matter, it is not clear that the existence of the EC has been an unmixed blessing for multilateral negotiations. Preoccupied with its internal problems and agenda, it was the EC that first delayed the launching and then the conclusion of the Uruguay Round. It is possible that if EC members were participating individually in negotiations, they would have seen greater merit in multilateral liberalization and been more eager to negotiate. In any case, while the free-rider argument had gained some popularity at the time the Uruguay Round negotiations were stalled, it has lost force since the successful completion of the round and then the launch of the Doha Round.

According to the second informal argument, PTAs may serve as a threat to force unwilling parties to negotiate in earnest at the multilateral level. Bergsten (1994) argues that the upgrading of the November 1993 APEC ministers meeting in Seattle by President Clinton to high-profile Leaders' Meeting signaled to the European Community that if they dragged their feet at the Uruguay Round, the United states would go ahead with an FTA with Asian countries. According to Bergsten, this threat led the European Community to conclude negotiations. Bhagwati (1996) disagrees with this interpretation of events. He argues that the Uruguay Round was completed essentially because the United States wisely decided to close the deal, taking the offer on the table rather than seeking more concessions. Given how distant and remote was, and still is, the possibility of an APEC FTA, it is difficult to imagine that the European Community would have taken the threat seriously, suggesting that Bhagwati is probably closer to the truth.

Third, on the stumbling blocks side, it is argued that due to their high visibility, PTAs can energize and unify protectionist lobbies, turning them into effective obstacles against multilateral liberalization. This is especially true since the PTAs likely to be negotiated by developed countries are with developing countries. Such PTAs are associated in public mind (in developed countries) with large inflows of labor-intensive goods and reduced wages for the unskilled. Multilateral negotiations, by contrast, involve both developed and developing countries and draw less attention of protectionist lobbies. Thus, the NAFTA debate in the United States was fiercer than the debate for any multilateral trade negotiation including the Uruguay Round.

An important variation of this point is that public debates on freeing up trade are always contentious and politicians use up goodwill they have with public each time they vote for an FTA. Because by nature FTAs must come for the vote with very high frequency, they generate acrimony towards free trade. For example, even the recent vote on Dominican Republic and Central American Free Trade Agreement, which was largely inconsequential for the United States in so far as trade is concerned, generated sufficient friction within the United States to leave the President reluctant to push hard for the Doha Round negotiations at Hong Kong and accept one-year delay instead.

Finally, there is the related but slightly different issue of attention diversion and scarce negotiating resource. If the President of the United States and his Trade Representative are preoccupied with cutting deals in Latin America, they will have less time and motivation for multilateral negotiations. Furthermore, even if they had the time and motivation, it may become difficult to persuade the U.S. Congress to go along with a multilateral round with negotiating capital having been used up for regional deals.

Non-trade Issues in FTAs

A particularly disturbing development in the second-wave FTAs between the United States and developing countries is the emergence of many non-trade issues that the U.S. is as yet unsuccessful in getting included into WTO. NAFTA had been saddled by side agreements on labor and environmental standards. In the U.S.-Jordan FTA, these subjects became a part of the core FTA agreement with Jordan becoming subject to trade sanctions if it failed to fulfill its obligations in this area.

More recently, the US FTAs have included such additional conditions as much higher intellectual property rights standards than in WTO and severe restraints on the use of capital controls. US-Morocco FTA and Dominican Republic and Central American FTA both contain very detailed intellectual property protection that far exceeds the standards set by the WTO Trade Related Intellectual Property Rights (TRIPS) Agreement. Agreements with Chile and Singapore contain restrictions on the use of capital controls. All agreements also contain provisions relating to labor and environmental standards. The US strategy is to put these provisions in enough number of bilateral agreements to weaken the opposition to them in WTO so that they can be eventually introduced on a multilateral basis.

4. Is Open Regionalism a Public Good?

Some advocates of the current wave of PTAs defend it on the ground that it represents "open regionalism" in contrast to closed, import-substituting regionalism of 1950s and 1960s. There is no single definition of open regionalism but the most obvious one is the one requiring open membership. Other criteria that have been cited include compatibility with GATT Article XXIV and freedom on the part of the member countries to pursue further trade liberalization unilaterally or reciprocally.[64]

The requirement that members be free to pursue unilateral or bilateral liberalization rules out customs unions as being compatible with open regionalism even though they are perfectly compatible with GATT Article XXIV. In a customs union, individual members are not free to lower their tariffs. Nor are members permitted to conclude PTAs with outside countries on their own. This criterion rules out the EU regionalism as open but accepts NAFTA to be so despite the fact that *ex post* the former has signed more new PTAs than the latter. Therefore, the condition would seem to be neither necessary nor sufficient for a PTA to qualify as open.

Compatibility with Article XXIV can serve as a necessary but not sufficient condition for an arrangement to be open. If two countries start with prohibitive tariffs and then form an FTA, keeping their prohibitive tariffs on outside countries, they will satisfy the requirements of Article XXIV. Yet, such arrangements can hardly be characterized as open regionalism. In more practical terms, this criterion says nothing about why the regionalism of 1950s and 1960s was closed while that being pursued today is open.

The remaining criterion—open membership—is perhaps the most important and one that gives the term "open regionalism" substance. It opens the possibility that if outsiders find it attractive to seek membership, a PTA can eventually encompass the entire world and thus lead to free trade for all. Despite this possibility, the open-membership criterion has three important limitations that give critics reason to be skeptical of the open regionalism idea. First, discrimination against nonmembers at any point in time remains in place by definition as long as the regionalism is of Article XXIV variety. Therefore, "open" club is still likely to harm nonmembers. Second, openness is not as innocuous as it sounds. As Bhagwati (1995, 1997) notes, the admission price can include several unpleasant "side payments" that are essentially unrelated to trade. These include acceptance of a stronger intellectual-property-rights regime, investment rules, and higher labor and environmental standards. Finally, open membership does not necessarily translate into speedy membership. It took EU more than 40 years to grow from 6 members to 15 and the transition to competing the expansion to 25 is still under way. The Canada-U.S. Free Trade Agreement was concluded almost a decade ago and, taking into account NAFTA, its membership had grown to only three until the end of the last millennium. Attempts by even a tiny country such as Chile faced serious resistance for some time. Even today, the U.S. has concluded agreements with such tiny countries as Jordan, Morocco, Singapore, Australia, Chile, Dominican Republic and the countries in Central America. Larger countries such as China, Japan and India are not even on the U.S. Radar screen.

Some observers have noted that a distinguishing feature of current regional arrangements is that they are taking place in an environment in which eight rounds of multilateral trade negotiations have brought trade barriers considerably down. Therefore, open regionalism can be defined as FTAs and customs unions with low trade barriers on outside countries. While this definition distinguishes recent regionalism from earlier ones, it does not overcome the fundamental contradiction between openness and discrimination: outsiders may face low barriers but they are nonetheless subject to discrimination relative to insiders.

[64] For example, see Council of Economic Advisors (1995).

For the sake of argument, even if we accept the view that open regionalism can be defined in terms of low external barriers, we must answer at what level of discrimination closed regionalism turns into open regionalism? For example, when Mexico maintains a large number of external tariffs in the 15-20% range, keeps open the option of raising them up to 35%, and also has the instrument of anti-dumping at its disposal, can we say that it is pursuing open regionalism under NAFTA? Or should we adopt external trade barriers in the United States as the critical level that distinguishes open from closed regionalism? But this latter definition is also problematic: even after the Uruguay Round liberalization, more than half of textiles and clothing products remain subject to 15-35% tariffs in the United States and anti-dumping remains a major trade barrier. To put the matter differently, despite lower (though by no means low) external trade barriers today, the motivating force behind regional arrangements is no different than in the 1950s and 1960s. Now as then, discrimination is the name of the game as member countries continue to be driven by a desire to secure a *preferential* access to the partner country's market.

5. Conclusions

The key policy question is how to turn the negative force of PTAs into positive one. Many proposals have been made to reform Article XXIV so as to make the pursuit of FTAs more difficult or make them more open. But since virtually all WTO members are currently pursuing these arrangements, prospects for these proposals being taken seriously are negligible. Therefore, the only practical option left is to achieve worldwide free trade more speedily. This will kill the preferences at source: preference relative to zero tariffs is zero.

If we look at the current protection levels, the goal of achieving free trade in industrial products by 2020 for developing countries and perhaps sooner for developed countries is not unrealistic. Except a small fraction of the labor-intensive products such as apparel and footwear, non-agricultural products in developed countries are subject to tariffs at rates 5 percent or less. Tariffs in developing countries are higher but have come very far down in recent years. Therefore, an agreement that phases out these tariffs over the next fifteen years or so is not unrealistic. To be sure, multilateral institutions such as the World Bank and IMF will need to assist developing countries to ensure that the loss of tariff revenue does not result in a serious macroeconomic imbalance and to create adjustment assistance programs. But such resources are likely to be well within the reach of these institutions and will be well spent on opening the world markets as well as giving order to the world trading system.

Achieving free trade in agriculture in the next fifteen years is less realistic not the least because even many developing countries are not ready for it. Nevertheless, there is a reasonable scope for an agreement that phases out export subsidies, and substantially lowers domestic support and border protection under the Doha Round. If the WTO members can come together to accomplish such liberalization, the problem of discrimination will be substantially alleviated.

Annex:

Table 1 A Quick Guide to the Results from the paper

Setting	*Main Results*	*Explanation*
PTAs analyzed from the national welfare perspective: In the political process leading to the PTA formation, producers count for more than national welfare	PTAs are a national public bad: while trade-creating PTAs that improve national welfare are rejected, trade-diverting ones that worsen national welfare are endorsed.	Trade creating PTAs expand intra-union trade by eliminating inefficient within-union producers who block them. Trade diverting PTAs expand intra-union trade by displacing the more efficient outside-union suppliers. This benefits within-union suppliers at the expense of outsiders so that the former push for such PTAs.
PTAs analyzed from international perspective.	PTAs are international public bad.	1. They make the rest of the world worse off by worsening its terms of trade. 2. They lead to increased extra-union tariffs (or other protection) by the union members. 3. They create the "spaghetti-bowl" of tariffs and thus fragment the global trading system. 4. They have an adverse effect on multilateral liberalization. 5. They serve as instruments of advancing non-trade agendas such as labor standards, intellectual property and restrictions on the use of capital controls.
Open Regionalism	Not as open as the term implies	1. Entry of new members is not free and automatic. Side conditions apply. 2. Discrimination against non-members remains.

Figure 1

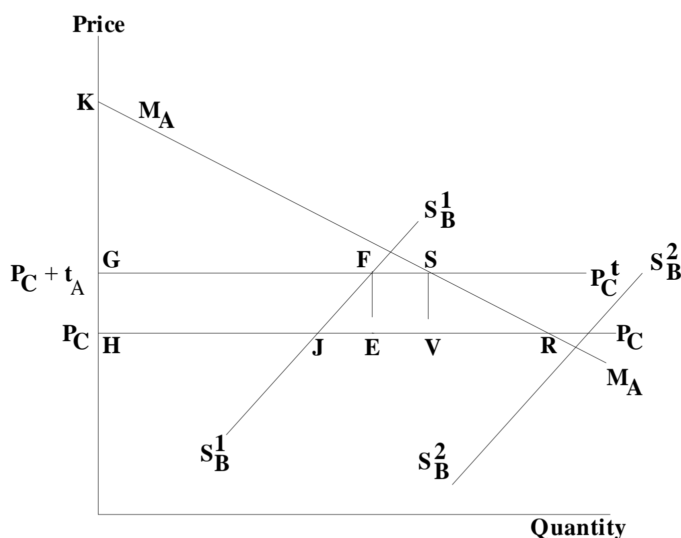
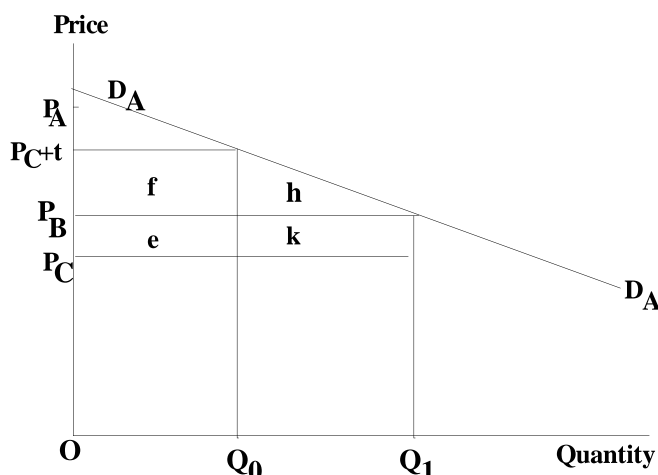


Figure 2



References

Bergsten, Fred, 1994, "Sunrise in Seattle," *International Economic Insights* 5(1), January/February.

Bergsten, Fred, 1997, "Open Regionalism," Institute for International Economics, Working Paper 97-3.

Bhagwati, Jagdish, 1991, *The World Trading System at Risk*, Princeton, N.J.: Princeton University Press.

Bhagwati, Jagdish, 1993, "Regionalism and Multilateralism: An Overview," in Melo and Panagariya, ed., *New Dimensions in Regional Integration*, Cambridge, Great Britain: Cambridge University Press.

Bhagwati, Jagdish, 1995, "U.S. Trade Policy: The Infatuation with Free Trade Areas," in Bhagwati, Jagdish and Anne O. Krueger, eds., *The Dangerous Drift to Preferential Trade Agreements*, Washington, D.C.: American Enterprise Institute for Public Policy Research.

Bhagwati, Jagdish, 1997, "Fast Track to Nowhere," *Economist*, October 18, pp. 21-23.

Bhagwati, Jagdish and Panagariya, Arvind, 1996, "Preferential Trading Areas and Multilateralism: Strangers, Friends or Foes?" in Jagdish Bhagwati and Arvind Panagariya, eds., *The Economics of Preferential Trade Agreements*, AEI Press, Washington, D.C.

Bond, Eric W. and Syropulos, Constantinos, 1996, "The Size of Trading Blocs, Market Power and World Welfare Effects," *Journal of International Economics* 40, 411-437.

Council of Economic Advisors, 1995, *Economic Report of the President*. Council of Economic Advisors: Washington, D.C.

Grossman, Gene and Helpman, Elhanan, 1995, "The Politics of Free Trade Agreements," *American Economic Review*, September, 667-690.

Hindley, B. and P. Messerlin, 1993, "Guarantees of market Access and Regionalism," in K. Anderson and R. Blackhurst, eds., *Regional Integration and the Global Trading System* (London: Harvester Wheatsheaf).

Krishna, Pravin, 1998, "Regionalism and Multilateralism: A Political Economy Approach," *Quarterly Journal of Economics*, forthcoming.

Krugman, P., 1991, "Is Bilateralism Bad?" in E. Helpman and A. Razin (eds.), *International Trade and Trade Policy*, Cambridge, Mass.: MIT Press.

Limao, Nuno, forthcoming, “Preferential Trade Agreements as Stumbling Blocks for Multilateral Trade Liberalization: Evidence for the U.S,” *American Economic Review*.

Levy, Philip. 1997, "A Political-Economic Analysis of Free-Trade Agreements," *American Economic Review* 87(4), September.

McMillan, John, 1993, "Does Regional Integration Foster Open Trade? Economic Theory and GATT's Article XXIV," in Kym Anderson and Richard Blackhurst, eds., *Regional Integration and the Global Trading System*, London: Harvester Wheatsheaf.

Panagariya, Arvind, 1994, "East Asia and the New Regionalism in World Trade," *World Economy*, November, 817-839.

Panagariya, Arvind, 1996, 'The Free Trade Area of the Americas: Good for Latin America?' *World Economy* 19, no. 5, September, 485-515.

Panagariya, Arvind, 1999, "The Regionalism Debate: An Overview," *World Economy*, June, 477-511.

Panagariya, Arvind, 2000, "Preferential Trade Liberalization: The Traditional Theory and New Developments," *Journal of Economic Literature* 38, June 2000, 287-331.

Panagariya, Arvind and Ronald Findlay, 1996, "A Political Economy Analysis of Free Trade Areas and Customs Unions," Robert Feenstra, Douglas Irwin and Gene Grossman, eds., *The Political Economy of Trade Reform*, Essays in Honor of jagdish Bhagwati, MIT Press.

Richardson, Martin, 1993, "Endogenous Protection and Trade Diversion", *Journal of International Economics* 34(3-4), 309-24.

Summers, L., 1991, "Regionalism and the World Trading System," Symposium Sponsored by the Federal Reserve Bank of Kansas City, *Policy Implications of Trade and Currency Zones*.

World Trade Organization (WTO), 2005, *The Future of the WTO*" Report by the Consultative Board to the former Director-General Supachai Panitchpakdi, January 17, 2005.

Environment

Specific Public Goods for Economic Development: With a Focus on Environment

Michael Braungart
Per Bondesen
Albin Kälin
Benson Gabler
EPEA, Environmental Protection Encouragement Agency

1. Introduction

Human activity has often been seen as negative for the environment. Resource dependent Inuit communities are so painfully aware of the ecological carrying capacity that there is a tradition of old people self-sacrificing their lives in order for the community to continue living (Qivitoq). Modern day environmentalism stops short of recommending suicide, but tells us that we are bad for the earth. Dramatic loss of species variety, global warming, soil depletion and contamination with persistent, bio-accumulative substances, among countless other examples, have led to the Earth carrying the burden of five planets. The main culprit of this environmental degradation has been economic development.

In 1972, the Club of Rome published a report entitled *Limits to Growth*, illustrating that there is a definite limit to the availability of raw materials and energy on this planet. This discussion, however, had already started a decade earlier. In 1962, Rachel Carson's book Silent Spring expressed the deep concern of human-made materials interfering negatively with the environment, dramatically destroying species diversity, immune systems, fertility, and human health.

The series of environmental disasters in the second half of the twentieth century, including Seveso in 1976, Love Canal in 1978, Three Mile Island in 1980, Bhopal in 1984, Chernobyl in 1986, and Exxon Valdez in 1989, led to the conclusion that industry needs to be more strictly controlled in order to ensure that negative consequences are minimized.

Impacted by these environmental disasters in Europe and the United States, as well as in Japan and India, a lot of highly intelligent young people chose not to devote their lives to science, engineering and technology, but instead pursued MBAs and Juris Doctorates. A whole generation of good scientists was essentially lost. At Chernobyl, experts fled for shame, leaving the power plant even more vulnerable than before the disaster. The ones who still studied chemistry, physics, biology, or engineering did this with a bad consciousness. They felt guilty for dealing with science and tried to find ways to minimize their harmful impact.

In the western world, the whole environmental debate led to the cultivation of a guilt complex. Human beings are bad and at best try to be less bad. But less bad is not good. Minimizing damage does not support the environment; it is only less bad, merely postponing the inevitable collapse. Funny terminology like 'environmental protection' was created when people tried to minimize their negative impact. At the same time, developing countries

decided to insist on their right to development which generated the term sustainable development, coined by the Brundtland Commission in 1987 as the basis for the Earth Summit in 1992. *This comment may prove unnecessarily inflammatory as so many people have invested emotions and efforts into sustainability. Apart from that we ourselves talk about sustainable investments etc. I therefore suggest that we explain more objectively our position.*

1.1 Sustainable Development – In order that Future Generations may not be worse off than us

Sustainability, as a commonly used term, is essentially too modest and defeatist, as it focuses more on tolerable levels of impact than on what can be achieved in positive terms, what can sustain further development in terms of economy, ecology and the social aspects of life. Thus, sustainability as a goal does not tend to generate innovation and quality design; instead, it rather focuses on defining standards, "best practices" etc. which often restricts creativity by concentrating solely on enhancement of efficiency to reach agreed levels of sustainability.

1.2 Designing a Future of Abundance and Growth – The Triple Top Line

This paper will explain what an agenda may look like if it does not focus on minimizing waste and the associated guilt, but rather on supporting life, environment, economy, and society as result of a holistic approach. This is no longer a triple bottom line approach, which is the socially and ecologically responsible management's way of taking into account externalities for which it may not even be legally accountable, but does it anyhow as society has failed to communicate the socio-economic costs of industrial production. The *Triple Top Line* is a radically different concept as it provides an ex ante perspective of the totality of needs, opportunities and profit potential, where human creativity can be celebrated and the other species can be happy to share this planet with many human beings. If organized right, economic development can be a good thing! It can support and benefit society and the environment, which is the underlying notion of *Cradle to Cradle Design*.

1.3 The Public Good of the Environment

Before embarking on a new strategy for economic development, we first need to understand what exactly public goods for the environment are and what their current relationship with economic development is.

According to UNIDO's draft report:

> *Public goods are distinguished from the private goods in the economic literature by two characteristics: non-excludability and non-rivalry. Non-excludability means that once these goods are supplied it is hard to exclude someone from utilizing their benefits, say from the access to clean water or air, if that person refuses to pay for this utilization (known as the "free rider" problem in the literature). Non-rival aspect of consumption of these goods means that the volume and quality of the supply of these good is not reduced by one-person consumption. Market fails to optimally provide these goods for all actors in a society, as rewards for private initiative to provide these goods through the market mechanisms are not sufficient. This is usually compensated by collective action or state provision.*

One question that arises is whether the characteristic of *non-excludability* is relevant in those cases where privatization of the distribution of public goods have been organized. Box 1: Water Rights in South Africa, is one case study that demonstrates the privatization of water in South Africa, which excludes a large part of the population from clean drinking water.

When it comes to the characteristic of ***non-rivalry***, it is obviously true on the level of personal consumption where the incremental consumption of one extra individual is negligible. However, what may be true on the level of personal consumption is not necessarily true when

it comes to industrial use of the public good. As a matter of fact, the example in Box 2: Coca Cola in India raises the question whether it is appropriate to talk about public goods in such context. It also questions whether it should always be required that independent environmental impact assessments and subsequent monitoring should be part of the conditions for new investments that will tap into such public goods.

Box 1 Water Rights in South Africa

The policy of "full cost recovery" – fully embraced by the World Bank, IMF, and many donors and African governments alike – combined with privatization and tariffs that poor people cannot meet, leads to many poor people being cut off from promised clean water.

The reasons for the lowered access to water after privatization are twofold. First, the "full cost recovery" model means cutting water to those not paying water bills. Property and eviction from resident homes can be part of the legal process to recover debt from customers. Mr. Cottle says that "since 1994 over 10 million South Africans have had their water cut off and 2 million South Africans have been evicted from their homes" for not paying their water bills. Second, tariffs generally increase during the commercialization phase prior to privatization, only to increase more after privatization. The black townships in Fort Beaufort had seen an increase in service charges by 600 percent between 1994 and 1996, the time of privatization. Similar trends have been noted in most towns and cities where water utilities are being commercialized or privatized.

The worst example of the health consequences of less access to clean drinking water in South Africa was given during the outbreak of cholera in year 2000. Mr. Cottle told afrol News that there was a direct Connection between the installation of prepaid meters and the unprecedented spread of cholera in KwaZulu-Natal. Over 120,000 people got infected and 290 people died during the outbreak. Studies showed that in the most affected areas, very many people had returned to the use of unsafe water sources as they could not afford safe water.

Curiously, water utilities privatization is still a seldom phenomenon on a world-wide basis, especially in rich countries. Only an estimated 5 percent of the world's water resources are on private hands. Industrialized countries, where the largest private water operators have their headquarters, thus increasingly are pushing for privatization in developing countries.

It may be questioned whether public goods have value in an economic sense in case that they do not come with a price tag. From economic theory, we know that price is an expression of scarcity. It does not reflect intrinsic value. That is why drinking water is often free or available at a low price or a price which does not provide an incentive to save it. Water is cheap and Champagne is expensive. Were we to end up shipwrecked on a small island in the Pacific few of us would prefer Champagne over water.

Public goods are often free, or they are provided with no price incentives to save on its consumption. That is often the case with piped water which is indeed not free as it comes at a cost of investment and maintenance of the water distribution system. This should not lead us to believe that it has no value. There are many examples of good and plentiful resources of potable water, which have been available free of charge to the local population, and which has attracted industrial investments, for example, in the field of bottling carbonated beverage products and which in the process has reduced the quantity and deteriorated the quality of potable water. In this way the former plentiful "free" drinking water may become scarce and thus "valuable," maybe even unaffordable to the local population.

Box 2 Coca Cola in India

Coca-Cola came to India in 1993, looking for water and markets in a country where one third of all villages are without anything approaching adequate water and shortages are growing every day.

Coca-Cola had sound reasons in zoning in on Plachimada. The site Coca-Cola picked was set between two large reservoirs and ten meters south of an irrigation canal.

The plant duly got a license from the local council, known as the Perumatty Grama panchayat. Under India's constitution the panchayats have total discretion in such matters. Coca-Cola bought a property of some 40 acres held by a couple of large landowners, built a plant, sank six bore wells, and commenced operations.

Within six months the villagers saw the level of their water drop sharply, even run dry.

On April 22, 2002 the locals commenced peaceful agitation and shut the plant down. Responding to popular pressure, the panchayat rescinded its license to Coca-Cola on August 7, 2003. Four days later the local Medical Officer ruled that water in wells near the plant was unfit for human use, a judgment reached by various testing labs months earlier.

Today, in a region known as the rice bowl of Kerala, women in Plachimada have to walk a 4-kilometer round trip to get drinkable water, toting the big vessels on their hip or head. Even better-off folk face ruin. One man said he'd been farming eight acres of rice paddy, hiring 20 workers, but now, with no water for the paddy, he survives on the charity of his son-in-law.

The old village well had formerly gone down to 150 to 200 feet. The company's bore wells go down to 750 to 1000 feet. As the water table dropped, all manner of toxic matter began to rise too, leaching up to higher levels as the soil dried out.

Lab analysis by the Kerala State Pollution Control Board has shown dangerous levels of cadmium in the sludge (given to the local farmers as fertilizer). Another report done at Exeter University in England at the request of the BBC Radio 4 (whose reporter John Waite visited Plachimada and broadcast his report in July of 2003) found in water in a well near the plant not only impermissible amounts of cadmium but lead at levels that "could have devastating consequences," particularly for pregnant women. The Exeter lab also found the sludge useless as fertilizer, a finding which did not faze Coca-Cola's Indian vice-president Sunil Gupta who swore the sludge was "absolutely safe" and "good for crops."

"The cruel fact," Veerendrakumar – a former federal minister - told the Indian parliament as he handed over a well-documented report on the toxic outputs of the plant, "is that water from our underground sources is pumped out free and sold to our people to make millions every day, at the same time destroying our environment and damaging the health of our people. For us rivers, dams and water sources are the property of the nation and her people."

The paradox is that this deterioration of the ecological situation is counted positively as economic production twice: in connection with the investment in and the operations of the plant, which is the cause of over-abstraction of groundwater, and in connection with the sales of potable water, which has become valuable in economic terms because of the industrially created scarcity. If and when corrective action takes place the economic consequences are counted once more!

To have access to public goods but to little else may be described as ***poverty***. To be deprived even from public goods, such as potable water, unpolluted soil, and clean air, adds a social and environmental dimension that significantly reduces quality of life and leads to ***misery***. Although they may often go together this is not always the case: you can be poor but maintain dignity, but you can also be relatively well off in terms of income but live in a condition of

deprivation, which amounts to misery. We have reasonably good ways of measuring poverty in terms of income and costs of living, but misery is harder to quantify as it includes aspects like unhealthy noise levels and lack of physical security.

In all forms of poverty alleviation whether implemented by national or local authorities, UN organizations, the World Bank and regional development banks, and whether they include industrial investments the overriding concern should be the concern of a medical doctor: “First, do no harm!” Do not incur the risk that a new industrial activity will consume public goods to an extent that is unsustainable with potentially grave, negative effects on the local population.

It is a widely held misconception that the familiar dictum "First, do no harm" comes from the Hippocratic Oath, the oath many physicians take when they enter medical practice. However, the Hippocratic Oath does not contain those words. It is the opinion of many scholars that Hippocrates did originate the phrase, but in Epidemics, Bk. I, Sect. XI, which reads: "Declare the past, diagnose the present, foretell the future; practice these acts. As to diseases, make a habit of two things—to help, or at least to do no harm."

Economic development by definition leads from the subsistence economy to the money economy. This shift incurs an economic risk relating to the maintenance of the infrastructure on which it is based. An improved transport infrastructure may open new markets and spur investments, but is it allowed to deteriorate, the negative consequences may outweigh the positive ones generated initially by the project. Therefore – although less glorious – guaranteeing the maintenance may prove more valuable than the original construction. Similarly, “green revolution” high yield crops and especially GM crops presuppose that farmers have purchasing power for seeds, fertilizers, pesticides etc. For such farmers to retreat into the subsistence economy will no longer be a viable option. The high suicide rates amongst India’s farmers bear witness to this fact. Following the principle: First, do no harm will result in practical steps to protect people from economic risks, the consequences of which they cannot afford.

In the context of development assistance, it is particularly important to ensure that well intended initiatives and projects which aim at producing economic growth will not have negative ecological and social implications, that factories will not deplete public goods like clean water and air, and that they will not introduce an unfair competition with smallholders, artisan fishermen, etc.

In this respect, it is natural to analyze and monitor the consumption of public goods and in this connection to use the price mechanism to keep the consumption on a sustainable level. The social costs of diseconomies of industrial production should not be passed on to the local population in the form of water tariffs, as mentioned in the South African water example. Whilst the price mechanism according to theory shall provide an incentive to economize with a scarce resource, it is not intended to bar people from access to a vital public good on which their sustenance is crucially dependent. In this quoted case, the price mechanism in effect works to exclude poor parts of the population from the access to clean drinking water, not only the part of the consumption, which may be considered as a “luxury” but at a level necessary for physical survival. It goes without saying that the result is that significant investments in public health as a public good, often with financing by the World Bank comes under threat in such a situation.

The ultimate cynicism is “privatization of survival.” You buy air conditioners and air cleaners, deep well water pumps and water purifiers, UV filters and invest in security so that less affluent citizens will not illegally find ways of protecting themselves by benefiting from what you paid for! This is the model of man that has reached the point of individual sustainability where he does not need to be and is in fact not part of community! As seen in

Box 3: Destruction of Asian Aquifers, the problems with saline water infiltration into aquifers is known in many Asian capitals, including Bangkok, Jakarta and Manila.

Box 3 Destruction of Asian Aquifers

Nearly one third of all humanity relies almost exclusively on groundwater for drinking, including the residents of some of the largest cities in the developing World, such as Jakarta. For them, groundwater is the affordable alternative to the piped water systems that are difficult for governments to provide to growing urban populations.

In Jakarta, approximately 60% of the population relies on groundwater, as well as 90% of businesses such as industries, hotels, and business centers. In Thailand there is a legally recognizable groundwater area, created in the Groundwater Act of 1977.

Once groundwater is contaminated, there will be little benefit in having access to it at all. Recent experience in Asia shows that groundwater quality issues are of life and death importance for those people who rely on sources of groundwater that may be contaminated.

Most groundwater is still pristine, but unless we take immediate action, clean groundwater will not be there when we need it… a toxic brew of pesticides, nitrogen fertilizers, industrial chemicals, and heavy metals is fouling groundwater everywhere, and that the damage is often worst in the very places where people most need water (Sampat, 2000).

Serious pollution of groundwater occurs when contaminants are discharged to, deposited on, or leached from the land surface, at rates significantly exceeding the natural attenuation capacity. This is occurring widely as a result of both the indiscriminate disposal of liquid effluents and solid wastes from urban development with inadequate sanitation arrangements, and of uncontrolled effluent disposal and leakage of stored chemicals into the ground from industrial activity (IRC, 1998).

The natural cleansing systems are overloaded by the pollutants to the extent that ADB estimates of the combined volume of water used in Asia and water needed to dilute and flush the pollutants to be returned to the hydrological system is almost equal to the total volume of accessible freshwater in the entire world's river systems (ADB, 2001).

Groundwater over-abstraction is a well-recognized problem in Asia. It can cause quality problems such as salinization, where abstraction from deep aquifers induces leakage into the water source of shallower, polluted groundwater (Foster et al., 1998). This occurs particularly within coastal areas, through saline connate water clay layer squeezing, saline water horizontal movement from the coast, inland, and saline water infiltration. Just two percent of seawater mixed with freshwater makes the water unusable for drinking or irrigation.

Seawater intrusion in Jakarta had reportedly reached more than 10-15 km from the coastline in 1994 (Tirtomihardjo et al., 1994), and, according to UNESCO (Nur et al., 2001), whilst saltwater intrusion has reached 6 km to the west and 11.5 km to the east of Jakarta in the shallow aquifer's upper 40 meters, it has penetrated landward 5-13 km at the Soekarno-Hatta Airport, and 8-10 km in Cengkareng, Grogol and Kelapa Gading.

The findings of the World Bank researchers seem to show that, under the prevailing circumstances, the best scenario for the preservation of aquifers were through leaks or breaks in the urban water-supply infrastructure!

The challenge may be as much to recreate the social man as it is to find new technologies, because without understanding our interdependence and our vulnerability we shall not be able to prevent unsustainable practices and we even risk that public goods may be lost altogether. That happens, for example, when aquifers get polluted with nitrogen and heavy metals. This social approach is good conflict prevention as well: we recognize and accept our vulnerability and interdependence with others and we act positively upon that knowledge.

Societies which have demonstrated great achievements in economic, social and ecological terms have explicitly recognized their dependence on shared public goods, as seen in Box 4: Subak Irrigation Communities.

Box 4 Subak Irrigation Communities

The Subak irrigation communities run by rice farmers on the island of Bali is a good example. They consider that water is the source of life, and carefully ensure that all community members benefit to the fullest from its availability. The Subak irrigation communities are based on the recognition of the irreplaceable value of shared water. This is so obvious to the participants that they do not need this fundamental truth to be communicated in the form of prices.

The Subak is based on shared economic interests in maximizing the yields of rice, and the core issue is the management of water. The way of achieving this is to work together not only to share the water and to expand, maintain and repair the complicated irrigation system, but to share the heavy work load of the labor intensive planting and harvest (which are not seasonal but take place on a continuous rotation basis) to speed up the rice growing cycle to the benefit of all. This means that the Subak irrigation communities have developed valuable skills of cooperation. These skills are used to economic ends, but equally important, they are used for social, cultural and spiritual purposes as well.

2. Types of Environmental Public Goods

Clean air and water, biodiversity, ozone protection, and nutrient rich soil are just a short list of the many environmental public goods. The following is a list of some of the most important environmental public goods, along with the corresponding supervision and public responsibility necessary for preservation:

- Biosphere stability: green house gas emissions and global warming prevention; ozone protection; carbon sequestration.
- Ecosystem stability: desertification and deforestation prevention; hydrological stability.
- Clean air: prevention of toxic substances contaminating air from incineration, combustion engines, and other activities.
- Clean water: prevention of toxic substances contaminating waterways, including leaching from landfills.
- Healthy topsoil: keeping topsoil intact; soil erosion prevention; prevention of toxic substances contaminating soil.
- Biodiversity: wetland, forest, and other habitat protection; endangered species protection; agrobiodiversity and GMO-free crops.

In this report, the latter four environmental public goods will be considered relevant for the purpose of discussing them in the context of industry and the activities of UNIDO.

Biosphere stability

UNIDO is one of the implementing agencies of the Montreal Protocol and the Kyoto Protocol. Whilst these Protocols are important the general approach to fulfilling their goals is based on the same minimization and best practice philosophy as other measures of environmental protection. The fact that major sources of CO2 emissions like the cement industry are subjected to standards like the EU Directive on IPPC does not leave much room for the targeted improvements.

Clean air
Clean air is an important determinant for good human health, which is a public good in its own right, traditionally given high priority in development programs including those designed and implemented with the financial assistance of the World Bank and the Regional Development Banks. The costs to society relating to diseases caused by polluted air in respect of sick leaves, medical costs and hospitalizations are very significant, and they should be taken into account when planning for as well as monitoring industrial activities. Box 5: Economic Costs of Air Pollution in India is a good example of the costs associated with unhealthy air, which is a classic case of resources gone astray.

Box 5 Economic Costs of Air Pollution in India

The costs to society, part of which is direct productivity loss, due to air pollution in the largest Indian cities are as high as nearly one-tenth of the income generated in these cities from all economic activities. Notwithstanding all the uncertainties around such estimates, this analysis clearly shows that India suffers from a disproportionately heavy health burden of urban air pollution by international comparison.

The World Bank undertook a study that assessed the magnitude of various damages in urban areas that may be attributed to different fuels, sectors, and pollutants (see Lvovsky et al., forthcoming). These damages considered in the study include: the adverse health effects of exposure to air pollution in urban areas; local non-health effects (i.e. reduction in visibility, soiling and material damages); and global climate change impacts. The analysis was applied to six large cities in different parts of the world suffering from the high levels of air pollution: Bangkok, Thailand; Krakow, Poland; Manila, Philippines; Mumbai, India; Santiago, Chile; and Shanghai, China.

The social costs of all environmental impacts assessed in the study reach US $3 billion, with health impacts being the largest portion of the costs for each city.

The situation pertaining to the air quality is rather an expression of how effective and efficient industry and consumers are in respect to processing other resources, including fossil fuels. As seen in Box 6: Environmental Pollution in Communist Poland, and in many other examples, there are a number of locations in the former centrally planned economies in Eastern Europe demonstrating that the introduction of a market economy significantly improved air quality as products resulting from wasteful manufacturing processes could not compete in the open market.

Clean water
Clean water is essential to survival of human beings and as a matter of fact the entire ecosystem of animals and plants, and it has often been described as a human right. Availability of clean, potable water is not only a question of sustainable levels of abstraction, it is also a question of maintenance of this source of public goods, which amounts to no more than ca. 0.5% of all the earth’s water resources.

The example in Box 7: Over Abstraction of Groundwater in Mexico, as well as in Box 2 and 3, clearly demonstrate the major problem of water pollution. However, the problem is not confined to developing countries, as there are reports of comparable situations in developed industrialized states including California.

Box 6 Environmental Pollution in Communist Poland

Part of the inglorious legacy of the previous communist political system is the disproportionately high level of environmental pollution in relation to the industrial potential of Poland or other Central and Eastern European countries. This pollution is an inescapable side-effect of such features of the communist economy as: the years-long dominance of the most energy-consuming and harmful industries, particularly minerals extraction and metallurgy; the construction of huge industrial plants, usually located in already heavily industrialized areas; the wasteful use of low-priced minerals, energy and water in production processes, and the resulting release of excessive quantities of waste into the environment; and, the pricing of goods without regard for their real production costs.

Atmospheric pollution in Poland is among the heaviest in Europe. In 1988-1989 about 4 million tons of sulfur dioxide (S02) and 1.5 million tons of nitrogen oxides (N0x) were emitted from the country's territory per year, making Poland the third biggest polluter in Europe (after the former Soviet Union and Germany)[65]. In terms of particulate emissions, at about 3.4 million tons per year, Poland ranked directly behind the former Soviet Union. Carbon monoxide emissions of 3.2 million tons and approximately 470 million tons of carbon dioxide per year were recorded. Whether calculated per unit of national income, per unit of energy generated, or per capita, these values are many times higher than those reported in OECD countries.

In the Sudety Mountains, where the Polish, German and Czech borders meet, there are 12 big power plants (including one Polish power plant in Turow) which burn poor-quality brown coal. None of these plants have facilities for exhaust gas desulphurization, and SO2 emissions from this small area, called 'the Black Triangle,' account for 20% of the European emissions of SO2. It should come as no surprise to learn that this area has the largest sulfur compound deposition, and that the acidification of precipitation causes it to have a pH below 3.0[66]. This is a striking example of the environmental effects after many years of failure to install pollution control devices.

The water pollution problem is equally dramatic. In 1989, as much as one-third of Poland's municipal and industrial sewage was dumped untreated into surface waters and another 35% was discharged after receiving only preliminary mechanical treatment. Only the remaining 32% of the waste was treated to a satisfactory level. Ofall Polish cities, including cities with more than 200,000 inhabitants (Bialystok, Lodz, Radom), did not have waste treatment plants. The waste treatment plant capacities in many other large urban-industrial areas such as Warsaw, Krakow, Poznan, Gdansk, Bydgoszcz and Szczecin were far from sufficient (GUS – Main Statistical Office, 1991 c).

Due to this negligence the quality of Polish rivers is very poor. In 1989, only 5% of the total river length had potable (Class I) water. Along 35% of it the water was below all rankings and could not be used even for industrial purposes.

A specifically Polish problem is the high salinity of many rivers, produced by Upper Silesian bituminous coal mine effluents. Some of these mines have deep saline waters which must be pumped up to the surface during mining operations. This refers mainly to the most recently opened mines, constructed in the past 20 years in the Rybnik area. The total amount of salt dumped into the Vistula and Odra rivers every day is 9,000 tons, enough to fill 450 20-ton railway wagons! This leads to huge material losses caused by chloride damage to heating systems in towns and cities located along the two biggest Polish rivers and in many industrial plants that use river water. No one as yet has estimated the real cost of extracting coal from the mines with the most saline effluents. However, air pollution does not recognize borders and recent studies of global dimming conclude that its filtering effect on the earth's reception of sun energy is almost universal.

[65] SO2(Sulfure Dioxide) and NOx (Nitrogen oxides) are air contaminants that react with water to form acids. Long term diposition of these acids can be linked with adverse effects on aquatic organisms and vegetation in areas where poor neutralization of these acids is present.

[66] Ph is the unit used to express the strength of an acidic solution. Values commonly range from 0-14 with less than 7.0 being acidic and greater than 7.0 being neutral. The difference of one Ph unit indicates a tenfold (10(1)). This means that the Black Triangle has (10(3)) or more acidity than the neutral Ph of 7.0.

Box 7 Over Abstraction of Groundwater in Mexico

While in absolute terms, Mexico's annual groundwater draft of 12 km is modest compared to countries like India (150 km), China (90 km), and Pakistan (45 km), on a per irrigated hectare basis it is nearly twice as high as India's, which explains both Mexico's higher per hectare crop yields and rapid groundwater depletion. Additionally, a significant share of Mexico's municipal and industrial water demand is met from groundwater, placing aquifer overdraft firmly at the center of both present and future water management challenges.

Guanajuato state, one of the major consumers of groundwater in the country, has seen an explosion in the number of wells over the past 50 years. Groundwater overdraft is estimated at 1.3 km^2 annually and water table is falling at an average annual rate of 2 m per year in the state.

It is not uncommon that agriculture accounts for the vast majority of water consumption, and more often than not agriculture does not have incentives to save on water resources.

Apart from the fact that lowering water tables indicate an abstraction, which is not sustainable in the long run, we have seen in many locations that the mere fact that the groundwater table is disturbed can result in other problems of pollution with arsenic and fluoride and salt, which may render the groundwater resource valueless.

Instead of using that fact as an excuse high industrial water consumption it should spur investors and UNIDO to work for solutions in which water is used but not polluted or depleted.

Healthy topsoil

Topsoil, which is the top six to eight inches of soil, is extremely important to keep intact. Almost all of the Earth's biological soil activity takes place in this layer soil, making it the home to countless microorganisms and organic matter. This layer is filled with nutrients, providing plants a place to sprout their roots.

Although this layer is extremely important to the survival of all species, including humans, economic development has spoiled it, causing massive soil erosion and contamination. Topsoil erosion can occur naturally from being blown or washed away; however, this situation is usually aggravated from human changes to the natural environment, especially agriculture.

One industry that has intensified the loss of topsoil is the logging industry, as seen in Box 8: Logging in the Philippines.

Box 8 Logging in the Philippines

Today, the Philippines has a total forest cover of only 6.16 million or approximately 20.52 per cent of the total land area, according to experts. A study conducted by the World Wildlife Fund showed that more than 119,000 hectares of forest cover disappear yearly.

Logging has been cited as the primary culprit of the rapid disappearance of the country's forest cover. Logging operations, legal and otherwise, are mowing down the country's remaining forest cover. Over the past 50 years, 400 logging companies operated in the country, reports the Environmental Science for Social Change.

The Rev. Peter Walpole, a Jesuit priest who heads the environmental group, said the Philippines "trusted" logging companies to cut down trees and manage the forest. "But they did a very bad job," he decried. "That started the problem that we have now."

A major consequence of deforestation is removal of topsoil. "Soil erosion, especially in the uplands, is now an extremely serious problem in the country," explains Rodrigo Calixtro, officer-in-charge of the Davao-based Mindanao Baptist Rural Life Center. "It does not only result in increasing the impoverishment of the Filipino farmers, but also destroys other things down under."

Siltation, caused by erosion, shortens the productive life spans of dams and reservoirs. The Magat reservoir, for instance, has been cut its probable life span of 100 years to 25 years. The Ambuklao Dam reservoir had its life halved from 60 to 32 years as a result of siltation.

Biodiversity

Biodiversity may not be efficient, but our experience has proven that it is effective. Loss of biodiversity represents a dangerous vulnerability demonstrated by the “green revolution” in the farming of rice. In a number of rice producing nations, traditional kinds of rice were no longer available in the market, and special efforts had to be made in order to retrieve the original seeds. The experience was important to prompt initiatives to set up special seed banks with traditional gene pools to preserve the biodiversity for posterity.

Apart from the “knowns” in respect to seeds for cultivation, we have the “unknowns,” the pools of genes, the importance of which we may not realize today. These unknowns include notably the natural pool of seeds with proteins, which may have significant value in respect to development of new pharmaceuticals. Our knowledge in this field is limited, and indeed even more limited than our understanding of the human health effects of the manmade chemicals. It is estimated that less than 3,000 out of 80,000 manmade chemicals that are on the market have been satisfactorily tested for their impact on human health. The example in Box 9: The Bt Cotton Controversy demonstrates the dangers associated with these manmade chemicals and their impact on biodiversity.

Biodiversity has no economic value before it is realized that it provides the basis for profitable economic activities, which are in turn dependent on such things as research and patent laws. This does not mean, however, that it should be treated as valueless. The vast majority of all medicine is based on natural substances and their derivates, most often in the form of proteins. The emerging medical discipline of proteomics holds great promise in understanding and diagnosing disease and finding remedies which may in principle be designed down to the level of the individual patient. In this sense, biodiversity is a global human inheritance and the costs, including opportunity costs of good stewardship should be borne collectively.

Box 9 The Bt Cotton Controversy

The town of Guntur in Andhra Pradesh is the center of the cotton ginning industry and reeks of pesticides, where the controversial field-trials of genetically-altered Bt Cotton are quietly going ahead.

Progressively deadly poisons have been developed by corporations like Monsanto as insecticides to control these persistent pests, the enemies of the crop, the farmer and the nation. But after over 50 years of rampant pesticide use, the bollworms grew resistant to the poison. With subtle alteration in its likes and dislikes, the bollworm decided to accept pesticides as a staple diet and grew from strength to strength, to the dismay of the poor farmers. For many who were caught in debt-traps carefully laid out by either moneylenders or the local seed-fertilizer-pesticide suppliers, the failure of yet another crop meant suicide among farmers.

Bt cotton was introduced commercially in the USA in 1996. The Bt toxin occurs in nature and has been safely used in many organic pest control sprays. Genetically engineered BT cotton incorporates the toxin in the seed itself where the Bt protein crystals pierce the intestine of a small number of insects, of which the cotton Boll weevil is the prime target. Unfortunately Bt does not discriminate between ‘pests’ and beneficial insects such as the monarch butterfly, lacewings and ladybirds. Populations of these could be severely depleted, making it difficult to get out of the chemical-dependence cycle, and causing impacts higher up the food chain.

The concept of Non Pesticidal Management (NPM) is the new buzzword in organic circles. NPM came about to restore the natural ecology in the villages and is based on conservation of bio-diversity, sustainable system of crop production which leads to maximum productivity and profitability. This is done with the help of locally-available, environmentally-sound pest control components such as neem, chili-garlic, parasites, and predators.

3. Measuring Under-provision

More often than not, these environmental public goods are unfortunately not being protected. Since the Industrial Revolution, we have dealt with a heightened problem of polluted air and water, loss of biodiversity, loss of top soil, dramatic soil erosion, and contamination of biosphere with persistent, bio-accumulative substances. This has led to malnutrition, diseases, death, and generally loss of life quality.

In measuring the under-provision of these goods, the basic, philosophical question is what do we measure? Do we measure the important or the priced goods? Do we celebrate the economic achievements of unsustainable practices by counting their contribution to GDP and then in turn count the economic effects of remedies in the form of end-of-pipe solutions?

Markets are supposed to communicate correctly all kinds of scarcities, including scarcities of public goods. However, miscommunication of the costs of economic activities in social, financial and ecological terms is prevalent in all countries, not only developing countries. Market distortions are not necessarily bigger in developing countries than in developed countries.

As a matter of fact, the EU Water Framework Directive has a social element in it which may offset financial and ecological aspects of water consumption. This is in sharp contrast to the situation in South Africa, described in Box 1, where an estimated 10 million have been cut off from safe water supply and 2 million have become homeless as the privatized water companies have exercised their “rights” to collect their water bills/exclude subscribers, who do not pay. In this respect we have more sympathy with the EU Water Framework Directive because it must be a basic human premise that nobody should be excluded from covering basic needs of sustenance.

Nonetheless, it is blatantly clear that these public goods are being under-provided. UNICEF's State of the World's Children 2005 report offers the following statistics:

- 1 billion children are suffering from one or more forms of extreme deprivation
- million children die each year due to lack of access to safe drinking water
- 400 million children (1 in 5) have no access to safe water
- The Earth Policy Institute published a report in 2001 that gave these additional figures:
  - The earth's forests are shrinking at a rate of 9 million ha per year
  - Soil erosion has reduced annual harvest by $1.9 billion in Africa
  - The current rate of species extinction is more than 1000 times the background rate

Every year, more than 5000 more topsoil is lost than is replaced, while there exists 5000 times more solar input than humans can use. These public goods are obviously not being well managed, resulting in a tragic loss of life and quality of life for both humans and nature.

Current Relationship between Economic Development and the Environment
The relationship between economic activities and the environment is a hostile one and it is outright dangerous when it is pursued efficiently. The more economic growth, the more environmental destruction takes place. This relationship was intensified with the Industrial Revolution, which focused its design principles only on cost, aesthetics, and performance.

If given as a retroactive design assignment, to recreate the Industrial Revolution one would have to design production system that:

- puts billions of pounds of toxic material into the air, water, and soil every year
- measures prosperity by activity, not legacy
- requires thousands of complex regulations to keep people and natural systems from being poisoned too quickly
- produces materials so dangerous that they will require constant vigilance from future generations
- results in gigantic amounts of waste
- puts valuable materials in holes all over the planet, where they can never be retrieved
- erodes the diversity of biological species and cultural practices.

The current relationship that economic development has with the environment can be considered parasitic. Development extracts all the available natural resources, contaminates the soil, pumps toxic particulate matter in the air, dumps heavy metals in fresh water, and by and large leaves the environment in an unhealthy state.

Although there are a number of cases, the impact of the mining industry is a prime example of how economic development negatively impacts environmental public goods.

4. Mining and its Influence on Global Public Goods

No single industrial activity is prone to generate as much controversy as mining. This is because mining activities are likely to have significant impact on the local ecology, including fish and livestock, as well as air, water, including groundwater, contamination of the food chain, and human health. In addition, a number of social aspects are often involved, including compensation for agricultural land lost to the mining activities and the democratic decision making processes paving the way for the start of the mining activities. Lastly, there is the problem of restoration of the ecosystem after termination of the mining activities. All these issues and more we find in the controversy about the Newmont Gold Mine activity in North

Sulawesi in Indonesia. The case is described in Box 10: Newmont Gold Mine Investigated for Polluting Indonesian Waters.

Box 10 Newmont Gold Mine Investigated for Polluting Indonesian Waters

Newmont Indonesia, a subsidiary of the world's largest gold producer, Denver-based Newmont Mining Corporation, is in trouble with Indonesian authorities over underwater disposal of mine tailings in Buyat Bay on the island of North Sulawesi.

"Indonesia has been gripped by news of an epidemic of health problems ranging from skin ailments, lumps and nervous system complaints suffered by dozens of Buyat Bay residents," conservation groups Friends of the Earth International, WALHI and the Mineral Policy Institute said on Saturday.

Since 1996, Newmont Indonesia has been dumping 2,000 tons of mine waste containing heavy metals such as mercury into the bay daily in a process known as submarine tailings disposal.

Newmont's profits since 1999 have been $1.3 million per day. By contrast, the communities of Buyat Bay and Ratatotok have been left impoverished by unfair compensation for their land (Rp 250/m2 or $0.02). In addition, since Newmont Indonesia started disposing of tailings in Buyat Bay, the fishermen have lost their traditional fishing grounds as a means of livelihood for their families.

The communities are now facing a health crisis, a direct result of Submarine Tailings Disposal (STD). NMR used a cyanide-leaching process, which resulted in the contamination of water sources with various toxic materials, including mercury and arsenic. Buyat villagers suffer from a variety of health problems including tumors, on their entire body, severe headaches and birth defects.

Longgena Ginting, director of WALHI-Friends of the Earth Indonesia said, "The Buyat Bay pollution disaster shows that instead of benefiting poor communities, mining operations destroy livelihoods and health."

5. Eco-Efficient Corrective Action

Due to the increased intensity of ethical concerns in recent years, sustainability has become a leading issue in economic development. Companies are beginning to feel guilty for their wrong doings, such as unhealthy working conditions, manufacturing harmful products, and polluting the environment. Sustainability, based on the principles of eco-efficiency, promotes reducing, minimizing, and limiting the size of ecological footprints, which in this context are perceived to be uniformly bad.

Eco-efficiency strategies focus on maintaining or increasing the value of economic output while simultaneously decreasing the impact of economic activity upon ecological systems. The aim is to provide maximal economic value with zero negative ecological impact – a true decoupling of the relationship between economy and ecology.

Eco-efficiency begins with the assumption of a one-way, linear flow of materials through industrial systems: raw materials are extracted from the environment, transformed into products and eventually disposed of. Eco-efficiency approaches seek to minimize the volume, velocity and toxicity of this 'cradle-to-grave' dynamic, but at all levels of decision-making accept the ultimate and inevitable demise of materials as useful resources.

Eco-efficiency is a broad concept which has been supplied with various definitions by a number of groups since its inception in 1989. The WBCSD originally defined eco-efficiency as "being achieved by the delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and

resource intensity throughout the life cycle to a level at least in line with the earth's carrying capacity."

Despite various definitions, the core of the eco-efficiency concept can generally be understood as to get more from less: more product or service value with less waste, less resource use and less toxicity. In this context: eco-efficiency can be said (in the material realm) to encompass the concepts of:

- Dematerialization
- Increased resource productivity
- Reduced toxicity
- Increased recyclability (downcycling)
- Extended Product lifespan
- Cleaner Production

Each of these strategies starts with an assumption of the linear, cradle-to-grave flow of materials through industrial systems. They presuppose a system of production and consumption that inevitably transforms resources into waste and earth into a graveyard. Strategies of dematerialization and increased resource productivity seek to achieve a similar or greater level of product or service value with less material input. The concept of Factor 4, for instance, aims at a simultaneous doubling of wealth and halving of resource use. Factor 10 aims at ten-fold reduction in the value of material intensity per service unit.

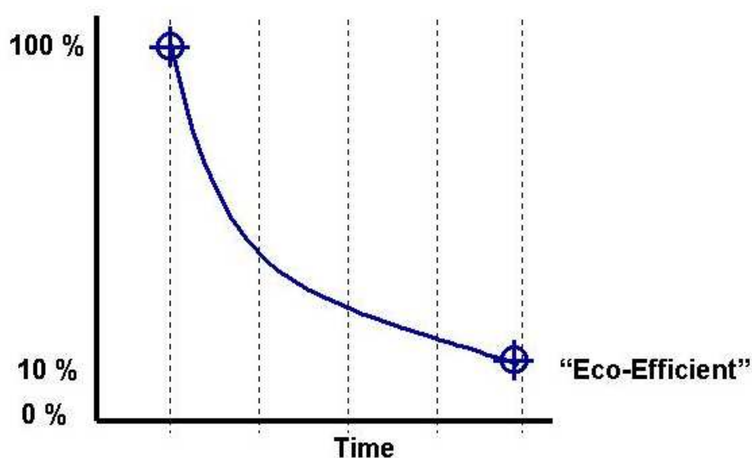
With cradle-to-grave material flows as a background, strategies for generating increased recyclability and extended product lifespan seek to prolong the period until resources acquire the status of waste, for instance by increasing product durability or reprocessing post-use material for use in lower value applications. Though recycling strategies begin to approach eco-effectiveness, the large majority of recycling actually constitutes 'downcycling' because the recycling process reduces the quality materials, making them suitable for use only in lower value applications. Materials still end up in landfills or incinerators. Their lifespan has been prolonged, but their status as resources has not been maintained.

Strategies for toxicity reduction focus largely on replacing the most hazardous materials such that they pose fewer problems to humans or ecological systems throughout their lifespan or after disposal.

In the short-term, eco-efficiency strategies present the potential for tangible reductions in the ecological impact of a business's activities, as well as an opportunity for (sometimes significantly) reduced costs. In the long-term, however, they are insufficient for achieving economic and environmental objectives.

Eco-efficiency is principally a strategy for damage management and guilt reduction. It begins with an assumption that industry is 100% bad, and proceeds with the goal of attempting to make it less bad (Figure 1). While being eco-efficient may indeed reduce resource consumption and pollution, and provide temporary economic advantage in the short-term, it lacks a long-term vision for establishing a truly positive relationship between industry and nature. Eco-efficiency strategies do not address the deep design flaws of contemporary industry. They address symptoms instead of the cause, setting goals and using practices that sustain a fundamentally flawed system. The ultimate result is an unappealing compromise that takes for granted, even institutionalizes, the antagonism between nature and industry.

Figure 1 Eco-efficiency as a negative approach



Recycling is hardly a magic bullet solution. As previously noted, the large majority of recycling done today is actually downcycling where materials lose value as they circulate through industrial systems. When plastics are recycled into countertops, for example, valuable materials are mixed and cannot be recycled again. Their trip to the landfill has only been slowed down. From this same perspective, mixing metals dilutes their value and increases the impact of the materials. When rare and valuable metals like copper, nickel and manganese are blended in the recycling process, their discrete value is lost forever. Creating new stockpiles is extremely costly, both economically and ecologically.

Current corrective action programs are inherently eco-efficient. Instead of trying to remove various problems in the long term, these programs seek out quick fixes to improve the present situation. However decreasing the amount of extracted raw materials and limiting the amount of toxic materials entering the biosphere, do not solve the problem that we are still wasting precious materials and polluting our environment. These environmental technologies to minimize toxic emissions and hazardous substances are somehow generating more problems indirectly because they establish a waste management technology which is not beneficial for the new relationship between economy and ecology. To make things even worse, they are often supported by legislation, which provides a set of incentives/disincentives, which result in sub-optimal solutions, and which may actively hinder the development and marketing of new and healthier technologies.

6. Eco-Effective Corrective Action

In 1990, when East and West Germany were reunited, it became pretty obvious that the environmental condition of East Germany was far better than that of West Germany. Even though there was no significant environmental regulation in East Germany, the reduction of the number and variety of species, the contamination of top soil, and the usual environmental degradation, was much lower than in West Germany. There were indeed contaminated hot spots of local destruction, but overall the environment was far more intact as a public good than in West Germany. This did not have to do with the presumed socialist perception of public goods, it was far more that the East German economic system was not efficient enough to exploit and destroy it.

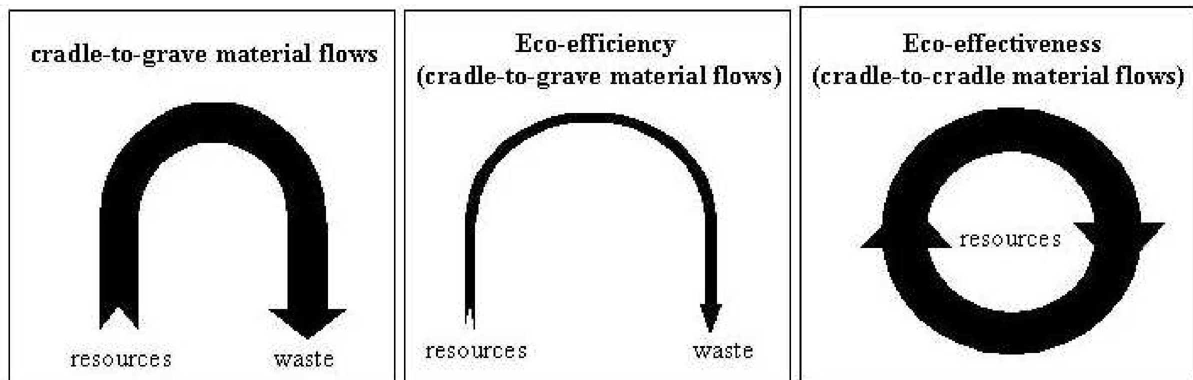
So it is clear when your course is wrong, it is better not to be efficient. Typically in less developed economies the biodiversity is much higher than in highly developed economies. In

this context, traditional economic growth always means more destruction and loss of biodiversity.

The concept of ***eco-effectiveness*** offers a positive alternative to traditional eco-efficiency approaches for the development of healthy and environmentally benign products and systems. In contrast to this approach of minimization and dematerialization, the concept of eco-effectiveness proposes the transformation of products and their associated material flows such that they form a supportive relationship with ecological systems and future economic growth. The goal is not to minimize or delay the cradle-to-grave flow of materials, but to generate cyclical, cradle-to-cradle 'metabolisms' that enable materials to maintain their status as resources and accumulate intelligence over time (upcycling). This inherently generates a synergistic relationship between ecological and economic systems – a positive recoupling of the relationship between economy and ecology. The characteristic of zero waste arises as a natural side effect of efforts to maintain the status of materials as resources.

Unlike eco-efficiency which begins against an assumption of linear, cradle-to-grave material flows, eco-effectiveness encompasses a set of strategies for generating healthy, cradle-to-cradle material flow metabolisms (Figure 2). Use of the term metabolism in this case is indicative of a similarity between cradle-to-cradle material flow systems and the internal processes of a living organism. Ayres and Simonis note the similarities between biological organisms and industrial activities on multiple levels. Just as the metabolic systems of biological organisms include the synthesis and breaking down of substances for the maintenance of life, the metabolic systems of eco-effective material flow systems include the synthesis and breaking down of products for the maintenance of a healthy economy and provision for human needs.

Figure 2 The material flow patterns of eco-efficiency and eco-effectiveness



Eco-effectiveness is modeled on the successful interdependence and regenerative productivity of natural systems. In nature, all outputs from one process become inputs for another. The concept of waste does not exist. The blossoms of a cherry tree bring forth a new generation of cherry trees while also providing food for micro-organisms, who in turn nourish the soil and support the growth of future plant-life.

Each element within a natural system may also be highly inefficient. The growth and release of thousands of cherry blossoms, only a few of which may become new cherry trees, is a travesty of material intensity per service unit. When the cherry tree is viewed in the context of the interdependent natural system of which it is a part, however, the overall effectiveness of the system becomes clear.

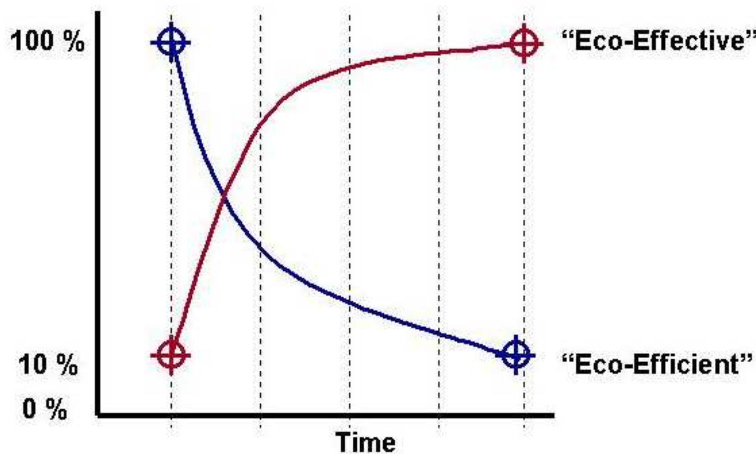
In eco-effective industrial systems, the material intensity per service unit of each individual element is irrelevant to the effectiveness of the whole. As long as those materials that enter

industrial systems perpetually maintain their status as resources, the system is perfectly effective and no waste is produced. If the trimmings from the production of a textile are composed in such a way that they become nutrients for ecological systems, then it is ecologically irrelevant when they are not included in the saleable product. Even if the material intensity per service unit of the textile mill were astronomically high, the system as a whole would be highly eco-effective because the trimmings would become productive resources for natural systems.

Efficiency and effectiveness can be complementary strategies. If efficiency is defined as "doing things the right way (to amplify or maximize the process)", effectiveness means "doing the right things." The concept of efficiency in itself is not value based; it can be either good or bad. If industry is driven by systems that are inherently destructive, making them more efficient will not solve the problem, and may even aggravate it (e.g. the rebound effect). The slimming down of material flows per product or service unit (eco-efficiency) is only beneficial on the long-term if the goal of closing material flows (eco-effectiveness) has first been achieved. Once effectiveness has been achieved, efficiency improvements are not an environmental necessity, but a matter of equity. They are necessary to ensure the fair distribution of goods and services.

Where eco-efficiency begins with an assumption of industry that is 100% bad, eco-effectiveness starts with a vision of industry that is 100% good (Figure 3), that supports and regenerates ecological systems and enables long-term economic prosperity.

Figure 3 Eco-effectiveness as a positive approach



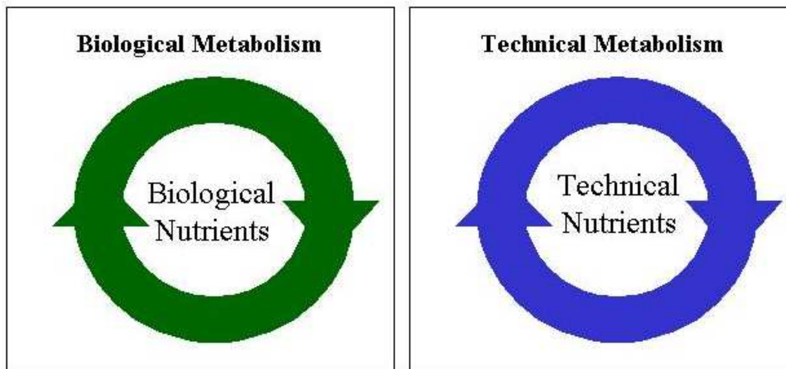
7. Cradle to Cradle Design

Cradle to Cradle Design enables the creation of wholly beneficial industrial systems driven by the synergistic pursuit of positive economic, environmental and social goals. The practical, strategic expression of the eco-effective philosophy, Cradle to Cradle Design defines a framework for designing products and industrial processes that turn materials into nutrients by enabling their perpetual flow within one of two distinct metabolisms: the biological metabolism and the technical metabolism.

As indicated in Figure 4, materials that flow optimally through the *biological metabolism* are called *biological nutrients*. As defined for Cradle to Cradle products, biological nutrients are biodegradable materials (or the result of biodegradation processes) posing no immediate or

eventual hazard to living systems that can be used for human purposes and be safely returned to the environment to feed biological processes. Biological nutrients can be natural or plant-based materials, but include also materials like biopolymers and other potentially synthetic substances that are safe for humans and natural systems. The biological metabolism includes processes of resource extraction, manufacturing and customer use, as well as the eventual return of these materials to natural systems where they can again be transformed into resources for human activity.

Figure 4 Biological and technical metabolisms in the context of Cradle to Cradle Design



Products conceived as biological nutrients are called *products of consumption*. This, for instance, includes products that may actually be consumed (e.g. through physical degradation or abrasion) during the duration of their lifespan, such as textiles, brake pads, and shoe soles. Because they are designed as nutrients for living systems, products of consumption can be returned to the natural environment after use to become nutrients for living systems. A biological nutrient textile, for example, can be used as garden mulch after its useful life as an upholstery fabric. An ice cream wrapper can be designed to contain seeds and liquefy at room temperature so that when thrown away, it not only dissolves safely into the ground but also supports the growth of plant-life.

A ***technical nutrient***, on the other hand, may be defined as a material, frequently synthetic or mineral, that has the potential to remain safely in a closed-loop system of manufacture, recovery, and reuse (the technical metabolism), maintaining its highest value through many product life cycles. Technical nutrients are used as ***products of service***, which are durable goods that render a service to customers. The product is used by the customer but owned by the manufacturer, either formally or in effect. The product of service strategy is mutually beneficial to the manufacturer and the customer. The manufacturer maintains ownership of valuable material assets for continual reuse while the customers receive the service of the product without assuming its material liability. The manufacturer or commercial representative of the product also fosters long-term relationships with returning customers through many product life cycles. Consider, for instance, a television or a washing machine that is leased to a customer for a defined period, and then afterwards returned to the company so that the materials can be recovered and used again in the creation of new products (either by the same or a different company, but at an equivalent or higher level of quality/performance).

7.1 Case Studies

The beauty behind Cradle to Cradle Design is that it can be implemented on all levels – from manufacturing a simple product to developing a whole city. The following two case studies will show how a small mill in Switzerland developed a completely compostable textile, how

the nutrients from waste water were able to be reused for agricultural purposes, and how *Raised Flora* is creating healthy ecosystems within crowded Chinese cities.

Compostable Fabric
Climatex® Lifecycle™ upholstery fabric is an example of a product whose constituent materials are positively defined as biological nutrients. Created in collaboration amongst Environmental Protection Encouragement Agency (EPEA) Internationale Umweltforschung, McDonough Braungart Design Chemistry and Rohner Textil, Climatex® Lifecycle™ is a completely biodegradable and compostable fabric. Each component was selected according to EPEA's positive listing methodology[67] for its positive environmental and human health characteristics and its suitability as a biological nutrient.

The fabric is made from natural fibers, including wool from free-ranging, humanely-sheared New Zealand sheep, and Ramie, a tall, fibrous plant grown in Asia. To identify suitable dyes for the fabric, 60 major dye producers were asked to provide the necessary information on their best dyes to enable an assessment of their suitability as biological nutrients. From a selection of 1600 dye formulations, EPEA utilized their methodology to identify 16 that met both the desired technical and environmental specifications.

Figure 5 Biological Metabolism of Climatex Lifecycle

The optimization of the materials and dyes used in the product also has an impact upon the environmental profile of the production process. Before eco-effective optimization of the product, trimmings from the mill were classified as hazardous waste requiring special (and expensive) disposal. Moreover, workers in the mill dealt with toxic chemicals on a daily basis. Most critically, the mill polluted the local river to such an extreme that the government asked them to cease production.

After Cradle to Cradle re-engineering, waste material from the mill could be made into felt to be used as garden mulch, and in the cultivation of strawberries, cucumbers and a wide range of other plants. Workers no longer had to handle toxic chemicals. And the space used for storing toxic materials was renovated into staff offices and a lounge. Furthermore, when

[67] EPEA's positive listing methodology, is based on the assessment of whether chemicals are good for recycling and recovery. These become positive qualities. Use of such materials can also lead to cost reductions. P-Lists include classifications A, B, C and X. 'A' - for optimal, 'B' - for principally suitable but requiring improvement, 'C' - for troublesome but tolerable - at least for a limited time and 'X' - for unacceptable.

tested after the eco-effective transformation, the river water was cleaner downstream of the mill than elsewhere upstream.

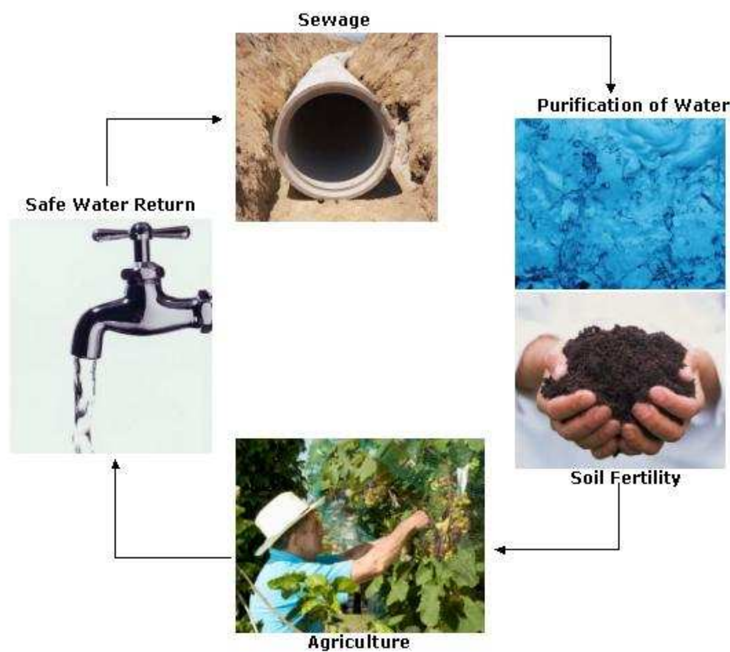
Biomass Nutrient Recycling Project

About 90 percent of humanity's sewage enters waterways untreated. According to the World Health Organization, 8 or 10 of the developing world's most frequent killer diseases are caused by water contaminated with sewage. In the year 1996, 10 million annual deaths were expected as a result, making sewage one of the most lethal substances in history.

Yet this apparently dangerous waste also contains a remarkable mixture of valuable nutrients which, if purified, helps restore depleted soil and avoids costs of expensive fertilizers. Conventional waste water treatment technologies, however, are too expensive for many developing economies and often fail to reuse nutrients in waste water. Most methods overlook natural advantages such as extended sunlight available in tropical regions where most of the world population lives. Cost-effective options are possible.

The Biomass Nutrient Recycling Project led by the German Hamburger Umweltinstitut e.V.(HUI) in cooperation with the Brazilian O Instituto Ambiental (OIA) constructed and tested demonstration projects using Biomass Nutrient Recycling technology to purify municipal waste water and improve soil fertility. The project cooperates with many agencies including the European Commission, municipal governments, community associations, laboratories and private companies in Brazil, Germany, and China.

Figure 6 Biomass Nutrient Recycling Cycle



Biomass and natural processes are used to recover nutrients and eliminate dangerous bacteria. Different parts of this technology have been applied before, but rarely were qualified scientifically in tropical zones, or combined for municipal waste water treatment and agricultural production at the same time.

Aim is to safely recycle nutrients from waste water to improve economic performance and to reduce waste water pollution, thus contributing to health and productivity affordably. The project has succeeded to purify waste water to European waste water discharge standards and

develop high levels of agricultural productivity. Most of this is done in low income communities, so the project also contributes social and economic benefits. Over ten demonstration projects have been constructed in Brazil, China, India, and Nicaragua serving from 30 to 1500 inhabitants and operating under varied climate conditions.

"Raised Flora" in China

With cities buzzing with the movement of millions of people and new development taking place on a massive scale, it is quite bewildering that various species of birds would be relocating in these crowded Chinese cities.

The reason for this migration is a result of a new concept called ***Raised Flora***. Since land is scare in these cities, it is difficult to set aside land for parks and ecological conservation. The best use of land is tall sky-scrapers. The new philosophy encourages to not only raise the floor, but to also raise the flora.

Figure 7 Raised floor, Raised *Flora*

By covering the buildings with green roofs, the fauna will provide a nice habitat for various species, most notably birds, offering them a healthy home within the compounds of the cities. Instead of being a burden to local energy needs, these skyscrapers, in addition, can be powered locally by the wind and the sun through the inclusion of wind turbines and solar panels.

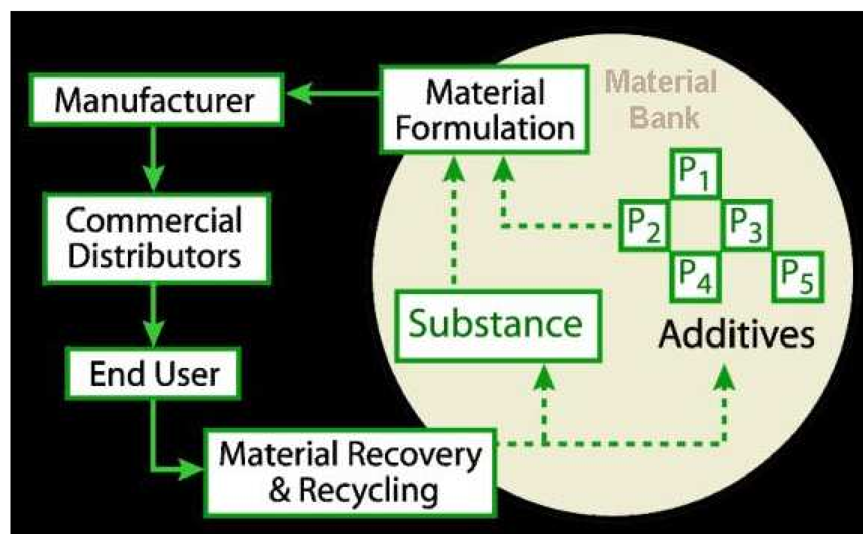
Intelligent Materials Pooling

In order to make Cradle to Cradle successful on a broad scale, there needs to be a greater management of nutrient flow metabolisms. One avenue to make this happen is ***Intelligent Materials Pooling***, which is a framework for the collaboration of economic actors within the technical metabolism which allows companies to pool material resources, specialized knowledge and purchasing power relating to the acquisition, transformation and sale of technical nutrients and their associated products. The result is a mutually beneficial system of cooperation amongst actors along the supply chain that supports the formation of coherent technical metabolisms and the enabling of product-service strategies.

The heart of an Intelligent Materials Pooling community is a materials bank, which maintains ownership of technical nutrient chemicals and materials. The materials bank leases these substances to participating companies, who in turn transform them into products and provide them to consumers in the form of a service scheme. After a defined use period, the materials are recovered and returned to the materials bank. The materials bank also manages the information associated with these materials, integrating and sharing related information amongst relevant actors. In this manner, it ensures the accumulation of intelligence relating to a particular material over time, and a true upcycling of the material.

As illustrated in Figure 8, the duties of a materials bank are ideally performed by the product chain actor responsible for post-use reprocessing of the material (e.g. a polymer or steel producer). This actor is responsible for reprocessing and intermediate storage of the material, as well as for leasing it to others for transformation into products of service.

Figure 8 Material flows in the context of an Intelleginet materials Pooling Community



The formation of an Intelligent Materials Pooling community is a four-step process:

- Phase 1 - Creating Community: identification of willing industrial partners with a common interest in replacing hazardous chemicals with technical nutrients, targeting of toxic chemicals for replacement.
- Phase 2 - Utilizing Market Strength: sharing list of materials targeted for elimination, development of a positive purchasing and procurement list of preferred intelligent chemicals.
- Phase 3 - Defining Material Flows: development of specifications and designs for preferred materials, creation of a common materials bank, design of a technical metabolism for preferred materials.
- Phase 4 - Ongoing Support: preferred business partner agreements amongst community members, sharing of information gained from research and material use, co-branding strategies.

The formation of Intelligent Materials Pooling communities has the potential to result in economic advantage for all actors involved. By establishing a framework for materials to be temporarily invested in products of service to be reprocessed into other and presumably more advanced products of service, Intelligent Materials Pooling enables the application of higher quality materials at lower cost. This in turn results in the potential for higher quality, safer and less expensive products. The prospects for realization of this potential depend upon the specific material metabolism in question, namely the relationship between the costs of material recovery and recycling and those associated with disposal and raw material acquisition. It goes without saying that the redefinition of roles of producers and consumers will enable the producer to conscientiously design the products of service to prepare them for being part of indefinite, closed cycles. Apart from that it may provide scope for vertical integration of mining, refining and processing of minerals with the added benefit that the volatility of raw materials prices may be reduced and the producers will benefit from the value added in the processing and “leasing” phase.

In the steel industry, for instance, value is often lost when a range of grades are mixed in the recycling process. A materials pool could preserve the value of steel over many life-cycles by specifying the separation of different grades. Rare, valuable constituent elements such as chromium, nickel, cobalt and copper could also be preserved and reused at the highest level of quality. With cooperation between steel producers (the materials banks) and the manufacturers of a wide variety of products, from automobiles to trains to refrigerators, the steel loop could begin to be closed and the value of its nutrients preserved over time.

8. Benefits of Eco-Effective Corrective Action

Triple Bottom Line

The purpose of the triple bottom line is to balance the objective of return on investment with a quantification of the social and environmental impacts of the company's activities. The concepts of eco-efficiency and socio-efficiency are central in the triple bottom line, adjusting the firm's added value with its environmental and social impact (ie. efficient use of resources, heightened corporate giving, reduction of emissions, and limiting human rights abuses). The goal remains the same: maximizing the return on the invested capital, and ecological and social concerns, in case that they might lead to corrective action, would be dealt with as a trade-off with this business goal.

The triple bottom line is a helpful model for incorporating sustainability issues into the company's income statement to express social and ecological responsibility which goes beyond the accounting requirements established by law. The triple bottom line thus internalizes those socio-economic costs, which society and its public utilities fail to communicate to the market place. Although worthwhile outcomes, the triple bottom line is only an add-on perspective on the past performance of the enterprise, and the room for imagination and free interpretation is so wide that it may easily lead to "green washing" of the company's performance. The triple bottom line does not claim to be a tool for improvement of the company's ecological and social performance, it just adds information on its perception of its impact in those areas.

Triple Top Line

Semantic similarities aside, the ***Triple Top Line*** is fundamentally different. Instead of giving a broader perspective of the company's performance by indicating its ecological and social impact of a one dimensional profit maximizing goal the Triple Top Line creates a three dimensional space in which the country or company can work in order to identify and develop its future development and investment opportunities.

Thus the Triple Top Line strives for products, processes, and development that "enhance the well being of nature and culture while generating economic value. Design for the Triple Top Line follows the laws of nature to give industry the tools to develop systems that safely generate prosperity." The Triple Top Line does not forsake economic growth; it thrives on it and provides the basis for further growth. It is not a tool to ensure sustainability in the sense that it defines what is merely "acceptable," it provides the basis that will sustain us in our further development. Unlike triple bottom line growth, where the ecological and social aspects of the company's operations are quantified, the Triple Top Line provides a three dimensional space of economic profitability, social equity, and environmental health, making each equally important and an integral part in the planning for development that sustains further growth.

Benefits of Triple Top Line Growth

Corrective actions must be a part of a broader development strategy addressing environmental, economic and social aspects together. Rather than add-on solutions, Cradle to

Cradle Design needs to be the guiding framework for an integrated development strategy. The scope of a development strategy should not be limited to addressing those elements currently lacking in supply, but should entail a holistic approach towards sustaining growth.

In addition, it is widely expected that the international trade barriers of the future will be such which are technical, and which concern the environment. Whilst environmental legislation to the aspiring exporting developing country may seem to be another form of political risk, the Cradle to Cradle philosophy in itself may provide such design input that will enable the producer in question to comply with all sorts of future environmental legislation as long as it is fair and performance based.

The effects of this approach can be expected to be as follows:

- The local needs for the investments will much more often be in the focus of the investments.
- The local skills and traditions as well.
- The design of the new investments will actively sustain their host communities, for instance, by undertaking to ensure that the fresh water abstraction is sustainable.
- The new investments will be designed to sustain employment in the short as well as the long run when economic growth has hopefully increased wage levels significantly. This is good for the economy as well as society.

With the massive amount of development that will occur over the next decade, it is imperative that UNIDO invests in worthwhile projects that are sustainable and beneficial in the long-term. By striving for Triple Top Line growth, UNIDO has the chance to truly reinvent industry and economic development. The Triple Top Line can provide the necessary analytical tool for determining new fields of sustainable industrial investments.

9. Selecting Sustainable Investments

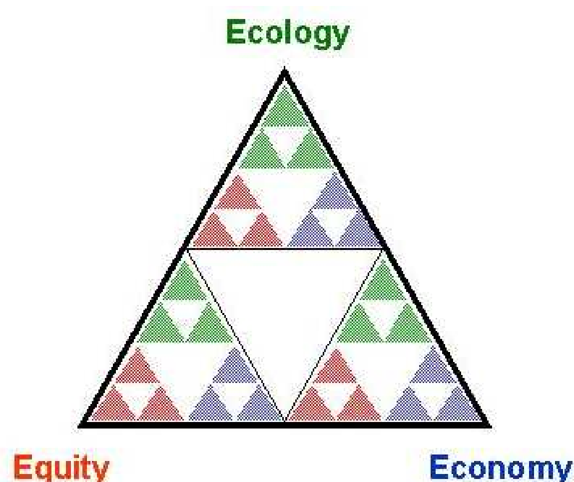
The Fractal Triangle

The ***Fractal Triangle*** is a visual tool to help demonstrate all the aspects needed to effectively address the Triple Top Line. The triangle is split into 9 sectors with ***economy***, ***equity***, and ***ecology*** in the three corners (see Figure 9). In the economy corner, the main focus is solely on profitability. Moving along the triangle towards the equity corner, the central issue turns more to fairness and its impact on profitability. Focus is purely social in the equity corner.

Continuing along the triangle towards ecology, health and safety issues are highlighted. In the ecology corner, the focus in on the health of the natural environment, with an emphasis on how humans can be a "tool for nature." Heading towards the economy corner, eco-effectiveness and eco-efficiency become central concepts, determining how natural capital is being used. For the Triple Top Line to be achieved, all nine sectors of the Fractal Triangle must to be fulfilled.

The importance of the Fractal Triangle is that it provides us with a tool, whether on the governmental policy and planning level or the level of business development in the individual enterprise. The Fractal Triangle gives us the basis on which we can generate completely new ideas of how to develop in the three dimensional space, in which all dimensions are equally important. It goes without saying that most new ideas, at least when the triangle is applied on the level of the individual business enterprise, will be found some distance from the extremities of the triangle: the company has no way of contributing to sustainability if it cannot sustain itself financially.

Figure 9 The Fractal Triangle illustrating the Triple Top Line



Investment Ranking System

We recommend that UNIDO in its activities will encourage and mentor its clients to use the Triple Top Line in support of their efforts to attain truly sustainable development. We also recommend that UNIDO will only actively support investments in projects that realize good scores in each sector of the Fractal Triangle. The questions and answers generated from the use of the Fractal Triangle can form a type of ranking system. For each sector, a project shall be given 1 to 3 points (with 3 as the top score) or an X if it fails to meet the sector's requirements. If a project receives an X in any sector, then it should be passed since it would not be a good long-term investment to meet the Triple Top Line. For projects with numbers in every sector, all of the points are added up. From an investment standpoint, scores from 9-17 should be given the level of ***silver***, 18-24 ***gold***, and 25-27 ***platinum***. A perfect score, and thus the most ideal investment, would receive 27 points. Ideally, all new projects that UNIDO supports should have the level of platinum.

Ranking Questionnaire

Economy / Economy: focus is solely on profitability

Is this project profitable in the long-term? Will it be able to sustain the future higher cost of production which will be the consequence of the economic growth in the host country? Will it be sustainable in the competition with other technologies, present and future? Will it be flexible enough to adjust to future challenges in the market place?

***Economy / Equity*: focus is on profitability in regards to fairness, socio-efficiency**

Will this project be implemented while providing workers/employees a living wage? Will it profitably contribute to a positive social development pertaining to increased levels of skills and education? Will the company create loyalty from its employees and from its customers in this process? Will the company's critical approach to the use of chemicals in its manufacturing processes increase workers' health and reduce absenteeism? Will the positive initiatives made by the company be shared with the local community in the form of demonstration projects or public-private partnerships?

***Equity / Economy*: focus shifts more to fairness**

Will anyone be able to participate in the project, regardless of race, sex, nationality or religion? Will the company challenge existing prejudice in the community in respect of who can do what by giving support to those candidates, who have potential, but who are not considered "to belong"? Will the company mobilize human resources, which may not presently be available due to lack of public services pertaining to child care, transport, etc.?

***Equity / Equity*: focus is purely social**
Will this project improve the quality of life of all stakeholders? Will the project impact positively the community, the health, skills, justice and social interaction of the people impacted by the project?

***Equity / Ecology*: focus is social in regards to human health**
Will this project enhance the health of all stakeholders? Will it ensure that public goods will not be depleted to the detriment of the community those of its members, who may be particularly vulnerable? Will it endanger or enhance the quality of life of the community in respect of air quality, noise, etc.?

***Ecology / Equity*: focus is on safety in relationship to the entire ecosystem**
Will this project contribute to the health of environmental aspects required my humans – clean and abundant drinking water, fertile, unpolluted soils, clean air without noise pollution, etc?

***Ecology / Ecology*: focus is on how humans can be "tools for nature"**
Will this project obey the laws of nature? Will it create or support natural habitats rather than destroy them? Will it maintain and strengthen biodiversity rather than limit it? Will it protect or endanger natural hydrology, including ground water?

***Ecology / Economy*: focus is on eco-effectiveness**
Will this project's ecological strategy be economically viable on short as well as long term? Will the project use resources effectively? Will it contribute to process and refine resources on a continuous basis in a closed cycle which does away with the entire concept of waste? Will it sustain its environment in manners which will create positive rather than negative repercussions of industrial production making it a valuable member of the community? Will it in other words be a good steward of resources rather than a consumer of resources?

***Economy / Ecology*: focus is on eco-efficiency**
Will the project use resources efficiently given its designated purpose? Will it reduce waste? Will it make the waste production less harmful to human health and the environment?

9.1 Case Studies

To demonstrate how this ranking system may successfully work, here is a review of the previously mentioned Cradle to Cradle Design case studies and how they have succeeded in generating Triple Top Line growth. Note that all sectors of the Fractal Triangle have been carefully analyzed in order to design the products and their respective manufacturing processes. This has made all of them extraordinary as business ventures and their profitability is out of the ordinary as well. The following example is from the level of private business. The Triple Top Line can also be applied in the process of official development planning and policy making, as described in 10.4.3.

Rohner Textil and Climatex Lifecycle/Lifeguard fabric
The challenge of Rohner Textil was twofold: to survive in the international very competitive market for textiles and to satisfy the local authorities in terms of the environmental impact of its activities. Part of the cost problem related to the fact that ordinary furniture textiles are so toxic that cuttings have to be processed as toxic waste. Therefore, the goal of this project was to develop a non-toxic, compostable fabric that allows the textile mill in Switzerland to stay operating competitively worldwide and to address its pollution problem satisfactorily.

Economy / Economy:
The mill is able to continue operations and has been very successful. Diseconomies of using toxic chemicals have been entirely avoided in terms of the costs of the chemicals themselves

and in terms of the costs of disposing of the trimmings as hazardous waste. Its new fabric the Climatex Lifeguard can now be seen flying the skies in the new Airbus 380.

Economy / Equity:
Saving money by being able to use building facilities, which were designated to store or process toxic chemicals for more productive purposes. The need or temptation to pass on negative effects of its products or production methods has been avoided altogether.

Equity / Economy:
Part of the area that was once used for the storage of toxic chemicals has now been renovated and converted into an employee lounge. The improved image of the company makes it easier for it to attract the most qualified and motivated employees.

Equity / Equity:
Improves the community by providing the local gardening clubs with compost from trimmings.

Equity / Ecology:
Workers no longer handle hazardous chemicals. Customers are no longer exposed to toxic materials.

Ecology / Equity:
Trimmings can now safely biodegrade, instead of being incinerated and/or landfilled. They no longer represent health hazards to those in direct contact with the materials.

Ecology / Ecology:
River is now cleaner downstream than in areas upstream of mill.

Ecology / Economy:
The production employs natural, renewable resources such as wool and ramie.

Economy / Ecology:
New non-toxic dye formula is healthier and more cost-efficient than the conventional ones at the same time as it does not involve any costs of remediation for the company according to the “polluter pays principle” or negative impacts on the ecology.

Biomass Nutrient Recycling Plant:
The goal of this project was to retrieve biomass nutrients from wastewater to improve the economy and provide food for the local communities of developing countries in tropical areas and in the process solve an environmental problem consisting of resources gone astray. Along with the goals pertaining to production of benefits from these projects the results have been consistent in showing a positive investment.

Economy / Economy:
The sites have been profitable and economically sustainable for the local communities to run.

Economy / Equity:
They provide jobs and income for the local community, some sites employing 20 workers. They sell fish and crops to enhance local economy.

Equity / Economy:
They offer job opportunities for people with varying educational backgrounds giving employment opportunities even to the disadvantaged members of their communities.

Equity / Equity:
They provide the local community with food and with common objectives which help the members to build up skills to work together and foster a stronger sense of belonging to the community.

Equity / Ecology:
Reduces risk of killer diseases that are often associated with sewage going untreated into wastewater streams from where they can contaminate the drinking water sources.

Ecology / Equity:
Provides nutrients to feed fish and improve soil fertility.

Ecology / Ecology:
The nutrients from wastewater are recycled, instead of being lost in the sewage.

Ecology / Economy:
Waste equals food for the production of farm products and fish.

Economy / Ecology:
Reduces the need for chemical fertilizers, along with the risk that chemical fertilizers might not be physically available in the market or unobtainable in financially difficult situations.

Indonesia
The Fractal Triangle can also be used to mentor countries on how to ensure sustainable development, as can be seen in this example regarding Indonesia.

Economy / Economy:
- Good geographical position for competitive transportation of export goods to the world's biggest markets, including Japan, USA and the EU.
- Rich on natural resources and well developed energy production and distribution system.
- An abundant and generally well-educated workforce which is available at a competitive cost level. The challenge is for the government to create sufficient employment for a growing population which is outgrowing the traditional agricultural base for economic development in absolute as well as relative terms.
- A society which is culturally, ethnically and religiously diverse, but not prone to conflict and social strife.
- A commitment to open markets, including capital markets.
- A friendly climate for foreign investments and foreigners in general.
- An economic growth policy which is conducive to innovation.

Economy / Equity:
A tradition for placing social burdens on the shoulders of the capital rich investors. (Bapak angkat system for sharing shrimp pond land between investors and the employees after a number of years of operation during which the investor has trained the workers to become shrimp pond owners and operators in their own right).

A tradition for protection of traditional trades in the promotion of new ones (protection of artisan fisheries employing million of people on a subsistence level at the same time as developing industrialized fisheries, which is barred from landing their catch in the local market).

A conscious use of foreign investments to ensure the transfer of technological and managerial expertise to Indonesians.

Equity / Economy:
Protection of traditional farming from the adverse economic and ecological effects of modern industry (Brantas River monitoring and protection project in East Java).
To ensure that the educated youth will get the opportunity to get meaningful employment which can support the economic growth.

Equity / Equity:
To make sure that the economic development policy will draw on the tradition of cooperation (gotong royong) and strengthen it rather than to pulverize society and the sense of social responsibility.
To activate the tradition of communal cooperation for productive purposes as is found in the Subak irrigation communities for social and economic development.

Equity / Ecology:
There is a traditional community sense of responsibility for its members' health and a basic health system is in place all over the country. There is a reasonably well functioning labor protection system in place. Exploitation of workers' health is not politically acceptable.

Ecology / Equity:
Mangrove forests are guarded, providing coastal communities protection from major storms.
Ecology / Ecology:
Maintenance of generous allocation of pristine nature not to be touched by human cultivation or exploitation (Hutan Lindung).
Increased recognition of the mangrove forest as an important natural environment, habitat and coast protection.
Special efforts to preserve endangered species by artificial breeding and reintroduction to life in their natural habitats.

Ecology / Economy:
Development of schemes for support of the natural environment and species based on "sponsorship" of artificial breeding of endangered species.
Development of eco-tourism.

Economy / Ecology:
Long standing policy to limit the exploitation of forest resources by way of increasing the degree of processing into end products like plywood and veneer in order to generate export earnings with the smallest possible adverse impact on nature.
CP policy central in the industrial development.

Significant scope for environmental protection by way of increased productivity, for instance, in small holders' rubber plantations, which will provide the means of leaving great areas untouched by development in agriculture and plantation activities.

10. UNIDO and Cradle to Cradle

The role of UNIDO is not supposed to be a facilitator of underbidding standards, including those of environmental sustainability and health. Rather UNIDO should mentor the client countries to position themselves for a sustainable participation in a long term international division of labor. By doing so it should not provide undue advantages for foreign investors and capital relative to locals.

Likewise, UNIDO is not supposed to just facilitate the trickle down the use of technologies from the industrialized countries to the still poorer countries. We explicitly say "the use of technologies" and not ownership of technologies, because this is more often than not the case. The bulk of industrial investments in developing countries is either done by TNCs or their

technologies are made available for local companies to produce on the basis of contract manufacturing arrangements, etc. Such a focus would indeed not be sustainable, neither for the rich, nor for the poor. In no case it would take into consideration the environmental aspects of the production. It would be technology based, and nothing else. This means that the benefits of the perspective of the Triple Top Line would not be realized for the developing countries.

According to Alwin Toffler, the trend is towards individualized production at the cost of mass produced items. This is promising because instead of specific products we may share more basic visions and strategies, which may be implemented widely in ways which are determined according to local conditions. The communality is performance of products based on usefulness and effectiveness, not the processes involved per se.

From this perspective, we envision UNIDO assisting its client countries to position themselves for a sustainable development in terms of employment, profit generation and the environment. With today's free flow of capital which comes cheaper and with much less risk than capital generated in the developing countries themselves, it is doubtful that we may be able to talk about comparative advantages in the traditional sense. It is especially so when international capital is invested not to open new export markets for international companies, but even to produce cheaper for the "home market."

In such a scenario the comparative advantages will tend to give way to advantages in absolute terms. That means that a mechanism will be triggered according to which costs of production, including wages will tend to approach another internationally. The tendency is likely to be strengthened by the fact that the developed countries for environmental reasons largely standardize according to "best practices" that stifle the development in the countries, which have the technology and research basis for being the leaders in the development. Instead, they risk losing the technological leadership because of market barriers as are known, for instance, in the EU, and they risk losing their entire industrial base for reasons of competitiveness.

From the perspective of Cradle to Cradle and its suggestion that products of service should be parts of complete and continuous cycles of an industrial metabolism, a broad industrial base is needed in order to organize Intelligent Materials Pooling, or the industrialized part of the world, including the EU, risk losing their industrial base. It is already obvious that the scope for implementation of the Cradle to Cradle philosophy in the USA has become fairly limited because of the international outsourcing of industrial production.

Therefore, UNIDO may do a great service to both sides of the development spectrum, the rich industrialized countries as well as the developing countries by encouraging them to position themselves in the dynamic development in accordance with the principles of the Triple Top Line philosophy. In case that it adopts this philosophy and implements it in connection with its individual projects, it will not have to be particularly concerned about the availability of public goods as one of many aspects of its activities; it will simply be covered by the Cradle to Cradle process of project identification and implementation. The Cradle to Cradle philosophy would most likely be a much more effective strategy than what will result from a "trickle down" approach.

A very significant part of the entire environmental industry is in effect addressing the problems of "leaking" nutrient cycles, biologically as well as technically. As a matter of principle cleaning up is not a satisfactory form of corrective action, it is just a compensation for the outcome of flawed designs. True corrective action is a change of the course of action, and in the case of UNIDO this change of the course of action should benefit all new investment projects, in which it may consider to become involved.

This possible course of action would make UNIDO a true catalyst for sustainable development in all the best senses of the term: it would promote projects, which are not only tolerable, but which will indeed sustain the local community in its further development, economically, socially and ecologically. It would help to identify local needs and resources, which will serve to maximize the usefulness of the project. And it would assist the investment to position itself in the world market in such a way that would ensure also the financial sustainability of the investment.

As mentioned before, the application of "best practices", standards, norms, and remediation procedures tend to define identical terms of reference for all countries, rich and poor. That only leaves one parameter of competition: price! If such a course of action were pursued, all production would logically end up in the country with the lowest costs of production, including costs of performing/not performing according to the local laws and standards. In effect, well intended EU Directives, including REACH speed up such development as it inadvertently provides foreign producers to use chemicals, which would not be allowed in the EU itself.

UNIDO is not some "Development Corporation of Bangladesh," it is supposed to assist all its client countries. Therefore, we need a multifaceted space in which we can define areas in which individual countries can position themselves in a sustainable pattern of international division of labor. We need the Triple Top Line because the developing countries need to produce different things as demand and opportunities vary between them.

New industrial investments are not often based on local needs, capacities or skills. Too often they are based on internationalization's transfer of production technologies which are most likely defined under completely different conditions. Coca Cola and Nike shoes are the same everywhere, and so are the materials going into their production. The same is true in the case of Intercontinental Hotels. What may very is the capital/manpower mix, which may provide for substitution of capital and take into account the undersupply of certain public goods like water, energy, healthcare for staff, etc.

We would like to see UNIDO working with all countries of the world, not only with its formal "clients" but also with the most advanced industrial nations. Because development which is sustainable and which can sustain future economic and social growth cannot be static, it has to be dynamic, because without dynamism it is doubtful that the concept of comparative competitive advantages has meaning any longer in a world of globalization.

Therefore, UNIDO should act as a mentor and a catalyst for future economic and industrial growth, in which all participating countries will benefit from their characteristics, whether natural or "man created" like health and education. In this perspective, a technologically advanced but stagnant Europe in terms of environmental directives will not only hurt itself, but eventually hurt the global industrial environment by not making the maximum use of its technological skills, by losing momentum in sustainable industrial development, by losing important parts of the industrial infrastructure, which is needed in order to organize Intelligent Materials Pooling, and by transferring a narrow range of technologies to developing countries. This approach, in addition, tends to narrow down the forms of transfer of technology to consist primarily of foreign direct investments as well as contract manufacturing arrangements such as for designer brand textiles.

As industrial mass consumption of public goods does not comply with the non-rival aspect of consumption special emphasis should be made on the protection of the rights of the local population to such public goods that their poverty may not ultimately become misery. It would be natural to make it a standard requirement for new investments that the investor pays for environmental impact assessments as well as for the necessary monitoring of the extraction of public goods. Only on that basis would it be appropriate that the investment

enjoys financial and other support from bilateral as well as multilateral institutions and organizations, including UNIDO and MIGA.

In the field of abstraction of potable water such monitoring should include certified measurements made periodically. Over abstraction should result in withdrawal of the permission to use the specific aquifer. Potentially even more important an absolute responsibility for soil pollution should be introduced as it exists in places like Flanders in Belgium. Without it entire aquifers might get polluted with devastating effect on the availability of drinking water and water for agricultural production. Similarly, as noted before, the ecological consequences of over abstraction of potable water may cause losses to investments in steel reinforced foundations of high rises etc.

In terms of corrective action, we strongly suggest that it will take the form of a change of course which will ensure that UNIDO supported industrial investments will not provide a negative increment to the local sustainable development. However, it goes without saying that UNIDO's future projects may suffer from deteriorating provision of public goods because of the actions of others. For that reason, it would be appropriate if UNIDO would ensure that its voice is heard in the wider field of economic and social planning in its client countries.

Over the last 40 years, the most successful developing countries have pursued an economic growth policy that is export driven. Some of them are believed to be part of a dynamic development which will result in 80% of their industrial production in 2025 originating from factories, which have not even been planned yet. UNIDO has the unique possibility to become the catalyst of true sustainable economic and industrial growth in these countries.

Should UNIDO chose this course of action it would work to define new sustainable industrial activities based on Cradle to Cradle in a partnership which will include central and local authorities as well as capital investment boards, industrial estates and individual producers.

Cradle to Cradle Dissemination Centers

We envision that UNIDO will develop its activities to ensure sustainable industrial development as a mentor and a catalyst of sustainable development, which it will involve and engage in the various levels of organized development:

The national level of economic and physical planning. On this level UNIDO along with other development agencies including UNDP may give valuable assistance to governments in order to make help them define their development priorities, and their planning of the availability of a range of public goods, which come into play in this respect. These may notably include education and public health, but also strategies for export driven economic growth.

The local level of government. This will create awareness of the need of good management of the public goods for the sake of the local population and for the sake of sustainable development, which may involve industrial investments. The specific local needs and resources should be mapped at the same time.

The level of public utilities and other relevant institutions, including investment boards, technological institutes, industrial parks etc. Oftentimes the diseconomies of industrial production are just borne by public utilities, which do not charge tariffs, which ensure that the level of industrial production/extraction is within what is sustainable. Therefore, awareness building is crucial, and so is awareness building in industrial parks because the composition of industries in specific parks may define the scope for Intelligent Materials Pooling.

The level of banks, insurance companies etc. This deals with financial risk that may incur by restrictions on export, which may be based on environmental criteria and considerations, and more tangible risks as well relating to stoppages and accidents like the one in Bhopal. Cradle

to Cradle is attractive as a risk management tool, as well as it provides a practical basis for sustainable and sustaining development.

The level of the individual industrial enterprise. In principle it should be motivated by all the above, including the scope for participation in Intelligent Materials Pooling.

The level of universities and other academic institutions. The next generation of industry leaders needs to be educated in regards to holistic, sustaining development that aims for Triple Top Line growth. Students, especially designers and materials scientists, need to fully grasp the Cradle to Cradle Design principles and recognize opportunities for Intelligent Materials Pooling. Universities can develop courses in design, business, and engineering departments. Other institutions can hold workshops that bring business leaders together to learn about these concepts and establish communities of shared goals. Recently, a workshop on Cradle to Cradle Design and Intelligent Materials Pooling was held in Menlo Park, California for 135 people from up and down the supply chain. This event was held by a local non-profit, the Foundation for a Global Community that strongly supports these concepts and wants to help them build traction within Silicon Valley.

We suggest that UNIDO's Cleaner Production Centers become the new Cradle to Cradle Dissemination Centers targeting all of the above levels, and that their relationship with their clients and partners will become mutually committing and lasting rather than a time limited exercise. The dynamism of this partnership may have a number of useful components which on the industral level will include benchmarking, environmental audits, and participation in emissions certificates trading.

In addition we suggest that wherever the conditions are conducive to it UNIDO's Cleaner Production Centers will also take on the challenge in becoming "market makers" by initiating Intelligent Materials Pooling for its client companies and countries with the perspective of strengthening further the competitiveness of industry and reducing or entirely eliminating the pollution in the process. It appears that such a role would not be alien to UNIDO taking into consideration its initiative to set up National ozone Centres.

11. The Wider Implications of Cradle to Cradle in the International Development Efforts.

"Cradle to Cradle" with its optimistic and proactive approach to development in many ways confronts and challenges the conventional approach to sustainable development, which is conventionally understood to be development that incurs diseconomies, which are „tolerable" and which are not supposed to make future generations less well off. This is a defensive approach at best.

"Cradle to Cradle" offers the possibility that new ventures or redesigned old ones will stimulate and nourish the development and safeguard the specific public goods. Their profitability which is based on good ressource management is likely to impact the environmental performance of conventional industry to a greater extent than environmental legislation.

The ramifications of the "Cradle to Cradle" concept are so far reaching, that it makes little sense to limit the discussions to UNIDO and its clients. We believe that we can only maintain comparative advantages in the international economic cooperation provided that we work for a dynamic division of labour in which the demands and obligations when it comes to the roles of the richest industrialized nations are just as high as for anyone else. That is why we consider that the sustainability approach adopted by the EU is neither in the best interest of the EU member states, nor the rest of the world. The EU Directives need to become incentives to true sustainable behaviour, instead of stifling the technological development with the

reason that we have already applied „best available technologies“. Unless the EU will realize that economic growth and the environment are not necessarily tradeoff issues they will indeed be, and both are bound to suffer.

In effect our international development efforts should be joint efforts in which we move from a trickle down philosophy which is the basis for standard industrial production moving to still poorer countries without consideration of much more than costs of production. In the longer term that serves neither rich nor poor nations.

As a practical reference point for dissemination of “Cradle to Cradle” to a large number of companies we suggest to UNIDO to follow closely the Styria initiative involving companies like ‘Eco & Co Umwelttechnik-Netzwerkbetriebs GmbH’ and to participate in the seminar in October 2005.

“Cradle to Cradle” with its Fractal Triangle offers a practical and yet analytical approach to generation of investment opportunities which will have the potential to sustain their communities in the economic, environmental and social sense. Therefore, all UN organisations with responsibility for development should join forces in order to produce maximum benefit from the „Cradle to Cradle“ approach to development.

In particularly UNDP comes to mind but also specialized agencies like FAO would be able to play powerful roles in attaining development, which will sustain us for further development.

In addition UN agencies seem to have a good potential to play an important role when it comes to monitoring the specific public goods as a necessary part of this process. This may f.i. concern the monitoring of the abstraction of water directly from aquifers with the risk of pollution with salt, arsenique and overabstraction in general. This has economic, ecological and health repercussions, all high priorities of the UN.

Efforts to increase awareness and building communities is often crucial in this connection. Bringing together people who are depending on the same public good is likely to result in actions which are more considerate to the interests of others. The Subak Irrigation Communities may very well offer a model for how this can be done. And there are many highly professional and motivated NGOs which are eager to play a part in this.

In all efforts undertaken, multilateral as well as bilateral it is important to keep in mind the economic, social, environmental and health vulnerabilities of the communities involved. It is not acceptable that industrial development results in depletion of public goods like clean drinking water causing the population to regress from poverty or even relative affluence to misery. Similarly development assistance shall not result in economic risk exposure of having to buy seeds, fertilizers etc. to stay alive, which will prevent the population from making a natural retreat into subsistance economy in order to weather bad times. The overarching principle must be: First Do No Harm!

12. Conclusion

Although economic development has traditionally negatively impacted the environment, UNIDO is in a unique position to change this relationship to one that is sustaining and supportive. By adopting the Cradle to Cradle Principles and the Triple Top Line’s investment ranking system, UNIDO can assist development that is beneficial for the local economy, environment, and society in the short and long-term.

Instead of encouraging eco-efficient corrective action, which only delays an inevitable ecological crash, UNIDO should promote eco-effective strategies that improve economic

development while taking care of ecology and equity. This positive agenda will lead our society into the Next Industrial Revolution.

This is not a far-fetched notion. Along with the Cradle to Cradle case studies, there are numerous examples demonstrating how humans can support nature. For instance, the species diversity in the city of Berlin is four times higher than in the country side. Backyard gardens and city parks, along with green roofs, have not only brought life back into urban centers, but have also provided species with a nurturing ecosystem where they can flourish.

A number of major corporations have also developed Cradle to Cradle certified products, or are at least in the beginning stages of adopting the concept. This includes Fortune 500 companies such as Ford Motor Company, Nike, PepsiCo, Herman Miller, BASF, Steelcase, and Shaw Industries. Shaw has developed a completely recyclable carpet tile that can change the current system where 4.5 billion pounds of carpet are sent to landfills annually. Even Thailand-based Cobra, a major manufacturer of surfboards, has started the process of developing eco-effective products.

We strongly encourage UNIDO to make Cradle to Cradle Design the core value of their economic development activities. Two key ways to make this happen are investing in projects that fulfill all the sectors of the Fractal Triangle, and by establishing Cradle to Cradle Dissemination Centers to educate people on this new framework.

Through the help of UNIDO, this century, unlike the destructiveness of the 20th century, can set in place a new healthy relationship between humans and their environment. With proper design of products, processes, and development, we no longer have to feel bad about being here. Alternatively, we can even be proud of our big, healthy footprints!

References

South Africa: 10 Million Water Cuts After South Africa's Water Privatisation. Environment & Development Challenge News. November 4, 2002. http://www.edcnews.se/Cases/WaterPrivateAfrica.html.

Cockburn A. How Coca-Cola Gave Back to Plachimada. CounterPunch newsletter and The Nation. April 16/17, 2005. http://www.counterpunch.org/cockburn04162005.html.

"First, Do No Harm" Is Not in the Hippocratic Oath. http://www.geocities.com/everwild7/noharm.html.

King C. Urban Groundwater Systems in Asia. UNU/IAS Working Paper No. 101.

Lansing JS. Balinese 'Water Temples' and the Management of Irrigation. American Anthropologist. 1987; 326-340.

Lvovski K. Economic Costs of Air Pollution with special Reference to India. South Asia Environment Unit, World Bank. 1998. http://www.nato.inVccms/piloVsubgO/meeting/defense95/d27.html

Beck J. Building a Water Democracy. Alternet. June 1, 2005. http://www.alternet.org/module/printversion/22144.

The IWMI-Tata Water Policy Program. http://www.iwmi.org/iwmi-tata.

Tacio HD. Philippines on Verge of Ecological Disaster. July 6, 2004. http://www.peopleandplanet.net/pdoc.php?id=2275.

Bunsha D. A Can of Bullworms. Frontline. November 24 – December 7, 2001. http://www.flonnet.com/fl1824/18240480.htm.

UNICEF State of the World's Children 2005. http://www.unicef.org/publications/files/SOWC_2005_(English).pdf.

Brown L. Eco-economy: Building an Economy for the Earth. Earth Policy Institute. 2001. http://www.earth-policy.org/Books/chap03.PDF.

McDonough W, Braungart M. The NEXT Industrial Revolution. The Atlantic Monthly. October 1998.

Newmont Gold Mine Investigated for Polluting Indonesian Waters. Water Conserve. August 19, 2004. http://www.waterconserve.info/articles/print.asp?linkid=34396.

Urgent Action - Support the Victims of Newmont's Gold Mining and Submarine Tailings Disposal. Mines & Communities. April 2004. http://www.minesandcommunities.org/Action/action57.htm.

Verfaillie HA, Bidwell R. Measuring Eco-Efficiency: A Guide to Reporting Company Performance. World Business Council for Sustainable Development, June 2000.

World Business Council for Sustainable Development (ed.): Eco-Efficiency. http://www.wbcsd.ch/templates/TemplateWBCSD5/layout.asp?type=p&MenuId=NzA&doOpen=1&ClickMenu=LeftMenu.von Weizsaecker EU, Lovins A, Lovins H. Factor 4 - Doubling Wealth, Halving Resource Use. London: Earthscan, 1997.

Schmidt-Bleek F. Das MIPS-Konzept - Faktor 10, Munich: Droemer, 1998.

Ayres RU, and Simonis UE. Industrial Metabolism: Restructuring for Sustainable Development. Tokyo: United Nations University Press, 1994.

Drucker FE. The Effective Executive, 4th edition. New York: HarperCollins. 2002.

Berkhout P, Muskens HG, Jos C, Velthuijsen JW. Defining the rebound effect. Energy Policy. 2000;28(6–7):425–32.

McDonough W, Braungart M. Cradle to Cradle: Remaking the Way We Make Things. North Point Press: New York. 2002.

Newcorn D. Cradle-to-Cradle: the Next Packaging Paradigm? Article featuring the work of Michael Braungart and William McDonough. Packaging World. May 2003.

McDonough W, Braungart M, Anastas P, Zimmerman J. Applying the Principles of Green Engineering to Cradle-to-Cradle Design. Environmental Science & Technology. December 1, 2003.

Storey P. Exploring New Horizons in Product Design. MBDC Feature Article June 2002. http://www.mbdc.com/features/feature_june2002.htm.

The Biomass Nutrient Recycling Project – A Cycle of Cycles – Purifying water in tropical regions. Hamburger Umweltinstitut. 1996.

Braungart M. "Beyond the Limits of Sustainable Architecture: A New Material Sensibility for the Twenty-first Century." Big & Green: Toward Sustainable Architecture in the 21st Century. Princeton Architectural Press: New York City. 2002; 114-125.

McDonough W, Braungart M. Intelligent Materials Pooling: Evolving a Profitable Technical Metabolism Through a Supportive Business Community. Green@Work. 2003; 20:50-54.

Dyllick T, Hockerts K. Beyond the Business Case for Corporate Responsibility. Business Strategy and the Environment. 2002; (11): 130-141.

McDonough W, Braungart M. Design for the Triple Top Line: New Tools for Sustainable Commerce. Corporate Environmental Strategy. 2002;9(3):251-258.

Roberts PC. Out Through the In Door – The Politics and Economics of Outsourcing. US – China Commission hearing May 19, 2005, at the Council for Foreign Relations.

For information on the Foundation for a Global Community visit their website www.globalcommunity.org and for information on the workshop visit http://www.globalcommunity.org/business/braungart.shtml.

McDonough W, Braungart M. The NEXT Industrial Revolution. The Atlantic Monthly. October 1998.

Smith R. Beyond Recycling: Manufacturers Embrace "C2C" Design. The Wall Street Journal. March 3, 2005, B1.

Designing for the Future: An Interview with William McDonough. Newsweek. May 16, 2005

Global Governance

Global Public Goods and Global Governance: A Political Analysis of Economic Theory and Policy Practice

Richard Higgott
Centre for the Study of Globalisation and Regionalisation
University of Warwick

1. Introduction: Global Governance and Global Public Goods

Why does sound economic theory with important policy implications—such as that advanced in the ongoing discussion on global public goods—invariably prove difficult to implement in practice? There is a range of explanations of both a general methodological nature and of an issue-specific nature depending on the particular issue-area concerned. The most obvious general reason is that good economic theory can often be poor political theory leading to sub-optimal political practice. In fact, much of economic theory often takes little or no account of the political context in which the economic theory must be applied. Rather it is based on sets of assumptions that only pertain in the realm of theory and that are destined to fail in the context of contemporary political practice. Such economic theory often demonstrates little or no appreciation of the political constraints that are likely to work against successful policy implementation. For particular scrutiny in this report are economic assumptions about what constitutes good governance in the 21st century. While they are becoming increasingly technically sophisticated, especially concerning the provision of public goods they often remain oblivious to the nature of the 'politics' that can and will derail them, no matter how theoretically sound and policy relevant they may be.

Much of the emerging economic literature on the theory and practice of global public goods (hereafter, GPGs) suffers from this deficiency. Much of this literature is good economic theory and good technocratic policy analysis. But it is poor political theory with little or no understanding of the ability of politics (as opposed to governance) to inhibit policy implementation. It is necessary to distinguish between politics and governance for the analysis advanced in this paper since the theory of GPGs has little or no understanding of the salience of 'real world politics' in the contemporary global era. Politics (not just governance) will be the dealmaker or deal breaker in the development of a GPG strategy for the early 21st century.

These are contentious and provocative statements. They are presented in this way deliberately. The theory and practice of GPGs is too important for us not to grasp the importance of this major inhibitor of long-term successful development policy implementation. The resolution of this problem is itself both a theoretical (or more precisely a methodological and ontological) problem as well as a practical policy problem. For the theorist of public goods, these wider first order questions are either ignored or glossed over. This is not surprising. 'Politics', as opposed to 'economic governance', does not lend itself easily to the theoretical and methodological certainties of much economic theory, hence an insufficient recognition of its salience in contemporary theorizing on GPGs.

Economics, and even the important and emerging sub discipline of political economy is not comfortable with 'politics'. Political economy as what we might call a 'theory of choice under

constraint', using game theoretic models, may be able to offer important insights into issues such as scarcity and the role of institutions in the policy process. It is less comfortable with questions of ideological contest, power, political struggle, representation, legitimacy and accountability; all of which can make or break the implementation and acceptance of a given policy. These latter issues, this report will argue, are not confronted centrally in the other reports produced to-date in the UNIDO study of GPGs, but they are central to an understanding of the prospects of a GPG strategy in the early 21st century.

This first section of the report introduces the increasing demand for understanding of a seeming oxymoron, 'global governance'. When used in popular discourse it is not an easily acquired concept. Educated lay people invariably ask how might we have 'global governance when we do not have a global state?' It is not an unfair question. So how do we account for its increasingly regular appearance in both the scholarly and policy literature? Section one provides an answer to this question and in so doing identifies an important intellectual context in which to locate theorizing about GPGs.

Section two looks at the changing political/policy context in which a theory of public goods has come to play an increasingly more important role in our understanding of development needs under conditions of 'globalization'. Specifically it traces the shift from an understanding of the 'Washington Consensus' to what we can call a 'post-Washington Consensus' (PWC) in the closing years of the 20th century (especially in the wake of the financial crises of second half of the 1990s.[68] It will demonstrate how the evolution of an interest in GPGs needs to be seen not only as innovation in economic theory, but also as a deliberate policy response to the growing concerns about the negative externalities of market liberalism and their impact on support for globalization that developed in the Washington Consensus era and that needed to be addressed in the PWC era. In this context, the debate over GPGs should be seen as part of a much wider theoretical and political debate over the nature of 'global governance'.

Section three begins an identification of the largely missing discussion in the literature of GPGs on global ethics and competing theorizing about accountability that have emanated from a recognition of the limits of the reform era of the Post Washington Consensus. It is both a normative and an empirical discussion of the manner in which the constraints identified in section two might be overcome. Section four carries the discussion forward in two ways. Firstly it provides an analysis of some relevant contemporary normative theorizing in the scholarship of international relations that is of direct relevance to the issue of global public goods but that finds little or no representation in the GPG literature to-date. Secondly, it provides an examination of some key philosophical issues such as the importance of 'justice' and 'fairness' as necessary ingredients in any attempt to advance global public goods in both procedural and substantive (outcome) terms. The WTO, defined as an 'intermediate' rather than a 'pure' public good, is used as a case study. In so doing, the difficulties of creating a settled constituency for global public goods in the absence of global level analogues of those features of representation familiar at the domestic level in OECD countries—notably shared

[68] This section draws on earlier work, notably Higgott, 2000, 2001 and Higgott and Phillips, 2000. This is not the place to develop a full exposition of the Washington Consensus save only to note that the term was originated by John Williamson to reflect shared opinion on the key parameters of global economic management, and specifically policy prescriptions for financial adjustment in developing countries within the Washington international financial community that included not only the US administration, but also the major international financial institutions and 'think-tanks' such as the IIE. To be fair to Williamson, he merely called it 'the Washington Consensus.' He cannot be held accountable for the expansion of its use and the pejorative connotations that have been attached to the epithet by other observers of these processes. See Williamson, 1990. For discussions see Krugman, 1995:28–9; Broad and Cavanagh, 1999 and Naim 2000. The post Washington Consensus is also know by some as the 'Augmented Washington Consensus' (Rodrik, 2002a).

identities and public spheres appropriate to the development of processes of accountability and representation—is identified.

This last section will suggest the pressing need to reform conceptions of, and understandings of, governance at the global level if we are to be successful in implementing GPGs. Without it, consensus on which public goods, and how best to implement them, is unlikely to be achieved. The prospect for reform in the absence of constructive global leadership, of either a hegemonic or consensual kind in the early 21st century, is identified as a major problem impeding the development of widely acceptable global public goods strategies (see Beeson and Higgott, 2005.) By consensus, I mean not just among the theorists of public goods about what they think and advocate, but also what the recipients on the receiving end of public goods theory might think. It is only if we can move into a serious discussion about responsiveness, representation and accountability that the discussion about governance is going to become anything other than a dialogue of the deaf between the rule makers and the rule takers. This discussion raises the general importance of the relationship between the GPG literature, economics and politics, and the prospects for ethically based policies under-written by consistent notions of justice and fairness.

2. Global Governance: Problems of Definition and Application

Global governance (GG) is an over-used and under-specified concept. The search for meaningful use is a reflection of the growing despair over the mismatch between the over-development of the global economy and the under-development of a comparable global polity. The demand for research on global governance has also followed the recognition that sovereignty is increasingly a relational and relative question of responsibility rather than one of absolute principled legal control over specifically determined space (Krasner, 1999) the result of which is a dramatic change in the role of International law. Moreover, governance has become a hosting metaphor identifying non-traditional actors (non-state actors such as NGOs and networks) that participate as mobilising agents broadening and deepening policy understanding beyond the traditional, exclusivist, international activities of states and their agents (see Slaughter, 2004). The demand for global and regional governance has become increasingly complex and the role of multi-level governance structures in key policy areas, enhanced by the role and functions of both issue-specific and regional specialised agencies, has grown dramatically.

Yet in some key areas of the global cooperative agenda, in both the economic and the security domain, we appear to be witnessing the deterioration of collective governance capacity and resistance to its enhancement (see Held and McGrew, 2002). For an increasing number of actors, global governance questions resist the technocratic fix and pose major political and ethical questions about the appropriate manner in which policy is made, decisions are taken and implemented and resources are distributed. This is an issue for the theorist as much as the practitioner. Indeed, a problem with the much of the contemporary analysis of the demand for governance, beyond the confines of the state, is that it is often posed as a technical and managerial problem. This approach removes any notion of politics or ethics from problem solving. Governance assumes the mantle of an ethically neutral activity—rather similar to the manner in which we used to understand the notion of public administration within states throughout much of the 20th century.

But actors in this process are not ethically neutral and dispassionate. They are players with political agendas. This is so whether we include the relevant international institutions (UN and alliances in the security domain, the IMF in the international financial arena; the WTO, regional and bilateral institutional arrangements in the trade arena; the World Bank in the context of development) or those ever more visible non state actors (such as MNCs, NGOs) and various advocacy coalitions and global public policy networks such as the Davos Forum

or the emerging counter voices to be found at the Global and European Social Forums or what is generically thought of as the 'alter-globalization' movement.

For the global policy community, driven largely by economic theory, the delivery of public goods via collective action problem solving leads to what I call global governance Type I (GGI). By contrast, scholarly interest, driven by normative (often cosmopolitan) political theory and focussing on issues of institutional accountability, greater citizen representation, justice and the search for an as yet to be defined global agora leads to a rather loose global governance Type II (GGII). But, without the enhancement of GG Type II, the prospects of the continuance of GG Type I—via the economic multilateralism of the 20th century Bretton Woods Institutions (IMF and WB), the WTO—, as this report will argue, will become unsustainable.

Cognisant of this intellectual and political context within which the growing interest in the theory and practice of public goods is embedded, section three will undertake a review of the literature on GPGs, including some of the papers that have been produced by the UNIDO project to-date. It will proffer an explanation as to why good economic theory pertaining to GPG is constrained by a too limited understanding of how 'politics' can constrain the implementation of a GPG strategy. Section four then interrogates the relationship between public goods theory and political practice in key institutions, especially the WTO, with a view to identifying the current limits on its ability to champion GPGs.

The report, it should be made clear, is not hostile to the work that has been produced in UNIDO project. Far from it, it is an important corpus of knowledge. Rather it offers a constructive critique of the project through the lenses of scholarship from the fields of political science and international relations. All the papers appear to miss the impact of global politics (across the spectrum from the interests of the major powers through to the interests of the developing countries and the increasing role of non-state actors from both the corporate sector and the increasingly active NGO sectors of civil society) on the prospects for success of GPG theory.

Presently, 'politics' in the public goods literature is seen largely as the effective and efficient making of public policy and where the enhancement of property rights and the reform and development of institutions is the key to success. It is fair to say that for economic theory, politics is largely about the 'rediscovery of institutions' by economists. These innovations are important and appropriate, but insufficient. To the extent that they privilege efficiency over accountability they isolate the institutions of global governance and their decision making from the lobbying (of both a special interest and general interest kind which is the very 'stuff' of politics) and which keeps them undemocratic and thus largely lacking in legitimacy.

At the core of the quest for legitimacy is the relationship between the market and the theory and practice of governance. This entails a more or less permanent struggle over the continued pace of economic liberalisation. This is a *political* struggle about the distribution of global wealth, not merely a technical economic one about how best to produce that wealth. The struggle has become increasingly vocal since the growth of the anti-globalisation backlash in the closing years of the 20th century (see Higgott, 2000.) Global governance is no administrative 'science' to accompany economic 'science'. It is a contested political process that can be seen in a number of ways. In this paper, I work with two 'understandings' (as opposed to definitions) of global governance (see Higgott, 2001). I take global *governance* (economic governance) to be those arrangements—across a spectrum from weak to strong in influence—that various actors attempt to put in place to advance, manage, retard, control, regulate or mitigate economic globalisation.[69]

[69] For the purposes of this paper I use the basic economic definition of globalisation as the tendency towards enhanced international economic integration beyond the territorial state via the processes of

Global governance (Type GGI): the enhancement of effectiveness and efficiency in the delivery of global public goods via collective action problem solving (see Kaul *et al.*, 1999) and underwritten by the emergence of an increasingly international, epistemic/technocratic-cum-managerial elite and in which the role of international institutions as instruments of transaction cost reduction, policy coordination and compliance for the mitigation of the risks attendant on an open and deregulated global economy have become increasingly important.

Global governance (Type GGII): the emergence of systems of representation and accountability allowing for the enhanced legitimation and democratisation of policy making in global, as opposed to national, contexts. This definition reflects an assumption that as the role of the nation state as a vehicle for democratic engagement becomes more problematic, the clamour for democratic engagement at the global level has become stronger.

This twofold definition is central to any hope of understanding the prospects to develop a working system of global governance as the efficient and effective provision of public goods in the 21st century (GGI). This question concerns the degree to which the private, or 'non-state' sector or non-state actors—my preferred terms—are meaningfully involved in it. Without meaningful involvement by the private sector, writ large, then global governance as a transparent, accountable and representative process of decision-making (GGII) is always going to lack legitimacy and, as a consequence, also lack long term sustainability.

In sum, current understandings of governance, exhibited in the work on public goods, have little or no understanding of 'politics as ethics' and 'politics as struggle' for accountability, representation and legitimacy. Neither does the GPG literature have much feel for the relationship between the advocacy and enhancement of public goods on the one hand and questions of sovereignty and regime maintenance in the developing world that some GPGs may undermine on the other. These issues remain unsettled and non-trivial aspects of the global agenda. Indeed, there is little consensus in many parts of the world as to how we establish an ethic of justice and (re) distribution and how we develop meaningful (as opposed to pietistic) conceptions of accountability and representation that provide, or re-create, the necessary legitimacy for the international institutions that will be responsible for delivering GPGs to the world's rule takers. Indeed, there is also the unresolved issue of whether it is the institutions *per se* (especially the WTO) that is a public good or its product that is accepted (or not) as the public good in the international community. This issue is returned to in Section 4.

3. Economic Theory in Political Context: From the Washington to Post Washington Consensus

Emerging understandings of the financial crises of 1997-9 focussed on the need for the provision of a range of public goods, the absence of which was seen both to have fed the socio-economic impact of financial volatility and to have undermined the continuing viability of 'purist' versions of the neo-liberal economic policy model. Moreover, increasing pressure throughout those regions of the world most affected by financial instability led national governments to attempt to redefine policy strategies in ways, which provided a range of safety valves against the *socio-economic* 'dangers' of globalisation and liberalisation. The process of rethinking the scope and mechanisms of governance, as well as the concrete policy strategies it might entail, has as one of its central components a re-evaluation of the public domain as a

---

enhanced trade liberalisation and financial deregulation. This is also the essence of the neo-liberal understanding of globalization. I am aware that this is a narrow understanding of globalisation. I am not unsympathetic to scholarship that identifies more complex, multifaceted and contested definitional approaches to globalisation, but the focus of this paper is on the international economic institutions as instruments of global governance, see *inter alia*, Scholte, 2005; Held *et al.*, 1999 and Watson, 2002.

means by which collective goods might be provided. Thus, thinking about public goods questions — their nature, their provision and their management — provides interesting perspectives on a particular element of the emerging notion of the 'public domain' as it relates to nascent governance agendas (see Drache, 2001).

Even in the international financial institutions themselves, and notwithstanding their continuing commitment to the principles of free market economics, there is an understanding that the liberalising and deregulatory urges of global neo-liberalism have not generated the demise of national states and their regulatory activities. On the contrary, the extent of 'convergence' on a single set of policy principles, on a single pattern of government spending, and on a single conception of institutional organization, has been far from that predicted by the 'globalisers' of the early 1990s (see the analyses in Boyer and Drache, 1996; Higgott and Phillips, 2000). Moreover, the financial crises have been interpreted as dramatic demonstrations of the unsustainability of 'state-less' models of market economics incapable of providing safety nets against market failures or structures of domestic compensation for the socially deleterious effects of unfettered competition and extensive liberalization. In short, one of the dominant understandings of the public domain, especially in Asian and Latin American countries, is of its essential (re)vitalization or utilization as a mechanism for the provision of a range of public goods crucial to the socioeconomic sustainability of markets. This view found its way into the policy debates of the international financial institutions, couched broadly in the language of the 'Post' or 'Augmented' Washington Consensus' (see Stiglitz, 1998, Rodrik, 1997 and 2002a).

However, the extent of the compatibility between the processes of reformulating policy strategies appropriate to specific historical-institutional settings (in effect, what is happening 'on the ground' in various regions and countries) and the mainstream of the 'governance' debates in the corridors of the international financial institutions was often over-stated at the end of the 20th century. While an essentially 'top-down' vision of global governance — or more weakly, 'multilateralism from above'[70]— prevailed within the policy making circles of the major international institutions, this was not the case in the developing regions of the world—nor indeed is it now. In the same way, as those broad economic analyses with limited 'area studies' knowledge were inclined to play up the unexpectedly swift recovery of the world economy as evidence of the limited nature of financial crises (and the limited collateral damage caused to the dominant policy consensus), those approaching the issue of the provision of (global) public goods from a 'top-down' (as opposed to a 'bottom up') perspective remain excessively optimistic of the prospects for genuine cooperation between states on matters relevant to a revamped global governance agenda.

The development of the 'alter (and anti)-globalization' movements encompass a resurgent antipathy to the emergence of a settled intellectual consensus of what constitutes global public goods. Second, the debate over what constitute public goods have to date largely been conducted in arenas which developing country influence over the intellectual debates (as in the International Economic Institutions) is at best limited. Third, the capacities--and more specifically the willingness—of policy elites to provide public goods or participate in global public goods agendas, while never as developed or as normatively driven as those of the

[70] I use a standard definition of multilateralism as the management of trans-national problems with three or more parties but operating with a series of acceptable ' … generalized principles of conduct' (Ruggie, 1993: 11). That is, the principles of behaviour should take precedence over interests. The key principles identified by Ruggie are indivisibility, non-discrimination and diffuse reciprocity. Overtime, the precedence of principle over interest should lead to collective trust within an institution, amongst players of different strengths and sizes. A key element in the development of this sense of trust would be a feeling amongst the smaller players that the major actors, especially an erstwhile hegemon, would be willing to accept the principle of 'self-binding' (Martin, 2003).

policy elites of OECD countries, have been seriously eroded by the negative impact on their economic well being occasioned by the financial instability of the late 20th century. The combination of these three conditions militate against the meaningful engagement of many developing countries in the international collaboration for the provision of public goods currently underway in a number of international fora and, moreover, against the engagement of national governments in this sort of public policy in the domestic and regional settings.

The dynamics of multilateral collective action that had been seen to be emerging throughout the early 1990s at both global and regional levels has been altered in important ways under the impact of financial crises in Asia and Latin America (see Phillips and Higgott, 1999). The financial crises, in the ways that they have played themselves out in the affected countries, challenged some of the dominant assumptions of liberal interdependence theory of the 1970s. The financial crises did not constitute the sorts of 'common interests' that Keohane (1984 and 1989) and others deemed to be the basis for *global* collective action. Rather, if we take East Asian post 1997 as our guide, they have led to enhanced *regional* cooperation (See Dieter and Higgott, 2003 and Higgott, 2005).

National states in the developing world are concerned less with the provision of public goods than with the minimization of 'public bads'. The provision of collective goods under conditions of globalization becomes an exercise in addressing the collateral damage to national societies and economies that can arise from such things as specific financial crises, and by the globalization of neo-liberalism more generally. In this sense the minimization of 'bads' (principally, but not exclusively financial volatility, market failure and the social costs of liberalization) was, at the end of the 20th century, rooted in the rethinking of neo-liberalism that was strong among policy elites and societies at that time, and in a growing *normative* concern to address the inequities generated by global liberalization. This characterizes the debates about the appropriate role of public authorities, and their relationship with other elements of the state—especially civil society/market nexus in the early 21st century.

The distinction between public 'goods' and 'bads' requires clarification. Environmental degradation, for example, is a public 'bad', but its management, by (potentially) converting degradation into sustainability, is a public 'good'. Global environmental policy, in this way, is simultaneously the management of a public bad and the provision of a public good. The same applies to financial volatility and the social costs of global liberalization. They are public bads while financial stability and social compensation are public goods. Thus in developing countries the emphasis is on the public 'bads', which are as much political as well as economic effects requiring minimization in the interests of equity, justice and stability. In public goods theory the adverse political effects are invariably set to one side. In the developing world, public policy is considered in the context of how globalization conditions the capacities of policy-makers and the results of policy initiatives themselves.

The pursuit of public goods is invariably understood to be most effectively achieved by positive problem-solving through collective action. By contrast, public policy aimed at the minimization of public bads tends to be a reactive process which states pursue mostly on an individualist rather than collective basis. The minimization of public bads becomes the provision of public goods, but it is the nature of the 'bads', as well as the strategies employed to 'manage' them, which legitimates the distinction made here and which makes them political as much as economic considerations. State policy making elites bruised and humiliated by the financial crises of the last century are clearly conscious of their diminished sovereignty in the new one. They remain cognizant of the need to control the 'public bads' that emanate not only from the crises but also from the effects of technology on cultures, eco-systems and the international order (especially the spread of drugs, crime, terrorism, disease and pollution). They do not appear willing, however, for the further erosion of sovereignty that would be required to tackle these problems collectively. For precariously situated

governing regimes, the sovereignty issue over-rides consideration of delivering global public goods in many parts of the developing world.

In this sense, despite impeccable theoretical arguments (both analytical and normative) in favour of collective action problem solving, the prospects for regular successful international cooperation amongst states must not be exaggerated. The key factor explaining inter-state cooperation — notwithstanding the recognized impacts of globalization — is still domestic *political* actor preferences (see Milner, 1997). The argument presented in this report shares the view that predominates in the major international institutions that the desired basic public goods for a 'just' global era (economic regulation, environmental security, the containment of organized crime and terrorism, and the enhancement of welfare) must be provided collectively, but these normative aspirations are undermined by a lack of state capacity and normative 'political will' in developing countries (not only Africa but also in many Asian and Latin American countries) to act in this way.

The provision of collective or public goods needs to be located within the broader framework of the reconsideration of the public domain and any utility of the concept beyond the level of the bounded territorial state. Responses of national policy elites to the limits of liberalization and the failed 'management' of the socio-political dislocations occasioned by the 'globalization' of inequity are invariably state-centric. This is not the same as being 'statist'. Rather it is to suggest that state policy elites are but one important group of actors in the development of a more explicit normative concern with equity and justice in the recent intellectual policy debates. These debates — ongoing between civil society, state and market actors (via NGOs and Global Social Movements, governmental and inter-governmental international institutions and corporate actors) — form the basis not only for rethinking neo liberalism in particular, but also for redefining the policy agenda associated with 'collective goods' or public goods questions in general.

Despite the variety of arenas in which political activity takes place in the global economy, there are principally three 'levels' at which the provision of public goods might be pursued by national states. The first is through engagement in the global policy debate; that is those agendas which seek to maximize collaboration between state and non-state actors for the governance of the global commons and the provision of collective goods and which are being driven by the policy community in the international institutions. It is here that the prospects for the collective provision of global public goods in the PWC era are important. 'Top down' global governance agendas of the kind envisaged in the PWC and the activities of, say, the UNDP to enhance the provision of global public goods, are likely to be limited in their success.

The second 'level' is the domestic setting which must also be combined with a third—regional—level where we can identify institutional and socio-political constraints on the capacity of states to engage in public policies for the pursuit of collective goods within and beyond the territorial state.

The financial crises of the late 1990s represented less the final ideological triumph of Anglo-American neoliberalism rather than a setback. At the very least, US and IMF dreams of even more open capital markets had to be put on the back burner, replaced by fears that the anti-globalization sentiments, strong in many emerging markets and growing in the USA, could spread to other liberalized OECD countries. And events in Asia and Latin America represent less the victory of global liberalism than a spur to rethinking significant aspects of the neo liberal project.

Liberalization and deregulation were never simply sound economic theory. They were also contentious political practice. Rather than being recognized as welfare enhancing overall they are seen to have negative redistributive consequences that disturb prevailing social structures

and which the 'invisible hand' of markets is incapable of addressing. We have seen since the late 1990s the emergence of a genuine debate, in policy and academic circles, on potential means of 'governing' globalization and of making good the notion of the 'social market'. At the 1999 G7 summit and even at the 1999 World Economic Forum in Davos for example, much was made of the apparent trade-off between international competitiveness and the social and political priorities of democratic systems. Privatization and deregulation in welfare provision, rightly or wrongly (and perception is often as important as reality) were believed to have contributed to rising levels of domestic inequalities and wealth concentration, and the 'logic' of international restructuring similarly fed into an increasingly painful differentiation between rich and poor countries in the global political economy.

Social injustice has come to be associated with the absence of effective economic regulation, or at the very least with the process of deregulation which most countries were engaged in from the 1990s. As a result, the *objectives* of market economics, as much as the functioning of the market economy itself, are deemed to stand in need of re-evaluation. Growing concerns about the power of the 'stateless market' pointed to a (re-) recognition (in policy and intellectual circles) of the importance of the institutional and social embeddedness of markets as well as the ways in which the functioning of domestic and global markets depends on political consent (see Polanyi, 1944, reinterpreted by Ruggie, 1995).

What the financial crises of the late 1990s made clear was that the urge for free markets and small government was socially unworkable in countries not possessed of the sorts of domestic compensatory mechanisms on which Ruggie's post-Second World War 'embedded liberal compromise' was based (but see also Rodrik, 1997), and which are found in most industrialised democracies. The Trade Adjustment Assistance Scheme in the US, and active labour policies and the social charter in the European Union, for example, aim to offset the effects of global liberalization on particular socio-economic groupings. Although these programmes are generally not considered to be of maximum effectiveness, more groups in developing countries are recognizing that the fiscal stringency and deregulatory imperatives peddled to them by the international financial community are not consistent with spending patterns in OECD countries (see Garrett, 1998) and the institutional safeguards that continue to protect these countries from the effects of competition and liberalization. In combination with the myopic responses of the IMF to the financial crises, the result has been, if not everywhere a 'politics of resentment' as in Asia (see Higgott, 1998), then at least the emergence since the end of the 1990s of a recognition of a two-class model, the development of significant sites of resistance to globalization and a search for alternatives to dominant Anglo-American versions of neo-liberal globalization.

In contrast to the Washington Consensus days, a visible awareness among policy communities of a need for a new 'development paradigm' has developed (Stiglitz, 1998) and one that is more reflective of the centrality of *politics* in global and domestic processes of economic change (Higgott, 1999). The Post Washington Consensus purported to recognize what had long been treated as axiomatic in many developing countries; that the divorce of politics from the dominant economistic understandings of globalization was both conceptually unsound and socially destructive. The understanding of governance contained in the post Washington Consensus — especially its emphasis on governance, civil society and safety nets — was firmly underwritten by: (i) a managerialist ideology of effectiveness and efficiency of governmental institutions and (ii) an understanding of civil society based on the mobilization and management of social capital rather than one of representation and accountability and certainly not as a site of resistance (Cox, 1999).

The Post Washington consensus represented a sharp departure from the more narrowly economistic and technocratic decision-making models. It should be seen as an attempt to institutionally embed, and even maybe humanize, the earlier elements of the Washington Consensus. The principal element of the PWC was the development of an understanding,

amongst leading policymakers of the international economic institutional policy community, of the importance of the need for a stronger 'governance dimension' to the international economic order. The dominance of an economic ideology, largely unmatched in its parsimony, but unrivalled in its normative poverty, was nudged over slightly by a newer understanding of 'governance'. To the original buzzwords of liberalization, deregulation and privatisation were added those of civil society, capacity building, governance, transparency, a new international economic architecture, institution building, safety nets, global compacts and of course 'global public goods'(see especially Kaul, *et al.*, 1999) which collectively fell under the increasingly popular hosting metaphor of global governance. In this way, we can usefully identify the notion, if not the words, of 'global governance' as the thread, or bridge, between the Washington and Post Washington Consensus eras.

If the earlier period was an attempt to create a set of global *economic* norms to be accepted by entrants to the global economy under the guidance of the existing international institutions, then the current era at least prior to 9/11 appeared to construct support for a new set of *socio-political* norms. But the Post Washington Consensus suffered from the same failings as its predecessor. It was no less universalising, and attempted to be no less homogenising, than the Washington Consensus framework. Global policy debates remained reliant on a set of 'generalisable' policy prescriptions, although with a more subtle understanding of market dynamics than in the early years of global neo liberalism.

The 'universalisation' of a PWC agenda still implied the universalisation of an understanding of governance based on efficiency and effectiveness, in which democratic accountability remained a secondary variable. Indeed, much of the policy prescriptive work on governance in or around the international institutions (for example, see Reinecke. 1998) treated (and still treat) governance as a neutral concept. The governance agenda under construction by the international institutions in the late 1990s and early 21st century stripped out questions of power, domination, resistance and accountability. To the extent that the international institutions recognized that resistance was a legitimate part of the equation, it was something to be overcome by 'good governance', not something that is a perpetual part of the process. This agenda allowed little or no provision for the extension and expansion of 'democratic' participation. Closing the 'participation gap' by incorporating non-state or 'civil society' actors is not a solution. This is for at least three reasons.

The first is that despite their visibility, NGOs and other non-state actors cannot approximate the legitimacy of the national state as the repository of sovereignty and policy-making authority, nor its monopoly over the allegiance of the society(ies) the national state is supposed to represent. Second, despite the appeal of expanding the parameters of participation to include these important actors, it is widely recognized that they are often less democratically accountable than the states and inter-state organizations they act to counter and invariably less democratic in their internal organization than their outward participatory activities would suggest (see Lynch, 1998; Gordenker and Weiss, 1995, Haufleur *et al*; 1999; Higgott, *et al.*, 2000) Third, implementation of resolutions taken in 'global' negotiations, or often by international organizations, remains primarily the function of national states, or at the very least depends on their compliance and complementary activity at the national level.

These observations point to significant anomalies in the system. On the one hand, the expansion of participation to non-state actors such as NGOs and GSMs does not solve the problem of the under-representation of developing country states in the more formalized policy processes. 'Global' governance issues are dominated by the powerful states and alliance constructions and interest representations which feature in the structures of international organizations and groupings such as the G7. Calls for the expansion of the G7 into the G16, G20, or similar (Sachs, 1998 and English *et al.*, 2005), recognize that in order to be effective, global economic leadership needs significant diversification, and that collaboration in the provision of public goods depends on an extended participation. There is

a widespread recognition that the institutional constructions of key global policy forums are simply inadequate to the generation of meaningful 'global' collaboration on a range of policy issues. Most importantly, the provision of those public goods identified as crucial to the construction of an equitable global order is complicated by the inequitable nature of the negotiation processes themselves.

If we accept that states continue to engage in (at least) two-level games (Putnam, 1988), then effectively these conceptions of governance marginalize the international bargaining role of developing states (through the privileging of civil society and the structures of international organizations) while attempting to enhance the position of states as mediators between the forces of global change and the societies they are supposed to represent. As such, the difficulty with the new-found state-friendly rhetoric of the Post Washington Consensus era was that in many ways institutions such as the World Bank may be seen as 'disarmed by its own logic' (Fine, 1999: 11). For many policy elites in the developing world (representative of their populations or otherwise), attempts to introduce a dialogue with non-state actors represents an unwanted alternative to giving them a larger voice in the global policy debates.

But the practical and conceptual shortcomings of the PWC and governance agendas are only part of the story. Incentives to participate are maximized by perceptions of the normative fairness and equity of the system itself (Mohan Rao, 1999). When viewed through the lenses of the developing countries, these appear less than optimal. Moreover, the classic 'logic of collective action' leads to a conclusion that incentives for developing countries to engage in such collaborative activities are unlikely to be compelling (Olson, 1988). Given the free-rider problems inherent in collective action, it is only in the presence of significant 'selective incentives' that the cost-benefit ratio of cooperation will be perceived as favourable to the actors involved.

Take the case of financial stability as a public good. There is a strong awareness in developing countries of the role played in conditioning the nature and impact of the financial crises by 'moral hazard' considerations on the part of the lenders. While it is certainly the case that the world economy was sustained largely intact by the strength of the US economy over the last couple of years, as a result of moral hazard the 'burden' fell disproportionately on those national markets (and societies) which experienced currency collapse (Krugman, 1999). As a result, the negative externalities of global financial deregulation were shouldered principally by the emerging markets of Asia and Latin America. Conversely, the positive externalities of action by national policy elites to reduce local economic instability accrued to other agents in the world economy. As a result, as well as shouldering the burdens of moral hazard in the crises, there is a perception in developing countries that the free-rider problem applies also to the subsequent process of economic recovery. This is seen in some ways as a reversal of the moral hazard question, in that the inadequacies of regulation at the global level compel state action at the local or regional level, which in turn benefits those industrialised economies which might otherwise be threatened by global recession or be obliged to put together further packages to bail out sinking currencies.

In an environment characterised by complex interdependence, the positive and negative externalities of any collective action will be felt by agents outside the boundaries of those states directly involved. But conceptions of financial stability as a global public good and talk about constructing a 'strong network of global participants' (Kaul, 1999: xxxv) fails to take into account *both* the moral hazard question and the absence of selective incentives, both of which will militate against the participation in collective action of developing countries (and especially the more advanced Asian and Latin American states). As a result, the incentives for participation in financial 'governance' measures are reduced not only by the constraints on the commitment of the necessary resources but also by the differential nature of the burdens of positive and negative externalities.

Now clearly Olson's logic of collective action is the classic statement of a rational choice approach to the political economy of cooperation, and as such can be, and has been, criticized for its selective appreciation of the motivations of actors. As is commonly understood, it takes little or no account of a sense of obligation or altruism.[71] Nor, more importantly for our discussion, can it take into account the normative force of calls for an ethical global order, in which the pursuit of equity is as much a question of justice as a simple issue of policy choice. But the impact of the financial crises has altered structures of selective incentives in ways which have led to an atomization of governance debates.

Developing states play only a marginal role in international cooperation for the provision of global public goods. This might suggest that activity in the domestic arena would be strengthened as a result of the structural limitations on their effectiveness at the global level, thus complicating questions of global governance and collective action as they appear to be emerging amongst the policy communities of the international institutions in Washington, New York and Geneva. However, the capacity of developing states to address in meaningful fashion collective goods issues, especially in domestic settings, is also significantly constrained by sets of institutional, political and socio-economic limitations and the priority has become one of minimizing public bads rather than supplying public goods. Understandings of 'governance', in this sense, is complicated by the reality that those parts of the world most in need of the provision of public goods are least able to engage in the proactive kinds of public policy required to provide them. 'Top-down perspectives' inherent in both the global governance agenda and the PWC fail to capture the 'bottom up' complexities of the collective provision of public goods.

Thus the international institutions at the turn of the century found themselves on some sort of waste-ground between market economics (in which the state is inactive) and a raging debate about the significance and appropriate functions of state institutions. In the 'good governance' and the social capital–state debates, the World Bank is, on the one hand, seeking to plug the 'developmental gaps' in civil society and close the 'participation gaps' and, on the other, seeking to dictate what states do and how they do it, in an attempt to both downplay the centrality of the state in global bargaining and offset societal opposition to the state's pursuit of neo liberal economic coherence. A similar argument can be extended to the attempts by the WTO to secure greater NGO input into the deliberations on the continued reform of the trading system while at the same time recognizing the anarchic effect that any such widening of the deliberative process might have on the traditional structure of trade negotiations.

4. Global Public Goods and Collective Action

The preceding section attempted to review the search for a Post-Washington Consensus. In so doing, it focused largely on the debate over 'global governance' that took place within the international policy community in the closing stages of the 20th century. For the technical specialist, this might seem like a digression from the analysis of GPGs. It is not. It was precisely in this context that the growing interest in global public goods evolved and is now embedded. The debate over GPGs represents a key dimension in contemporary global governance and international organization. Expanding on the existing neo-liberal economic perspectives on international relations, concepts such as positive/negative externalities, non-rivalry and non-excludability are introduced into literature to remedy problems of collective action on a trans-national scale and especially in development contexts. The arguments are invariably presented in a scientific and 'depoliticised' manner.

The recent interest in GPGs has not only been spurred on by academic endeavours, but also by a demand for analyses from both national and international agencies such as the UNIDO

[71] For a critique of the absence of altruism in rational choice theory see Jervis (1998) On the limits of rationality in general see Sen, 1977.

project on International Public Goods for International Development and the International Task Force on Global Public Goods[72] This section analyses the key concepts in some of this GPG literature. It explores the potential consequences of an incorporation of some of the key concepts and assumptions into the international trade and financial regime before embedding them in wider global governance context.

This section addresses the issue of externalities and various categories of public goods following their elevation from a traditionally state-centric/state bounded context to the wider transnational levels. Collective action and the principle of subsidiarity as elements in the provision of GPGs are then considered. Moving beyond the language of global public goods, a series of questions about the literature's inherent normative propositions and political relevance are asked; specifically with an eye to addressing the limited ethical considerations and predispositions of the concept of 'self-interest' that has for too long dominated discussions of global economic governance and the consequent marginalisation of ethical and political considerations. At a more empirical level the section explores critical questions of whether the international institutions of trade and finance can be considered GPGs in their own right.

5. GPGS and Externalities

Based on conventional neo-liberal macro-economic theory, the question of 'externalities' (positive and negative) have been brought into both the theory and practice of global governance. The provision of GPGs is essentially an attempt to externalize negative cross-border 'spillover effects of events and policies in one country on other countries' (Kanbur, 2002: 4-5) which remain 'unmediated by classically competitive markets' (Kanbur, 2001: 2). Examples of such externalities span from environmentally based issues such as the emission of carbon dioxide and the use of shared water supplies, over security and health based issues such as migration following civil wars and transmittable diseases such as AIDS, to economic and financial externalities such as financial contagion and lacking coordination and regulation of trade[73] (Jacques and Marniesse, 2004; Kanbur, 2001 and 2002).

Following from the added cross-boundary character of the elevation of externalities to the international level, different categories of public goods have been determined. Whereas the state was the sovereign unit serving as the basis for public goods considerations in initial macro-economic theory[74], the international dimension has fostered concepts such as transnational public goods (TPGs), regional public goods (RPGs), international public goods (IPGs) and global public goods (GPGs) (Sandler, 2005). The number and location of beneficiaries of these goods are what determines the labelling as one or the other above-mentioned category. All the categories share basic characteristics to qualify for the label in the first place.

---

[72] The International Task Force on Global Public Goods was established by the French and Swedish governments and is chaired by Ernesto Zedillo and Tidjane Thiam. Other task force members are prominent scholars and experts on international cooperation (The Secretariat of the International Task Force on Global Public Goods, 2005: 31).

[73] The International Task Force on Global Public Goods has identified the following six areas as their main concerns: 'peace and security, control of infectious diseases, global commons, financial stability, open trade, and knowledge'. (The Secretariat of the International Task Force on Global Public Goods, 2005, p. 3). These priority areas seem to have been outlined on the basis of Sandler's 2005: 20-31.

[74] These public goods provided for at the state level are referred to as National Public Goods (NPGs) or simply public goods and include e.g. primary education (The Secretariat of the International Task Force on Global Public Goods, 2005:5). To avoid confusion the term public goods used here encompasses all the categories of goods mentioned and the term NPGs will refer public goods provided at the state level.

A public good by standard definition has to be non-rivalrous; that is situation in which 'all enjoy in common in the sense that each individual's consumption of such a good leads to no subtraction from any other individual's consumption of that good'(Samuelson cited in the Secretariat of the International Task Force on Global Public Goods, 2005, p.5), and non-excludable; that is a good, the consumption of which people cannot be excluded even if they do not pay (The Secretariat of the International Task Force on Global Public Goods, 2005, p. 31). To qualify these relatively straightforward theoretical constructs, distinctions between pure, impure, discrete, continuous, 'weakest link / weaker-link' and 'best shot / better-shot' public goods have been added to the literature in the early 21st century.[75] (Arce and Sandler, 2000; Jacquet and Marniesse, 2004; Sandler, 2005; UNIDO, 2005, p. 13-21).

6. Collective Action and the principle of subsidiarity

Central to the definition of externalities is the assumption that (some) people's actions can negatively or positively affect the welfare of others. This spill-over therefore has to be managed and here we must move from the realm of economic theory to the political practice of collective action[76]. As is well describe in the political science and political theory literature, the sovereign state has traditionally been the answer to problems of collective action (Walker, 1992 and Spruyt, 1994) and it is hence not surprising that most public goods today are provided at state level (Jacquet and Marniesse, 2004; The Secretariat of the International Task Force on Global public Goods, 2005: 6). By extension, there is also a broad consensus among GPG scholars, that the principle of subsidiarity should guide the provision of public goods.[77]

In essence subsidiarity affirms that if the problem is a negative externality crossing the border of two countries, then the TPG should ideally be provided for by these two countries. Similarly, if an externality is pertinent to a geographically, ecologically or otherwise defined region, the countries of this region or a regional body already in place should secure the provision of the corresponding RPG. As such, the principle of subsidiarity prescribes that the externality 'should be addressed at the lowest government level consistent with effectiveness' (The Secretariat of the International Task Force on Global Public Goods, 2005: 5). This, in turn, means the level closest to the problem where resources to secure the provision of the public good are available or can be generated. For some, the subsidiarity principle assumes assistance from rich to poor in securing the provision of these public goods (Sandler, 2005).

The provision of public goods is determined by the composition and character of the externality in question. Further, whether the public good is pure or impure determines the premises of its provision. If a public good is equivalent to the theoretically constructed ideal type—non-rivalrous and non-excludable—the basis for its provision can be undermined by the prospects of free-riding thus accounting for the undersupply of public goods, which is an integral part of the economic concept of externalities and public goods as such.

Undersupply is a characteristic of public goods at the national and the international level. But when the public good is trans-national the problem of collective action becomes even more pertinent. The solution to these problems has previously been at the discretion of the

---

[75] These distinctions are made according to the characteristics of non-rivalry and non-excludability as well as the aggregation technology, 'which indicates how individual contributions to the public good contribute to the overall quantity of the public good available for consumption' (Sandler, 2005: 7).

[76] UNIDO has adopted a definition of collective action as meaning 'the planned effort by two or more agents to act together for a particular result which is thought desirable for all' (UNIDO, 2005, p. 30). It is not clear whether 'all' strictly refers to the two agents and whoever they may represent or whether it is meant to embody the entire humanity or any grouping in between these two extremes.

[77] For a discussion of the provision of RPGs and the principle of subsidiarity see Sandler, 2005: 15-20 or Kanbur, 2002: 11.

sovereign state, which has the authority to legitimately enforce its decisions. But at the international level, there is no such authority to mitigate the free-rider problem, collect taxes and secure the provision of the public good (The Secretariat of the International Task Force on Global Public Goods, 2004: 12). Notwithstanding the seemingly technical nature of the public goods discourse this is not a very original observation. It has been captured in the principle of anarchy in international relations for much of the 20th century (see Bull, 1997).

But what the scholar of international relations has long recognised, in a manner that much of the literature of public goods fails to appreciate, is that the problem of collective action and an absence of authoritative structures at the global level is not a technical economic shortcoming, but a political problem. The provision, or not, of GPGs is often a highly contested political problem that cannot not be dealt with exclusively in economic terms. As indeed some of the UNIDO sponsored literature implicitly, if not explicitly recognizes 'arguments for collective action would not only be based on the need to improve efficiency by correcting market failure, but also on the carrying out of a social policy related to what should be available to everyone without exception' (UNIDO, 2005:18). The resolution of excludability problems is as much an ethical and political question as it is an economic one. As will be argued, it is essential to be wary of the limitations to the economic logic and acknowledge the ethico-political aspects of GPG provision.

The argument outlined above, essentially provides the economic rationale for coordination, cooperation and assistance across borders to be found in the literature on GPGs. The negative impact of certain externalities can be curbed and welfare can be generated through the provision of GPGs in other areas. In spite of the principle of subsidiarity, it is argued that the provision of GPGs should be the responsibility of those who have sufficient resources to ensure that the necessary coordination and cooperation is in place. Based on the premise that development in least-developed and developing countries will benefit all by increasing aggregate welfare overall at the global level through the market mechanisms, the GPG theory provides a sound economic rationale for North to South assistance and aid (Kanbur, 2002).

As such, the World Bank has adopted a definition of global public goods as 'commodities, resources, services and also systems of rules or policy regimes with substantial cross border externalities – that are important for *development* and *poverty reduction*, and that can be produced in sufficient supply *only through cooperation and collective action by developed and developing countries*' (The World Bank Development Committee, 2000, emphasis added). Similarly, UNIDO adopts the position that 'equity itself on an international scale or through generations might be considered as a global public good' (UNIDO, 2005:54). In short, the provision of GPGs will generate welfare for all[78], and every government and population hence has an economic (self-) interest in securing sufficient provision of the various public goods[79]. As such, the GPG arguments are used to provide justification to the 'aid-fatigued' populations of the North for continued assistance to least-developed and developing countries (Kanbur, 2001:2 and 2002: 2-3).

There is, however, a limit to the logic of these arguments. When applied to the formulation of policies, it can seem inconsistent with the complex and ever changing realities of political life. In justifying aid by the North to the South via the provision of GPGs, the argument is based on a 'global' conception of welfare (International Task Force on Global Public Goods, 2005: 10). In spite of global outbursts of compassion such as those following the Boxing Day tsunami in 2004, the political outlook and priority of the average citizen, is still largely restricted to the state in which she or he lives. An abstract concept such as 'global welfare' rarely takes other than rhetorical precedence over the welfare of the more immediate community. This has been acknowledged throughout the literature, prescribing that in cases of

[78] '…the global community benefits from welfare improvements in poor countries' (Sandler, 2005: 7).
[79] For a detailed discussion of the relationship between inequality and GPGs see UNIDO, 2005: 52-54.

public goods 'individual rationality is not enough to assure collective rationality: the tendency towards opportunist behaviour (free-riding) and the strategic response of the agents… show the difficulties these goods have in promoting an efficient collective action' (UNIDO, 2005: 29-30, also see Kanbur, 2001: 3). In cases where the welfare of ones' own community might decrease at the expense of the welfare of others, efficient collective action remains largely inconceivable. When the role of perception, party political battles, persuasion and distortion play in domestic politics today is also taken into consideration, the aid-favourable argument based purely on economic rationality weakens practically and, we might add, theoretically.

Since economics does not function in a vacuum and the political realities of the day are far more complex and encompassing than economic models either reveal or assume, it is, as I will suggest in the next section, detrimental to theoretical reasoning as well as practical policy making contexts to marginalize political and ethical systems of justification. The privileged position of the economic discourse has allowed for the marginalization of voices other than those reinforcing this near-hegemony[80] in the current debates on GPGs and aid. This is how the International Task Force on Global Public Goods would appear to operate. In its own words, it marginalizes ethical considerations: 'the global public good for health, for example, is not about promoting good health outcomes in all countries, *desirable though that is from an ethical and developmental perspective*. Rather…the health global public good is primarily about the *prevention of adverse international spillovers*' (The Secretariat of the International Task Force on Global Public Goods, 2005: 5. Emphasis added). This logic would seem to preclude any issue without cross-border effects from inclusion on the international agenda. Since the GPG efforts seem destined to take over many of the traditional aid initiatives, this could have ethical and developmental consequences as well as negative outcomes for communities in a crisis confined within their own borders.[81]

While the provision of GPGs and aid to specific states can be separated conceptually this segregation is much harder in overall development practice.[82] As UNIDO notes:

> '…aid refers to international equity problems and its purpose is to eradicate poverty; therefore it should base its action on the doctrinal realm of distribution; while, by contrast, public goods supply refers to the correction of market failure, seeking to arrive at better efficiency levels by focusing its analysis of the wide doctrinal field of economic allocation' (UNIDO, 2005: 55).

For example, development scholars working on trade issues have argued for a transfer mechanism to be included in the WTO architecture (Collier, 2004: 3),[83] which would essentially mean that the WTO would move more into 'the doctrinal realm of distribution' (UNIDO, 2005: 55). Indeed, there is debate within the GPG literature as to whether the WTO should be considered as but a negotiation framework[84] or whether it does indeed have a

[80] The concept of hegemony refers to a dominance of a particular discursive logic which has been internalized, and hence is also continuously reinforced, by the powers-that-be and subalterns alike. For an excellent discussion of this concept see Agnew (2005).

[81] To this could be added the categories of public goods at the regional and sub-regional level as primarily 'GPGs and TPGs offer spillover benefits for donor nations outside of the recipient region' (Sandler, 2005: 12). These public goods and the traditional aid priorities should not be forgotten (Jacquet and Marniesse, 2004: 11).

[82] '…public goods in general and global public goods in particular are necessary ingredients of any development strategy' (Jacquet and Marniesse, 2004: 11).

[83] Jacques and Marniesse argue that 'Indeed, global redistribution and the provision of GPGs are intricately linked' (2004: 4). Specifically, UNIDO claims that: 'international trade would benefit only if some mechanism to redistribute gains within and among nations is implemented' (2005; 75).

[84] Robert Staiger outlines two roles for the WTO; 'the first role: escaping from a terms-of-trade driven Prisoners' Dilemma' and 'the second role: making policy commitments to the private sector' (2004).

developmental role to play. Central to a neo-classical economic justification of the WTO is the idea that free trade will increase income and result in development,[85] and it can hence be argued that the organization has an inherent 'developmental' aspect by default if not by design.

Furthermore, it is clear that some funding is currently being diverted from aid to the provision of GPGs,[86] albeit the exact share in question remains a matter of debate.[87] This diversion of funds and the mission creep into aid and development by international organisations such as the WTO designed with somewhat different purposes,[88] could eventually lead to a greater detraction from the assistance given by the developed to the developing and least-developed countries. In spite of the mixed track record of traditional aid initiatives (Kanbur, 2001: 3) the diversion of funds away from the developing world has yet to be proved to be the right strategy. Since GPGs are supposed to benefit all and the rationale for their justification is self-interest, pure aid and development efforts could potentially suffer greatly from the institutional reform and reallocation that may result from the ascendancy of GPG argumentation.[89]

Similar concerns can be raised about the issue of non-excludability at the heart of the GPG literature. Drawing on Kaul and Mendoza (2003) UNIDO states that 'the limits of public goods are shaped, partly, as a social construction, based on ethical or political criteria of what should be available and shared by all'(UNIDO, 2005, p. 17). For instance, vaccination as a palliative should in principle be non-excludable because once the knowledge behind it has been produced it should be accessible for all to use. In practice however, not only technological differences, but a politically defined system of TRIPs, make it impossible for vacines to be produced in certain countries. This again highlights the shortcomings of a purely economic approach to the provision of cross-boundary public goods as well as the failures of a market-driven system. 'Excludability' is a political issue as much as it is an economic concept when we consider coordination and intervention at the international level.

7. Global Public Goods and Fairness

As the first section of this report suggested, economic theory, and the theory of GPGs, does not exist in a vacuum. Similarly, the international trading system and the international financial architecture do not function without a corresponding normative structure. First of all, it would be misguided to assume that institutions such as the WTO and the IFIs, whose *modus operandi,* in theory at least, is driven by objective economic science, are anything other than political actors. As has already been illustrated, there is nothing apolitical, objective or pre-given about the neo-classical logic guiding these institutions; indeed, this logic is as much a social construct as any other truth-claiming system. In spite of the lacking reflection over the

---

[85]See. for example, Wolfe, 2004; Bhagwati, 2005). This argument is also prominent around the WTO (Collier, 2004, p. 8), even though the empirical analyses carried out on the issue arrive at conflicting conclusions (UNIDO, 2005: 71). In fact, Staiger argues that GATT/WTO negotiations have had very limited impact on the trade of developing countries while having increased developed country trade with 65% (2005: 9).

[86] Kanbur even argues that this is desirable: '…the new realities mean that the aid system will have to … allocate a greater share of aid resources to cross-border externalities and international public goods' (2002: 7).

[87] An estimate which UNIDO considers credible is 30% of aid funding being diverted towards GPGs provision (UNIDO, 2005: 56). Sandler refers to an estimated increase in aid-funded public good support from 16.22% in 1980-82 to 38.19% in 1996-98 (2005: 2).

[88] As such, Staiger states that '…the many problems faced by developing country governments are not the problems that the WTO is well-equipped to solve, in which case placing reforms of the WTO at the heart of the efforts to help developing countries may be ill-advised' (2005: 10).

[89] This is what Stalgren refers to as the 'inverse Robin Hood' effect (UNIDO, 2005: 59).

normative aspects of these logics both among economists[90] and within the actual institutions, there are clear normative and political factors driving policy at the WTO and IMF as there are at any other institution. Secondly, the international trade and financial institutions are part of a broader system of global governance including other international organizations such as the UN and all its agencies, regional institutions, NGOs and civil society actors including academia, media and private companies.

Indeed, one question stemming from the debate on GPGs is whether or not international institutions such as the WTO and the IMF should themselves be considered as GPGs. There seems to be some consensus that the coordination of trade and access to trade-related information provided by the WTO constitutes a GPG.[91] But this should be seen rather as an 'intermediate' rather than a 'pure' public good. Moreover, the distribution of the gains from free trade is not symmetrical in nature and there have been calls for incorporation of a redistribution mechanism within the international trade regime (UNIDO, 2005: 75). The question remains, however, whether such a redistributive role is better handled by the WTO or another agency.

Similarly, there seems to be agreement that the loan mechanisms and the coordination provided under the IMF auspices also constitute a GPG. In other words, it is the 'ability of the financial markets to create systemic effects to crises, which are difficult to limit locally' that 'makes financial stability a public good' (UNIDO, 2005: 151). This is, furthermore, a public good which is virtually impossible for the state to provide under circumstances of free capital markets and it is therefore axiomatically of the global realm.[92] Finally, in the case of the WTO, the IMF has been ascribed a developmental role in providing 'the appropriate supply of capital flows…to the different categories of developing countries, including the poorest' (UNIDO, 2005: 157). Again, there would appear to be a tension between mission creeping and the traditionally 'purer' aid or stabilization tasks of the World Bank and the IMF. Considering the current unsatisfactory representation of developing countries in the decision-making bodies of the IMF,[93] it cannot simply be assumed that the developmental aspect would be outweighed by the 'benefit-for-all' element of GPGs in the re-allocation of resources within institutions.

More importantly, any consideration of the role of the principal International Economic Institutions within an overall theory of public goods must focus on their role as venues for negotiations and increasingly as venues to ensure that a theory of global public goods is under written by assumptions of justice and fairness without which the 'legitimacy question' will continue to dog the role of the IEIs as the appropriate agents for the implementation of GPGs and indeed the appropriateness of GPG strategies more generally. These essentially normative and ethical issues are not simply the stuff of the scholar of international philosophy, although they are scholarly questions. Rather they are questions that cast massive policy shadows if the theory and practice of global public goods is to be advanced. They are questions of politics

---

[90] Staiger (2005: 3) argues it is '… possible to view the WTO as an international institution within which the behavior of governments can be understood with basic economic reasoning' (2005: 3). On the non-reflexive thinking in economics more generally see Fine, 1998.

[91] '…the trade regime can be considered as an impure public good, which, to a certain extent, resembles a club good' (UNIDO, 2005: 73). '…the creation and maintenance of the WTO can be seen as an act of providing an international public good, but the utilization of the WTO by its member governments … can be seen largely as an international private good' (Staiger, 2005: 7).

[92] This view is not of course universally accepted; especially in East Asia wher the period since the financial crises of 1997-8 have seen a permanent debate, and not inconsequential real progress, on formulating strategies to stem financial volatility at the regional level. See Dieter and Higgott, 2003 and Pempel, 2005).

[93] U.S. voting power is equivalent to 75 African, Middle-eastern and Latin-American countries and the EU adds up to 32% of votes of the Board of Governors (UNIDO, 2005, p. 168).

requiring negotiated settlements. Collective action problems require negotiated outcomes and these are secured in political activity between the principal actors.

This issue is much more than simply a comment on the capability of institutions to secure decisions from amongst the agents involved. It is not simply a technical issue of bridging the participation gap identified by Inge Kaul and her colleagues in the 1999 volume on *Global Public Goods*. Nor is it just an issue of how to incorporate new actors into the multilateral spaces (especially civil society actors) traditionally occupied by states (see O'Brien *et al*, 2000). These are all necessary conditions of enhancing GGII but they are not sufficient conditions. There are also questions about power, or more accurately the asymmetries of power and what that does to the prospects for GPGs being under written by principles of justice and fairness. The missing ingredients are the issues of justice and fairness and how these are to be delivered under conditions of persistent asymmetries in the power relations between developed and developing country actors.

Let us not forget that in any negotiation, and especially an MTN Round, it is invariably a few powerful states or coalitions of states that set the agendas at the expense of weaker, less technically equipped and politically well organized states. Following Cecilia Albin, I use justice in a general generic sense to mean '… general standards for allocating collective benefits, opportunities and burdens among members of a community.' 'Fairness' is a much more applied concept. It gives guidance to what is a reasonable way to implement justice in a given context (Albin, 1993: 223-44; more generally see Albin, 2001a and Pogge, 2001). They are extremely difficult concepts (especially justice and its applications) on which to secure a broad consensus of thought. They are also extremely difficult concepts to handle in anything other than a discursive and qualitative manner, thus rendering themselves unattractive to the kinds of theoretical modelling and quantitative methodologies that under-write much literature on GPGs. But, without justice and fairness prospects of negotiating the successful implementation GPGs will be limited.

This is not as drastic as it might seem. It is clear that there are a series of strong principles under-writing GPGs in theory and some, if not all, GPGs in practice. But priorities and modes of application remain contested across the range of relevant actors (the IEIs, states, civil society actors). Perhaps a principle area of contest is over the governance of GPGs and specifically between my two definitions of governance: GG1, effective and efficient policy implementation on the one hand and GG11, the degree to which policy implementation is underwritten by principles of representation and accountability. Institutional rule makers (invariably technocratic specialists from the developed world) tend to privilege GG1 while rule takers (developing country government officials and civil society actors) tend to privilege GG11. Thus the difference between success and failure will revolve around the degree to which the principle of justice and fairness under-write and GPG bargain. GG1 is invariably under-written by a rationalist methodological discourse of self interest while GG11 is seen to be under-written criteria such as justice and fairness that are portrayed at best as hopelessly naïve, altruistic, whimsical even, and at worse as politically unrealistic.

The reports and recommendation, which define these institutions as public goods and thereby help legitimize their presence and allocated resources, are predominantly produced by economists mainly of neo-classical disposition. As such, one could argue that the justification provided by the GPG literature not only serves the purpose of the institutions but also, in a self legitimating manner, the broader paradigm of neo-classical economics. In spite of pointing to the limitations of the market by introducing externalities, the literature reintroduces the self-interest driving the market as the solution to the problem by providing theoretically constructed arguments in favour of the provision of GPGs. Further, the question remains what this means for the organization of the provision of GPGs. Following institutional theory, it is an inherent characteristic of employees or affiliates of an institution to want to expand the scope and territory of that particular institution to secure or enhance

their own position (Finnemore, 1996). There is a need to critically examine what the logic behind the theory of GPGs entails, whether the institutions like the WTO and the IMF should in fact be considered GPGs in their own right and whether this automatically gives them the legitimate authority to take on the provision of other GPGs.

There are a range of reasons for why fairness matters in the successful provision of public goods. In theory, GPGs are public and non-excludable; but irresponsible or selfish use—especially over consumption or free riding—leads to resentment and resistance. Notwithstanding the attempts to equate the use of GPGs within a developmental framework, it is usually the stronger states that are in a position to behave in an irresponsible way, as in the use of environmental resources for example, while it is the poorer or developing states that dispute the just and fair use of GPGs. Since GPGs need multilateral cooperation to produce them collective action is unlikely if this resentment and stand-off prevails. Thus there is a pressing need for the application of principles of fairness (both of outcome *and* process) if GPGs are to provide for the 'equitable utilization of shared resources,' (Albin, 2003b: 369).

GPGs, Governance and Procedural Fairness: Lessons from the WTO

As Albin points out (2003b: 370-72) procedural principles of justice and fairness (equality, proportionality, mutual advantage, reciprocity in the policy process) and principles of outcome (substantive issues such as MFN and national treatment in the international trade regime or polluter pays and inter-generational justice in the global environment) are often agreed at such a high level of generality that their implementation needs to be negotiated in issue specific contexts; the international trade regime being the most obvious case in point. If the WTO is a global public good, as much of the GPG literature assumes, then it is a strange one. It has clearly produced losers as well as winners and the overall aggregate welfare that is generated by its regulatory footprint is not necessarily perceived to be spread equally across all participants in the global economy; and perception is every bit as important as reality in many instances of North South dialogue.

In this regard, issues of 'justice as process' is often every bit, if not more, important for the mostly developing world rule takers rather than is 'justice as outcome'. From an economic theory of public goods, under-written by methodological assumptions of rational self-interest, this would no doubt appear irrational. A similar judgment is also likely to be found amongst the managers of the IEIs such as the WTO, World Bank and IMF, tasked with implementing various strategies to provide GPGs. They adopt and understanding of global governance of the kind I have labelled GGI. It has no way of accounting for or measuring the salience of the demand for GGII amongst rule takers. The economic theory of GPGs demonstrates little appreciation of the kinds of constraints of a socio-psychological and ultimately political nature, than can undermine GPG negotiations and outcomes (but see Rubin and Brown, 1975). Moreover, GPG theory exhibits what Dorothy McClosky (1983) long ago called 'the arrogance of social engineering' that is to be found in much economic theory.

No where is this better seen than in a political, as opposed to an economic, analysis of the trials and tribulations of the Doha Round of Multilateral Trade Negotiations. Here is not the place for a detailed discussion of the round to-date, but the lack of progress of the round immediately prior to the Hong Kong Ministerial Meeting (December 2005) supports the contention that procedure is as important as outcome for many developing countries involved in the round. As is understood key procedural activities start with agenda setting and finish with policy implementation, with the various stages of the bargaining process in between. As literature, spanning the political spectrum, tells us. It is in the bargaining process that structural asymmetries between North and South have traditionally been at their most evident. As a first principle, it is here that notion of what is a public good is for many developing countries a contested concept.

The WTO is for many of them seen as a vehicle for the advancement of so-called public goods that serve the interests of the developed world (such as Intellectual Property Rights) first rather than those of greater salience to the developing world (such as health and poverty issues.) The initial agenda of the Doha Round, especially the 'Singapore' issues with an emphasis on service trade, intellectual property and capital movements and an initial refusal to address the issue of agriculture and S&D (see Rollo, 2003)—were all seen to benefit developed countries more than developing ones. Hence the opposition to them at the Ministerial Meeting in Cancun in 2003 and the interesting spectacle of the new coalitions that formed with major developing countries at their core, to thwart process of an MTN built around these issues rather than one that catered for a range of different actor interests in more balanced manner.

The use of coalitions is, of course, not new to the Doha Round (see Hamilton and Whalley 1989 and Higgott and Cooper 1990, on the Uruguay Round) but Cancun was a milestone in the effectiveness of developing world coalitions. Since that time coalition building activity (especially the emergence of the G20 as a response to the EU-US text on agriculture) has become increasingly sophisticated (see Tussie and Narliker, 2004). The development of these coalitions, notwithstanding that all WTO decisions are in theory based on consensus, is a recognition that power asymmetries remain the key to explaining outcomes in the WTO and that coalition building by developing country states is one of the few course of action open to them to offset that power of the majors (that is the USA, the EU and to a lesser extent Japan.) Developed country opposition, as for example seen in the opposition to the G20 by the US and the EU, seems to have the effect of exacerbating North South distrust and strengthening developing country coalition building. To identify this mistrust is not to suggest that distrust and disagreement does not exist between countries *within* the North and the South; cleavages which exacerbate the difficulties of coalition-building.

It should also be noted that we live in what Carlos Braga, Senor Advisor on Trade at the World Bank calls an 'age of anxiety' about the effects of the trade and the policies of the WTO on the sovereign autonomy and economic welfare of states and their populations and that this is not simply a developing country phenomena; it also a concern that finds resonance in developed countries as diverse in their socio-economic models as the United States and France. While trade liberalization is considered a near public good in the world of the economist; this is not a perception that predominates in the wider reaches of civil society in many developed countries. The growing economic strength of China and India is not seen as something to be welcomed in the vulnerable economic sectors of the developed world as recent EU-China trade tensions ('bra wars') attest.

This leads to a problem for theories advancing the provision of public goods. The empowerment of developing countries as negotiators, in the absences of procedural fairness, may prove to be a serious obstacle to collective action problem solving in general and the provision of Northern inspired global public goods such as the WTO in particular. In the absence of both procedural fairness and outcome fairness the temptation by developing countries to thwart the aspirations of the developed countries is only likely to grow.

While this kind of learning experience might not appear conducive to the provision of global public goods there would appear to be little or no doubt in the minds of developing country negotiators in the Doha round that procedural fairness is the necessary precursor to outcome fairness. Indeed, and inverting Rawls (1971) the negotiation processes in the MTN confirms that in the absence of procedural justice (justice as fairness) co-operative action is not likely. Procedural fairness is a necessary, if not sufficient condition to guarantee outcome fairness; that is a fair distribution of both positive and negative externalities arising from an agreement. According to Albin, there is a substantive body of empirical evidence to suggest that this is the case. At the very least decisions taken by real consensus 'enhance the perception of the

outcome being fair and balanced' (Albin, 2003b: 379-40) and a positive perception is a vital ingredient in any process of institutional legitimation.

If a multilateral economic institution such as the WTO is to be thought of as a GPG then it needs to be not only an effective and efficient instrument of policy making beyond the territorial state (GG I) it also needs to diminish what is widely agreed to be a democratic deficit that arises from the two speed process of the rapid globalisation of the world economy on the one hand and the considerably slower globalisation of governance on the other. There are a number of ways to address this issue. One is normatively through political theory. While this can produce interesting ways of thinking about the democratic deficit, such literature, especially what we might describe as calls for cosmopolitan democracy, often looks a little esoteric to proponents of GPG theory. Not only does it play down the role of the institutions—although note David Held's (2004) interesting turn from talking about cosmopolitan democracy to talking about 'cosmopolitan multilateralism'—this literature invariably ignores, or at least downplays the nature of old fashioned power politics. There is no getting away from the fact constraints on the multilateral international economic institutions--and the prospects of enhancing GGII—cannot be separated from the structural power and intellectual purpose of the USA an issue avoided in much GPG theoretical literature.

This is not the only issue to be addressed, but it is a necessary one. US multilateralism has always been an exercise in what some call 'Ambivalent Engagement' (Stewart and Forman, 2002) and others call 'Instrumental Multilateralism' (Foot, *et al*, 2003). The US has accorded greater, but never unconditional, support to multilateral problem solving in the economic domain. The principal distinction is the long-standing difference in US attitudes towards the financial institutions, in which it has demonstrated a high degree of intrusion and desire for control and the governance of international trade (via GATT and now the WTO) in which it has traditionally been prepared to underwrite, and largely accept, rules-based governance. Ironically, it may be that the creation of the WTO has pushed the writ of that organisation farther into the domestic political processes (via the development of a dispute settlement mechanism) of the member states than many, including the United States, anticipated and may in fact be prepared to tolerate in the longer run (Elliott and Hufbauer, 2002: 404-7).

This is something we shall not know for sometime to come but, if it turns out to be the case, it will be a major setback for multilateralism. The Dispute Settlement Mechanism can be seen as a major building block to a global (as opposed to regional) governance structure. In theory it introduces democracy and law into international trade matters in a manner unlike any other instrument of the international trade regime. It is open to the smallest state to take the mightiest state to court. It is a key principle of procedural fairness. In practice, in an age of intolerance towards multilateral intrusions of this kind, it is seen as an infringement on the sovereignty of the major powers; especially the USA.

In terms of governance as the effective and efficient management of the global economy (Type I), the international economic institutions have served the interests of the US well. This was the case in the bi-polar era of the Cold War and now in this unipolar era. But unless the US takes greater account of the GGII understanding of governance—governance defined as enhanced accountability, responsibility, representation (and, indeed, justice)—this may not continue to be the case. Even ignoring good ethical reasons for considering it an essential component of global governance, there are good instrumental reasons for advancing GGII. The continued globalisation of the world economy—freer trade, freer capital flows, freer movement of technology—cannot continue without these processes developing structures of accountability and representation. 'Leaving it to the market' won't do. It ignores the degree to which markets are not just organic or spontaneous developments rather than the outcome of the acts of purposive social agents.

We have a well-recognised problem. There is an incompatibility of the continued existence of (i) the nation state (to ensure self-determination), (ii) the development of democratic politics beyond the state (to ensure that public policy is accountable) and (iii) the continuing economic integration of the global economy to enhance global living standards (see Rodrik, 2002b). At best, argues Rodrik, we can secure two of these goals, never all at once. As is now recognised, even amongst avid free marketeers (see Wolf, 2004: 13), global markets (economic integration) without global governance are likely to prove unsustainable.

The WTO desire to enhance rapid economic integration sits at odds with the clamour for democratic politics and representation, both within states and between states. It thus remains neither feasible nor desirable, to continue towards global economic integration at a rate greater than is compatible with the desires of nation states (either via traditional forms of representation) or their peoples (through new discursive, non-statist forms of representation) for democratic input into these processes. Thus we need to think, more pragmatically, of what can be achieved. For Rodrik, the alternative is a renewed Bretton Woods Compromise, the aim of which should be:

> [t]o preserve some limits on integration, as built into original Bretton Woods arrangements, along with some more global rules to handle the integration that can be achieved. Those who would make different choices—towards tighter economic integration—must face up to the corollary: either tighter world government or less democracy. … [We might need to] … scale down our ambitions with respect to global economic integration … [and] … do a better job of writing the rules for a thinner version of globalization' (Rodrik, 2002b: 1-2)

Or, put as a question: 'Can we have global economic integration without global governance?' To pose the questions is not to resist the central importance of markets, rather than to require an ethic of global governance that suggests *global governance as effective and efficient problem solving (especially via the provision of global public goods) and global governance as enhanced accountability are not for de-linking.* However, the widely held belief amongst rule takers is that that Type II governance is ignored by the powerful actors. Yet this is sufficient to weaken governance Type I. (Brassett and Higgott, 2004.) If GPGs are a principle manifestation of GGI then there prospects of successful acceptance and implementation are weakened in the absence of GGII.

In theory, the multilateral institutions should play the major role in bridging the gap between Types I and II governance. They should underwrite and enhance cooperation in the interests of all participants in an accountable and transparent manner. Their aim should be to ensure the stability of the global economy (assumed to be an unalloyed public good) and provide problem-solving strategies for new stresses on the system as they emerge. The problem, of course, is that many sections of the world's policy community (both public and private) do not accept these theoretical assumptions. Even if they do, they see the organisations fulfilling only and invariably sub-optimally, the GGI side of the bargain. The other half of the equation—the need to make these institutions more accountable to, and representative of the majority of their members—remains un-realised and deemed unreaslisable.

To revisit our case study, the international economic institutions in general and the WTO in particular, as is now widely accepted, have a legitimacy deficit. One does not need to have been on the barricades at Seattle or Cancun to think this. Indeed, many officials in the institutions are sensitive to this charge. The lack of accountability of the institutions to all but their most powerful members is not new. Indeed, it has always existed.[94] What has made it no

[94] Woods (2001b) and Woods and Narliker (2001) have provided detailed empirical studies of the limits of accountability through their Executive Boards of the international institutions to their member

longer acceptable are telling and increasingly well-understood critiques, not all of which are merely anti-globalisation rhetoric. But institutional reform has not kept pace with the exponential change in the global economic system nor demands for it to be 'democratised'.

This is not simply a normative issue of fairness, reasonable as such a claim may be. It is practical issue casting long shadows over the policy process. It is understood how the structure of negotiations marginalizes smaller, less well-equipped nations. Limited financial and human resources—especially the absence of specialised knowledge (GATT-speak) and specialist non-state actors able to support the national interest—works against developing country participation (see Page, 2003). Civil society support to developing country participation, given the expense a limited knowledge-pool, always leaves developing countries at a disadvantage compared with better resourced developed countries (see Edwards, 2001 and Scholte, 2003).

Nor is civil society support axiomatically an advantage. Unlike business groups and corporate sector actors, many civil society actors do not find it so easy to secure access to the decisions making processes. The governing norms and the language of the WTO is the language of neo-liberalism, as indeed is the language of GPG theory. Unsurprisingly, it projects an unquestioned emphasis on the core market values of competition and efficiency—GGI. This is also, of course, the language of business groups and experts, comfortable with the sentiments present in the neo-liberal discourse, but also competent in the technical language of the WTO. This empathy and expertise ensures easy access to the trade policy community (see the access of the *Evian Group for Economic Order in a Global Era*, www.eviangroup.org).

On the other hand, most civil society actors, especially those with a development focus critical of the WTO and how it conducts its business, are mostly not regarded as sources of 'expert knowledge' on the international trade regime. Rather they are seen as antagonists and activists. Their role in the decision-making processes of the WTO have not been, nor indeed is it likely to be, legitimised or normalised in the manner of corporate actors.[95] As a consequence, the decision-making processes of the international economic institutions, especially the advocacy of a range of GPGs, will remain contested domains of legitimacy. Calls in the Doha Round to address 'new issues', before many developing states have come to terms with expectations on them from the Uruguay Round have—when coupled with the absence of any movement by major powers on issues such as agriculture and democratic reform in their governance structures—have generated resistance and stretched the WTO to breaking point. Nothing demonstrates this better than the deadlock at the 2003 Cancun Ministerial Meeting to progress the Doha Round.

Opposition to (and support for) the WTO as a GPG spans the political spectrum. Two main categories can be considered—*dismantlers/ abolitionists* on the one hand and *supporters* on the other. These two broad categories can be sub-divided. Abolitionists can be of either a *left-developmentalist* persuasion (*pace* Focus on the Global South, Third World Network) or a *right nationalist* persuasion (*pace* conservative US think tanks such as the Heritage Foundation or the American Cause). Similarly, supporters can be of either a market privileging *neo-classical* persuasion (most academic economists, the Institute for International Economics, Evian Group) or of a more *interventionist Keynesian* persuasion (such as Oxfam or the World Development Movement).

---

governments. See also Verweij and Josling, 2003 and Howse and Nicolaidis, 2003.

[95] I should declare an interest here. I am a member of the Evian Group and supportive of its aims and agendas. But this does not mean that I am unaware of the structural and discursive barriers that are often in the way of other less well-supported civil society actors. Thus my point here is to illustrate the differential nature of access available to different groups at different points in the policy process and, more importantly, the way that this is determined.

The abolitionists in the anti-globalization movement, especially those who believe that the US is less concerned about the future of the multilateral trading system than building a series of bilateral and regional trading regimes in hub-and-spoke fashion, or a trade empire that mirrors the realities of its unrivalled military power, would dismantle the existing institutions altogether (see Bello, 2002; Jawara and Kwa, 2003; Peet, 2003). Similarly, there is little or no support for the general theory of GPGs amongst these groups. The American nationalists—or what others call the 'new sovereigntists' (Spiro, 2000) or 'new exceptionalists' (Hoffmann, 2003)—would equally shed few tears at the end of the WTO. These groups believe the US would be better off liberated from such intrusions. They would exercise an exit strategy.

Reformists, despite internal differences, resist the argument that the IMF and WTO are past their use by date. Woods (2003) argues that there have been serious attempts to make decision-making procedures more transparent and that there is still some momentum for reform. But internally generated reforms have focussed on an understanding of improving governance Type I rather than developing governance Type II. Change overtime in the organizational structures of the multilateral system has not exhibited the institutional learning or adaptive capacity required to takes account of the aspirations of the developing nations (and new actors from civil society) for greater inclusion in the decision-making processes. To the extent that there is 'system learning' taking place, the key question is whether it is quick enough.

The WTO may not yet have reached crisis point. But two out of its four ministerial meetings since its inception in 1995 have ended in breakdown. If attempts to restart the Doha Round in 2004 are not successful then questions about the longer-term viability of the WTO will increase. Rethinking the way forward will have to take place on two fronts: firstly and immediately, how simply to keep the Doha Round going. (This is a key issue at the time of writing this report in the run up to the Hong Kong Ministerial in December 2005). Secondly, and more importantly in the long run, how to restore the principled believe in multilateralism as a *modus operandi* for global problem solving remains a live issue.

A twofold strategy (assuming we ignore exit options) appears to be emerging. One strategy is to continue attempts to allow greater participation by non-governmental actors and increase the capabilities of the developing states in the inter-governmental process by concerted WTO-friendly capacity building. This route, from within a reformist camp, is slow and judged by results not to be particularly effective. A second strategy straddles both reformist and abolitionist camps. This is the increased pursuit of activities parallel to, but separate from, the existing multilateral inter-governmental process (see for example Houtart and Polet, 2001. This emerging approach is not without difficulties of its own. Like the first strategy, it is reformist, but in other ways very different. It is, in effect, an attempt to create a 'new multilateralism' for the 21st century, one that changes assumptions of global order and attempts to alter policy outcomes *from below*. It contrasts with what we might call the multilateralism of the 20th century, in which international institutions extended their remit geographically (by widening institutional membership), functionally (by deepening coverage of issues) and inclusively (by the cooption and socialisation of recalcitrant actors into the dominant neo-liberal market mode) *from the top*.

But reformists and dismantlers alike—albeit with different agendas—appreciate that if institutional change capable of addressing legitimate demands for accountability and representation of the smaller, but weaker members cannot be found, the continuance of the these institutions, and by extension, governance Type II, will become increasingly difficult to sustain. Increasing economic nationalism in the developing world will rub up against global liberal projects such as endeavours to develop GPGs in an increasingly strident and combative fashion. This emerging problem, from below if you like, is a major problem in its

own right, but it is inseparably linked to problems from above, and especially the question of a lack of self-reflexive political analysis on the part of both the scholarly and policy communities advancing the theory and practice of global public goods in an era when the commitment to procedural justice (embedded in the wider context of GGII) seems at best a secondary variable within the international economic policy making community.

The lack of reflexivity—and specifically a recognition of the difficulties presented by *political analysis rather than economic theory*—does, I would suggest, render several of the suggested reforms in the UNIDO project papers unworkable. Numerous observers and reports recommend a strengthening of the WTO Secretariat (Michalopoulos, 2005, p. 17-19) to increase its ability to provide what they consider to be GPGs (such as the effective operation of the dispute settlement mechanism (DSM), the access to trade related information and the formulation of independent policy suggestions (Michalopoulos, 2005; Staiger, 2004: 11-14; UNIDO, 2005: 76-83). All are sensible proposals, but without a more reflexive approach towards its own role, the Secretariat will still be considered largely the servant of the developed countries. If this legitimacy problem is not addressed the resources spent on strengthening the secretariats role would largely be wasted. Institutional legitimacy cannot be secured on the basis of technical competence alone. The legitimacy problem needs to be addressed before the secretariat can assume a greater role. Another way for the WTO to increase credibility towards the least-developed and developing countries could be to compliment their own analyses and reports with references to competing agencies (such as other international institutions, national and regional agencies, INGOs, NGOs). This would allow for increased policy dialogue, open up the space for currently marginalised voices and, most importantly enable advice-takers, to make more informed decisions.

8. Conclusion: Global Public Goods and Good Global Governance-A Way Ahead?

The financial crises of the late 1990s generated precisely the sorts of ‘distrust and animosity’ which Inge Kaul *et al* (1999: xxxv) saw as detracting from the possibilities for mutually beneficial cooperation at the international level. There was a generalised perception among both the Asian and Latin American policy communities and the populations at large, that they, not the developed world, have shouldered the negative externalities of global liberalisation. The rhetoric in industrialised countries about burden-sharing — the implication being that developing countries did not share the burdens of global public goods — was more than countered by perceptions in developing countries that the burdens of moral hazard, social dislocation and the impact of unfettered competition had been unloaded on precisely those economies and societies that were (and are) least equipped to deal with them. In an era of deregulated capital movement and the processes of financial change which brought us the hedge fund, pegged exchange rates and precipitous currency collapses, the notion of global burden-sharing adopted by the developed world was thought by many in the developing world to be putting the cart before the horse.

Thus the provision of public goods, such as stable exchange rates, adequate taxation systems, macroeconomic conditions conducive to the global competitiveness of private sectors, property rights, the rule of law, and so on, remain the principal residual roles of national states when their regulatory and welfare functions have been eroded by the process of economic globalization. But the policy challenge has changed in the context of the backlash against globalization since the end of the 20th century. The challenge is now how to *combine* the reactivation of the welfare and regulatory roles of states (as essential elements of a ‘public’ domain) with economic models that continue, more or less, to revolve around liberalized (and progressively globalizing) private sector activity (see Drache, 2001.) The provision of public goods must be understood not only as a mere technical problem but also as the political management of the public bads associated with social exclusion and market failure.

This report has traced the emergence of a policy debate on a global governance agenda that developed out of this period of crisis and aspired to provide for the collective provision of public goods at the global level. This agenda, it has been argued, was initially enveloped in the language of a Post-Washington Consensus as a response to the backlash that followed the financial crises that hit the emerging markets of Asia, Latin America and Central Europe from 1997. This change stemmed from a recognition within the international policy community that without the development of a more humanised and equity-driven development strategy for the world's poorer countries, global economic liberalization may have contained within it (and may still contain) the seeds of its own demise. This agenda represented a qualitative change from the pre-crisis days of the Washington Consensus era, but it has been constrained in the successful provision of what its sees as global public goods and good governance tools such as transparency and institutional effectiveness.

This report then attempted to offer a political explanation for the constraints on this new economic discourse. Globalist imaginings of governance, encapsulated in the in attempts to deliver a programme of global public goods of the kind outlined in the by the UNDP and UNIDO are limited in their practical applicability because of their limited understanding of the need for a multi-dimensional approach to global governance. The homogenizing political aspirations of the post Washington Consensus era—seeing governance as principally a technical problem solving endeavour—were suggested to be as flawed as the now ill-founded 'convergence' assumptions inherent in the prior Washington Consensus era. To suggest as much is not, however, to dismiss either the theory GPG or the GPG agenda. Indeed it as a central element of any serious attempt to create a contemporary system of global governance that can address many of the global public bads that beset the modern world order. Rather the report has attempted to contribute to this important theoretical and practical debate in two ways.

Firstly, it has tried to demonstrate the manner in which knowledge on GPGs (like all economic knowledge) is embedded in socio-political and indeed methodological-cum-philosophical contexts and that these contexts, frustrating as it might be for pure economic theory, can derail or impede the translation of good economic theory into successful policy practice. What is required, it is argued, is a broadening of the GPG discourse to acknowledge the importance of 'justice' and 'fairness' in the successful development of GPGs and the need for the GPG literature to engage more strongly with the insights to be gained from theorising in positive political philosophy that advance concrete ideas of justice and fairness arguments within this important sector of the global development debate.

If the economic theory and practice of GPGs is not embedded within this wider normative context, and especially those intermediate institutional GPGs meant to facilitate the liberalisation of trade (as opposed to pure GPGs such as clean air or fresh water) then discussion of the relationship between trade on the one hand and 'development', as more than simply a rationalist enterprise on the other, will continue to take place in 'parallel universes' (see Higgott and Weber, 2005: 444-46). Rationalist methodological-individualist theorising must be embedded in a wider context that also appreciates the salience of linking human actions and social relations with inter-subjective values and meanings (such as altruism) and social and political power relations (see Brohman, 1995 and McMichael, 2005).

Secondly, and more specifically, the report has demonstrated that much, although not all, GPG theory has a limited conception of governance—what I call governance Type I (GGI) and that for global public goods, especially institutions as intermediate public goods such as the WTO, to be effective they need a more sophisticated understanding of global governance that also includes what I have called governance type II (GGII). We now understand, at least better than we did prior to the financial crises of the late 20th century, that the divorce of markets from politics and institutions — or of the private from the public — is unsustainable. The spotlight in policy and academic debates has thus fallen on the role of public authorities

in minimising a raft of public bads associated with market failure, social exclusion and financial volatility, and on the public domain as an arena in which market and non-market social relationships can be effectively mediated. As yet, however, we have no way of up-scaling the public domain to the global level. The over-developed global economy is unfortunately matched by an under-developed global polity (see Ougaard and Higgott, 2002 and Higgott, 2006).

It is the development of a better understanding of GG II that will be central to the global governance agenda, and especially our ability to deliver global public goods, in the coming years. Much of the literature on global governance type 2 to-date (*pace* Held 2004) has represented an extension of the 'domestic analogy' to the extra-territorial, or global, context. That is, it extends the model of democratic accountability that we have come to understand and accept in the developed world to the global context. The weakness of the domestic analogy is that all but the most minimal of democratic constraints present within a domestic polity are absent at the global level. There is no serious institutionalised system of checks and balances at the global level. And, as we have seen in the early 21st century, those institutional constraints that do exist have little purchase on the behaviour of major powers, especially a hegemon, should they/it choose to ignore them. Nor is there in any meaningful sense a global public sphere in either a legal or a sociological sense.

Thus for GGII to be meaningful—by which I mean acceptable to a large group of principal actors in global politics and at the same time remain supportive of GGI–-it has to understand the fundamental differences between unrealisable conceptions of cosmopolitan global democratic governance on the one hand, and systems of accountability that can have real political purchase in global public policy on the other. Claims to 'legitimacy', or rather the absence of it in global public policy are frequently a euphemism for the rejection by the weaker actors of the asymmetrical structure of power in the contemporary global order. This is an unfortunate political reality. Exercises to enhance the accountability of global governmental actors that do not take seriously notions of procedural fairness will do nothing to fundamentally alter the structural nature of global power. This has several implications.

Firstly, we can expect that the nature of what constitute 'global public goods' will continue to be strongly contested. Second, and to be blunt, both the ability and political will of the US to offer self-binding hegemonic leadership, under-writing multilateralism as a principal institutional form of global governance, will continue to be problematic. Third, without reform, resistance amongst global 'rule takers' to hegemonic order will grow. Susan Strange (1987), like the distinguished economist, Charles Kindleberger, saw the US in 20th century as an 'altruistic hegemon' delivering multilateral public goods. In the early 21st century, as Bhagwati and Panagariya argue (2003: 13) 'we have a "selfish hegemon" delivering the opposite'.

Thus the next step in the enhancement of GGII needs to be modest. It will certainly not appeal to radical transformationalists. It will not deliver an ideal type global democracy (with universalist participation) predicated on the globalising of the domestic analogy. But it does recognise the ability to enhance, and in some instances consolidate, existing or nascent patterns of legitimacy and accountability. Legitimacy emanates from the extension of principles of justice and fairness to GGI. That is, the effective and efficient delivery of public policy based on best practice but also under-written by general norms of fairness described in the work of scholars such as Albin (2003a and b; Pogge, 2001 and Sen, 1999)). Legitimacy must be embedded in shared norms (usually of elites, but wherever possible of national publics, of the major state actors) and be under-written by judicial instruments (such as the ICC and increasingly the dispute settlement mechanism of the WTO). It should also be enshrined in what Albin (2003b: 382) calls 'fair negotiation practice'. This means negotiation practices that are not only efficient (GGI) but also open and inclusive. Enhancing our

capabilities in these areas should be at the core of a reformist agenda to enhance GGII. This is not abstract political theorising. Successful, albeit gradually enhanced, such activities will eventually cast massive and beneficial policy shadows.

References

Agnew, John (2005) *Hegemony: The New Shape of Global Power*, Philepdephia: Temple University Press.

Albin, Cecilia (1993) 'The Role of Fairness in Negotiation', *Negotiation Journal*, 9 (3): 223-44.

Albin, Cecilia (2003a) *Justice as Fairness in International Negotiation*, Cambridge: Cambridge University Press.

Albin, Cecilia (2003b) 'Negotiating international Cooperation: Global Public Goods and Fairness', Review of International Studies, 29 (3): 365-85.

Arce M., Daniel G. and Sandler, Todd, *Transnational public goods: Strategies and institutions*, Second revision, May 2000.

Beeson, Mark and Higgott, Richard (2005) 'Hegemony, Institutionalism and US Foreign Policy: Theory and Practice in Comparative Historical Perspective' *Third World Quarterly*, 26(6): 1173-88**.**

Bello, Walden (2004) *Deglobalization: Ideas for a New World Economy*, London: Zed Press.

Bhagwati, Jagdish (2004) *In Defence of Globalization*, Oxford: Oxford University Press,

Bhagwati, Jagdish and Panagariya, Arvind (2003) 'Bilateral Treaties are a Sham', *The Financial Times*, 14 July, 13.

Boyer, Robert and Daniel Drache (eds), (1996) *States Against Markets: The Limits of Globalization* (London / New York: Routledge, 1996).

Bull, Hedley (1977) *The Anarchical Society*, London: Macmillan.

Brassett, James and Higgott, Richard (2004) Building the Normative Foundations of a Global Polity, *Review of International Studies*, 30: 29-55.

Broad Robin and Cavanagh, John (1999) 'The Death of the Washington Consensus', *World Policy Journal*, 16 (3): 79–88.

Brohman, John (1995) 'Economism and Critical Silences in Development Studies: A Theoretical Critque of Neo-Liberalism', *Third World Quarterly*, 16 (2): 297-318.

Collier, Paul, *The International Public Goods Needed to Promote International Trade*, 19 August 2004. Commissioned by the International Task Force on Global Public Goods.

Cox, Robert (1999) 'Civil Society at the Turn of the Millennium: Prospects for an Alternative World Order', *Review of International Studies*, 25 (1).

Cutler, Claire Haufleur, Virginia and Porter, Tony, (1999) (eds.) *Private Authority and International Affairs*, New York: SUNY Press.

Dieter, Heribert and Higgott, Richard (2003) 'Exploring Alternative Theories of Economic Regionalism: From Trade to Finance in Asian Co-operation', *Review of International Political Economy*, 10 (3) 2003: 430-54.

Drache, Daniel (2001) *The Market and the Public Domain: Global Governance and the Asymmetry of Power*, London: Routledge.

Edwards, Michael (2001) 'Introduction', in Michael Edwards and J. Gaventa, (eds) *Global Citizen Action*, Boulder CO: Lynn Reinner.

Elliott, Kimberly and Hufbauer, Gary (2002) 'Ambivalent Multilateralism and the Emerging Backlash: The IMF and the WTO', in Patrick Stewart and Shephard Foot, Rosemary, MacFarlane, Neil, and Mastanduno, Michael, (2003) 'Instrumental Unilateralism in US Foreign Policy' in Foot *et. al*, (eds) *US Hegemony and International Organisations*, Oxford: Oxford University Press.

Forman, (2002) (eds) *Multilateralism and US Foreign Policy: Ambivalent Engagement*, Boulder, CO: Lynn Reinner.

English, John, Ramesh Thakur and Andrew Fenton Cooper (eds), *A Leaders 20 Summit: Why, How, Who and When?* Tokyo, United Nations University Press, 2005.

Fine, Ben, (1998) 'The Triumph of Economics: Or, 'Rationality Can Be Dangerous to Your Reasoning' in James G. Carrier and Daniell Miller (eds) *Virtualism: A New Political Economy*, New York: Berg, 1998.

Fine, Ben, (1999) 'The Developmental State is Dead—Long Live Social Capital?', *Development and Change*, 30 (1).

Finnemore, Martha (1996) 'Norms, Culture and World Politics: Insights from Sociology's Institutionalism', *International Organisation*, 50(2): 887-918.

Foot, Rosemary, MacFarlane, Neil, and Mastanduno, Michael, (2003) 'Instrumental Unilateralism in US Foreign Policy' in Foot *et. al*, (eds) *US Hegemony and International Organisations*, Oxford: Oxford University Press.

Garrett, Geoffrey, 'Global Markets and National Politics: Collision Course or Virtuous Circle' *International Organisation*, 50:3 (1998).

Gordenker, Leon And Weiss, Thomas, (1995) 'NGO Participation in the Global Policy Process', *Third World Quarterly*, 16:3.

Hamilton, Colleen and Whalley, John (1989) 'Coalitions in the Uruguay Round', Weltwirtschaftliches Archiv 125 (Winter): 547-62.

Held, David (2004) Global Covenant: The Social Democratic Alternative to the Washington Consensus.Cambridge: Polity.

Held, David, et al, (2000) Global Transformations: Politics, Economics and Culture, Cambridge: Polity Press.

Higgott, Richard (1998) 'The International Politics of Resentment: Implications of the Economic Crisis in East Asia ', *New Political Economy*, 3 (3): 333-56.

Higgott, Richard (1999) 'Economics, Politics and (International) Political Economy: The Need for a Balanced Diet in an Era of Globalisation', *New Political Economy*, 4(1): 23-36.

Higgott, Richard (2000) 'Contested Globalization: the Changing Context and Normative Challenges', *Review of International Studies*, 26 (5) 2000: 131 - 154.

Higgott, Richard (2001) 'Economic Globalization and Global Governance: Towards a Post Washington Consensus?' in Volker Rittberge (ed) *Global Governance and the United Nations System*, Tokyo: United Nations University Press.

Higgott, Richard (2005) 'Economic Regionalism in East Asia: Consolidation with Centrifugal Tendencies', in Richard Stubbs and Geoffrey Underhill (eds) *Political Economy and the Changing Global Order*, Oxford: Oxford University Press.

Higgott, Richard (2006) 'International (Political) Organisation(s)', in Rod Rhodes, Sarah Binder and Bert Rockman (eds) The *Oxford Handbook of Political Institutions*, Oxford: Oxford University Press.

Higgott, Richard and Weber, Heloise (2005) 'GATS in context: Development, An Evolving *Lex Mercatoria* and the Doha Agenda', Review of International Political Economy, 12 (3): 434-55.

Higgott, Richard and Nicola Phillips, (2000) 'Challenging Triumphalism and Convergence: The Limits of Global Liberalisation in Asia and Latin America', *Review of International Studies*, 26 (3): 359-79.

Higgott, Richard, Geoffrey Underhill and Andreas Bieler (1999) (eds) *Non-State Actors and Authority in the Global System*, London: Routledge, 1999.

Higgott, Richard and Andrew Cooper, (1990) 'Middle Power Leadership and Coalition-Building in the Global Political Economy: A Case Study of the Cairns Group and the Uruguay Round' *International Organisation*, 44 (4): 589-632.

Hoffmann, Stanley (2003) *American Exceptionalism: The New Version*, Harvard University: Weatherhead Centre for Science and International Affairs, 1-17.

Houtart, Francois and Polet, Francois (2001) (eds) *The Other Davos: The Globalization of Resistance to the World Economic System*, London: Zed Books.

Howse, Robert and Nicolaidis, Kalypso (2003) 'Enhancing WTO Legitimacy: Constituionalization or Subsidiarity, *Governanc*e, 16 (1): 73-94.

Jacquet, Pierre and Marniesse, Sarah, *Financing Global Public Goods: Issues ands Prospects*, Summary, 31 August 2004. Commissioned by the International Task Force on Global Public Goods.

Jervis Robert (1988), 'Realism, Game Theory and Cooperation', *World Politics*, 40:3.

Jawara, Fatoumata and Kwa, Aileen, (2003) *Behind the Scenes at the WTO: The Real World of Trade Negotiations*, London: Zed Books.

Kanbur, Ravi, *IFI's and IPG's: Operational Implications for the World Bank*, June 2002.

Kanbur, Ravi, *Cross-Border Externalities, International Public Goods and Their Implementation for Aid Agencies*, March 2001.

Kaul, Inge, Grunberg, Isabelle and Stern, Marc, (1999) (eds) *Global Public Goods: International Cooperation in the 21st Century*, New York: Oxford University Press for the UNDP.

Kaul, Inge, Pedro Conceicao, Katell Le Goulven and Ronald U. Mendoza, (2003) (eds), *Providing Global Public Goods: Managing Globalization* (New York, Oxford University Press.

Keohane, Robert, (1984) *After Hegemony: Cooperation and Discord in the World Political Economy*, Princeton: Princeton University Press.

Keohane, Robert, (1989) *International Institutions and State Power: Essay in International Relations Theory*, Boulder Co: Westview Press.

Keohane, Robert, (2004) 'Global Governance and Democratic Accountability' in David Held and Mathias Konig Archibugi, *Taming Globalization: Frontiers of Governance*, Cambridge: Polity Press.

Krasner, Stephen, (1999) *Sovereignty: Organised Hypocrisy*, Princeton: Princeton University Press.

Krugman, Paul (1995) 'Dutch Tulips and Emerging Markets', *Foreign Affairs*, 14 (1): 28–9;

Krugman, Paul (1999) *The Return of Depression Economics*, London: Allen Lane The Penguin Press.

Lynch, Cecilia (1998) 'Social Movements and the Problem of Globalisation', *Alternatives,* 23 (2)

Martin, Lisa (2004) *Multilateral Organisations after the US-Iraq War of 2003*, Harvard University, Weatherhead Centre for International Affairs, August: 1-17.

McClosky, Deidre (1983 and 1998) *The Rhetoric of Economics*, Madison: University of Wisconsin Press.

McMichael, Philip (2005) 'Globalization', in T. Janoski, R. Alford, A. M. Hicks and M. A. Schwartz (eds) *A Handbook of Political Sociology: Civil Societies and Globalization,* Cambridge: Cambridge University Press.

Michalopulos, Constantine, *WTO – An Assessment*, February 2005. Commissioned by the International Task Force on Global Public Goods.

Milner, Helen (1997) *Interests, Institutions and Information: Domestic Politics and International Relations*, Princeton: Princeton University Press.

Mohan Rao, J. (1999) 'Equity in a Global Public Goods Framework', in Kaul, Inge, Grunberg, Isabelle and Stern, Marc, (1999) (eds) *Global Public Goods: International Cooperation in the 21st Century*, New York: Oxford University Press for the UNDP.

Naim, Moise (2000) 'Washington Consensus or Washington Confusion, *Foreign Policy*, 118 (Sping).

Narliker, Amrita and Tussie, Diana (2004) 'The G20 at the Cancun Ministerial Meeting: Developing Countries and their Evolving Coalitions', *The World Economy* 27 (7): 947-66.

O'Brien, Robert et al, (2000) *Contesting Global Governance: Multilateral Economic Institutions and Global Social Movements*, Cambridge: Cambridge University Press.

Olson, Mancur, (1982) The Rise and Decline of Nations: Economic Growth, Stagflation and Social Rigidities, (New Haven: Yale University Press).

Ougaard, Morten and Higgott, Richard (2002) (eds) *Towards a Global Polity?* London: Routledge.

Page, Sheila, (2003) *Developing Countries: Victims or Participants Their Changing Role in International Negotiations*, London Overseas Development Institute.

Peet, Richard (2003) Unholy Trinity: The IMF, World Bank and the WTO, New York, Zed Books.

Pempel, T. J. (2005) 'Firebreak Against Globalization: East Asia Institutionalizes its Finances', *Conference on Regionalization and the Taming of Globalization: Economic, Political, Security and Governance Issues*, University of Warwick: Centre for the Study of Globalisation and Regionalisation, 26-28 October.

Phillips Nicola and Richard Higgott (1999) *Global Governance and the Public Domain: Collective Goods in a 'Post-Washington Consensus' Era*, Centre for the Study of Globalisation and Regionalisation, University of Warwick, www. csgr.org.

Pogge, Thomas (2001) (ed) *Global Justice*, Oxford: Blackwells.

Polanyi, Karl (1944) *The Great Transformation: The Political And Economic Origins Of Our Time*, (Boston: Beacon Press, 1944).

Putnam, Robert (1988) 'Diplomacy And Domestic Politics: The Logic Of Two Level Games', *International Organisation*, 42 (3): 427-60.

Rawls, John (1971) *A Theory Of Justice*, Cambridge Mass: The Belknap Press.

Reinecke, Wolfgang, H (1998) Global Public Policy: Governing Without Government, Washington: Brookings.

Rodrik, Dani, (1997) *Has Globalization Gone Too Far?* Washington: Institute for International Economic.

Rodrik, Dani (2002) 'Feasible Globalisations', http://ksghome.harvard.edu/ ~.drodrik.

Rodrik, Dani (2002a) 'After Neoliberalism, What?' *After Neoliberalism: Economic Policies that Work for the Poor*, Conference sponsored by the New Rules of Global Finance Coalition, Washington DC: May 23-24.

Rollo, Jim (2003) 'Reviving the WTO Doha Development Agenda: Eight Modest Proposals', Lausanne: Evian Group, December, http://www.eviangroup.org/p/369.pdf.

Rubin, J.Z and Brown, B (1975) *The Social Psychology of Bargaining and Negotiation*, New York: The Academic Press.

Ruggie, John G (1995) 'At Home Abroad, Abroad at Home: International Liberalisation and Domestic Stability in the New World Economy, *Millennium: Journal of International Studies,* 24 (3): 507-26.

Ruggie, John G (1982) 'International Regimes, transactions and change: embedded liberalism in the post war economic order', *International Organisation,* 36 (2).

Ruggie, John, G. (1993) (ed) 'Multilateralism: the Anatomy of an Institution', in Ruggie, (ed) *Multilateralism Matters: The Theory and Praxis of an Institutional Form*, New York: Columbia University Press.

Sachs, Jeffrey 'Global Capitalism: Making it work', *The Economist*, 12 September 1998.

Sandler, Todd, (2005) *Regional Public Goods and Regional Cooperation*, January.

Scholte, Jan Aart, (2003) *Democratising the Global Economy: The Role of Civil Society*, University of Warwick, Centre for the Study of Globalisation and Regionalisation. A Report for the Ford Foundation, at www.csgr.org/ EnglishReport.pdf.

Scholte, Jan Aart (2000) *Globalisation: A Critical Introduction*, Basingstoke, Palgrave.

Sen, Amartya, (1977) 'Rational Fools: A Critique of the Behavioural Foundations of Economic Theory', *Philosophy and Public Affairs,* 6:4.

Sen, Amartya (1999) *Development as Freedom*, Oxford: Oxford University Press.

Hoffmann, Stanley (2003) *American Exceptionalism: The New Version*, Harvard University: Weatherhead Centre for Science and International Affairs, 1-17.

Secretariat of the International Task Force on Global Public Goods, *Meeting Global Challenges: International Cooperation in the National Interest*, WP, 14 January 2005

Slaughter, Anne Marie (2004) *A New World Order*, Princeton: Princeton University Press.

Spruyt, Hendrik (1994) *The Sovereign State and its Competitors*, (Princeton: Princeton University Press, 1994).

Staiger, Robert W., *Report on the International Trade Regime for the International Task Force on Global Public Goods*, 5 February 2004.

Stewart, Patrick (2002) 'Multilateralism and its Discontents: The Causes and Consequences of US Ambivalence', in Patrick Stewart and Shepard Forman, (eds) *Multilateralism in US Foreign Policy: Ambivalent Engagement*, Co: Lynn Reinner.

Strange, Susan, (1987) 'The Persistent Myth of Lost Hegemony', *International Organisation*, 44 (4): 551-75.

Stiglitz, Joseph (1998) 'More Instruments and Broader Goals: Moving Toward the Post-Washington Consensus', 1998 WIDER Annual Lecture, Helsinki, 7 January from http://www.worldbank.org/ html/extdr/extme/js-010798/wider.htm.

Verweij, Marco and Josling, Timothy. (2003) 'Deliberately Democratizing Multilateral Organization', *Governance*, 16 (1): 1-22.

Walker, R. B. J (1993) Inside/Outside: International Relations as Political Theory, Cambridge: Cambridge University Press.

Watson, Iain, (2002) Rethinking the Politics of Globalisation: Theory, Concepts and Strategy, Aldershot: Ashgate.

Williamson, John (1990) 'What Washington Means by Policy Reform', in John Williamson (ed.), *Latin American Adjustment, How Much Has Changed?* Washington: Institute for International Economics.

Woods, Ngaire (2001) 'Who should govern the world economy: the challenges of glolbalisation and governance', *Renewal*, 9 (2/3): 73-82.

Woods, Ngaire and Narliker, Amrita (2001) 'The WTO, the IMF and the World Bank', Accountable to Whom? *International Social Science Journal*, 170 (November).

Wolf, Martin (2004) *Why Globalization Works*, New Haven: Yale University Press.

World Bank Development Committee, *Poverty Reduction and Global Public Goods: Issues for the World Bank in Supporting Global Collective Action*, DC/2000-16, Washington DC, 2000.

UNIDO, *UNIDO project on International Public Goods for Economic Development*, Vienna, 2005.

Global Public Goods and Global Governance: Highlights and Some Policy Recommendations

Richard Higgott
Centre for the Study of Globalisation and Regionalisation
University of Warwick

1. Highlights

Why does sound economic theory with important policy implications—such as that advanced in the UNIDO project on global public goods—invariably prove difficult to implement in practice? Such economic theory often demonstrates little or no appreciation of the political constraints likely to work against policy implementation. While economic assumptions about what constitutes good governance in the 21st century are becoming increasingly technically sophisticated, especially for the provision of public goods, they often remain oblivious to the nature of the 'politics' that can and will derail them, no matter how theoretically sound and policy relevant.

In short: Economics, and even the important and emerging sub discipline of political economy, is not comfortable with 'politics'. Political economy as what we might call a 'theory of choice under constraint', using game theoretic models, may be able to offer important insights into issues such as scarcity and the role of institutions in the policy process. It is less comfortable with questions of ideological contest, power, political struggle, representation, legitimacy and accountability; all of which can make or break the implementation and acceptance of a given policy.

That discomfort sets the stage for discussing global governance, an over-used and under-specified concept. The search for meaningful use reflects despair over the mismatch between the over-development of the global economy and the under-development of a comparable global polity. The demand for research on global governance has also followed the recognition that sovereignty is more a relational and relative question of responsibility rather than an absolute concept. One result of this is a dramatic change in the role of international law.

(Global) governance is more than a technical and managerial problem

The demand for global and regional governance has become increasingly complex. And the role of multi-level governance structures in key policy areas, enhanced by the issue-specific and regional specialised agencies, has grown dramatically. Yet in some key areas of the global cooperative agenda, in both the economic and the security domain, we appear to be witnessing the deterioration of collective governance capacity and resistance to its enhancement. For an increasing number of actors, global governance questions resist the technocratic fix and pose major political and ethical questions about the appropriate manner in which policy is made, decisions are taken and implemented and resources are distributed.

This is an issue for the theorist as much as the practitioner. Indeed, a problem with much of the contemporary analysis of the demand for governance, beyond the confines of the state, is that it is often posed as a technical and managerial problem. This approach removes any

notion of politics or ethics from problem solving. Governance assumes the mantle of an ethically neutral activity—rather similar to the manner in which we used to understand the notion of public administration within states throughout much of the 20th century.

But actors in this process are not ethically neutral and dispassionate. They are players with political agendas. This is so whether we include the relevant international institutions (UN and alliances in the security domain, the IMF in the international financial arena; the WTO, regional and bilateral institutional arrangements in the trade arena; the World Bank in the context of development) or those ever more visible non state actors (such as MNCs, NGOs) and various advocacy coalitions and global public policy networks such as the Davos Forum or the emerging counter voices to be found at the Global and European Social Forums or what is generically thought of as the 'alter-globalization' movement.

The financial crises of the late 1990s generated precisely the sorts of 'distrust and animosity' that detracts from mutually beneficial cooperation at the international level. There was a perception among both the Asian and Latin American policy communities, indeed populations, that they, not the developed world, had shouldered these negative externalities of global liberalization. The rhetoric in industrialised countries about burden-sharing — the implication being that developing countries did not share the burdens of global public goods — was more than countered by perceptions in developing countries that the burdens of moral hazard, social dislocation and the impact of unfettered competition had been unloaded on precisely those economies and societies that were (and are) least equipped to deal with them. In an era of deregulated capital movement and processes of financial change which brought us the hedge fund, pegged exchange rates and precipitous currency collapses, the notion of global burden-sharing adopted by the developed world was thought by many in the developing world to be putting the cart before the horse.

Broadening the discourse

Knowledge on GPGs (like all economic knowledge) is embedded in socio-political and indeed methodological-philosophical contexts and these contexts, frustrating as it might be for pure economic theory, can derail or impede the translation of good economic theory into successful policy practice. What is required is a broadening of the GPG discourse to acknowledge the importance of 'justice' and 'fairness' in the successful development of GPGs and the need for the GPG literature to engage more strongly with the insights to be gained from theorising in positive political philosophy that advance concrete ideas of justice and fairness arguments within this important sector of the global development debate.

If the economic theory and practice of GPGs is not embedded within this wider normative context, and especially those *intermediate* institutional GPGs such as the WTO meant to facilitate the liberalisation of trade (as opposed to pure GPGs such as clean air or fresh water) then discussion of the relationship between trade on the one hand and 'development', as more than simply a rationalist enterprise on the other, will continue to take place in 'parallel universes'. Theorizing must be embedded in a wider context that also appreciates the salience of linking human actions and social relations with values and meanings (such as altruism) and social and political power relations.

Broadening the conception of governance

Much, although not all, GPG theory has a limited conception of governance. Global governance is no administrative 'science' to accompany economic 'science'. It is a contested political process. Global *governance* (essentially economic governance) is those arrangements—across a spectrum from weak to strong in influence—that various actors attempt to put in place to advance, manage, retard, control, regulate or mitigate economic globalization. It has two types:

Global governance 1*—efficient negotiation processes.* The enhancement of effectiveness and efficiency in the delivery of global public goods through collective problem solving and underwritten by a technocratic-managerial elite—with international institutions increasingly important as instruments of transaction cost reduction, policy coordination and compliance for the mitigation of the risks in an open and deregulated global economy.

Global governance 2*—open and fair negotiation processes including* the emergence of systems of representation and accountability allowing for the enhanced legitimisation and democratization of policy making in global, as opposed to national, contexts. As the role of the nation state as a vehicle for democratic engagement becomes more problematic, the clamour for democratic engagement at the global level has become stronger.

This twofold definition is central to any hope of understanding the prospects to develop a working system of global governance for the efficient and effective provision of public goods in the 21st century (GG1). This question concerns the degree to which private, or 'non-state' sector or non-state actors—my preferred terms—are meaningfully involved in it. Without meaningful involvement by non-state sector, writ large, then global governance as a transparent, accountable and representative process of decision-making (GG2) is always going to lack legitimacy and, as a consequence, also lack long term sustainability.

In sum, current understandings of governance, exhibited in the work on public goods, have little or no understanding of 'politics as ethics' and 'politics as struggle' for accountability, representation and legitimacy. Neither does the GPG literature have much feel for the relationship between the advocacy and enhancement of public goods on the one hand and questions of state sovereignty and regime maintenance in the developing world that some GPGs may undermine on the other.

GPGs: Towards a New Development Paradigm?

What the scholar of international relations has long recognised, in a manner that much of the literature of public goods fails to appreciate, is that the problem of collective action, and an absence of authoritative structures at the global level, is not a technical economic shortcoming, but a political problem. The provision, or not, of GPGs is often a highly contested political problem that cannot not be dealt with exclusively in economic terms. GPGs needs to be seen as a deliberate policy response to the growing concerns about the negative externalities of market liberalism and their impact on support for globalization that developed in the Washington Consensus era and that needed to be addressed in the Post-WC era. In this context, the debate over GPGs should be seen as part of a much wider theoretical and political debate over the nature of 'global governance'.

In contrast to the Washington Consensus days, a visible awareness among policy communities of a need for a new 'development paradigm' has developed and one that is more reflective of the centrality of *politics* in global and domestic processes of economic change. The Post Washington Consensus purported to recognise what had long been treated as axiomatic in many developing countries; that the divorce of politics from the dominant economistic understandings of globalization was both conceptually unsound and socially destructive. The understanding of governance contained in the Post Washington Consensus, remained underwritten by: (i) a managerialist ideology of effectiveness and efficiency of governmental institutions and (ii) an understanding of civil society based on the mobilisation and management of social capital rather than one of representation and accountability and certainly not as a site of resistance.

While the Post Washington consensus represented a sharp departure from the more narrowly economistic and technocratic decision-making models. It should be seen as an attempt to institutionally embed, and even maybe humanise, the earlier elements of the Washington Consensus. The principal element of the PWC was the development of an understanding,

amongst leading policymakers of the international economic institutional policy community, of the importance of the need for a stronger 'governance dimension' to the international economic order. To the original buzzwords of liberalization, deregulation and privatization were added those of civil society, capacity building, governance, transparency, a new international economic architecture, institution building, safety nets, global compacts and of course 'global public goods', which collectively fell under the increasingly popular hosting metaphor of global governance.

If the earlier period was an attempt to create a set of global *economic* norms to be accepted by entrants to the global economy under the guidance of the existing international institutions, then the current era, at least prior to 9/11 and the securitisation of much global economic policy, appeared to construct support for a new set of *socio-political* norms.

But, the Post Washington Consensus suffered from the same failings as its predecessor. It was no less universalising, and attempted to be no less homogenising, than the Washington Consensus framework. The 'universalisation' of a PWC agenda still implied the universalisation of an understanding of governance based on efficiency and effectiveness, in which democratic accountability remained a secondary variable. To the extent that the international institutions recognised that resistance was a legitimate part of the equation, it was something to be overcome by 'good governance', not something that is a perpetual part of the process. This agenda allowed little or no provision for the extension and expansion of 'democratic' participation. *Closing the 'participation gap' by incorporating non-state or 'civil society' actors is not a solution.* This is for at least four reasons.

First, despite their visibility, NGOs and other non-state actors cannot approximate the legitimacy of the national state as the repository of sovereignty and policy-making authority, nor its monopoly over the allegiance of the society(ies) the national state is supposed to represent.

Second, despite the appeal of expanding the parameters of participation to include these important actors, it is widely recognised that they are often less democratically accountable than the states and inter-state organizations they act to counter and invariably less democratic in their internal organization than their outward participatory activities would suggest.

Third, implementation of resolutions taken in 'global' negotiations, or often by international organizations, remains primarily the function of national states, or at the very least depends on their compliance and complementary activity at the national level.

For many policy elites in the developing world, the attempt to introduce a dialogue with non-state actors represented an unwanted alternative to those institutional policy elites a larger voice in the global policy debates.

Without reform of the conceptions of governance at the global level successfully implementing GPGs is unlikely to be achieved. The prospect for reform in the absence of constructive global leadership is identified as a major problem impeding the development of widely acceptable global public goods strategies. It is only if we can move into a serious discussion about responsiveness, representation and accountability that the discussion about governance is going to become anything other than a dialogue of the deaf between the rule makers and the rule takers. Global governance questions pose major political and ethical questions about the appropriate manner in which policy is made, decisions are taken and implemented and resources are distributed.

For the global policy community, driven largely by economic theory, the delivery of public goods via collective action problem solving leads to what I call *global governance Type I (GGI).* By contrast, scholarly interest, driven by normative (often cosmopolitan) political

theory and focussing on issues of institutional accountability, greater citizen representation, justice and the search for an as yet to be defined global agora leads to a rather loose *global governance Type II (GGII).* Without the enhancement of GG Type II, the prospects of the continuance of GG Type I economic multilateralism ('multilateralism from above') will become unsustainable.

This twofold definition is central to any hope of understanding the prospects to develop a working system of global governance as the efficient and effective provision of public goods in the 21st century (GGI). Without meaningful involvement by the private sector (non-state actors) then global governance as a transparent, accountable and representative process of decision-making (GGII) is going to lack legitimacy and as a consequence lack long-term sustainability. Global governance as effective and efficient problem solving (especially via the provision of global public goods) and global governance as enhanced accountability are not for de-linking. If GPGs are a principle manifestation of GGI then there prospects of successful acceptance and implementation are weakened in the absence of GGII.

Incentives for collective action? Governance is complicated by the reality that those parts of the world most in need of the provision of public goods are least able to engage in the proactive kinds of public policy required to provide them. 'Top-down perspectives' inherent in both the global governance agenda and the PWC fail to capture the 'bottom up' complexities of the collective provision of public goods. Incentives to participate are maximised by perceptions of the normative fairness and equity of the system itself. When viewed through the lenses of the developing countries, these appear less than optimal. Moreover, the classic 'logic of collective action' leads to a conclusion that incentives for developing countries to engage in such collaborative activities are unlikely to be compelling.

Given the free-rider problems inherent in collective action, it is only in the presence of significant 'selective incentives' that the cost-benefit ratio of cooperation will be perceived as favourable to the actors involved. Talk about constructing a 'strong network of global participants' fails to take into account *both* the moral hazard question and the absence of selective incentives, both of which will militate against the participation in collective action of developing countries. As a result, the incentives for participation in 'governance' measures are reduced not only by the constraints on the commitment of the necessary resources but also by the differential nature of the burdens of positive and negative externalities.

GPGs and development aid. Based on the premise that development in least-developed and developing countries will benefit all by increasing aggregate welfare overall at the global level through the market mechanisms, the GPG theory provides a sound economic rationale for North to South assistance and aid. In short, the provision of GPGs will generate welfare for all, and every government and population hence has an economic (self-) interest in securing sufficient provision of the various public goods. As such, the GPG arguments are used to provide justification to the 'aid-fatigued' populations of the North for continued assistance to least-developed and developing countries. In justifying aid by the North to the South via the provision of GPGs, the argument is based on a 'global' conception of welfare. In spite of global outbursts of compassion such as those following the Boxing Day tsunami in 2004, the political outlook of the average citizen, is still largely restricted to the state in which she or he lives.

Since economics does not function in a vacuum and the political realities of the day are far more complex and encompassing than economic models either reveal or assume is detrimental to theoretical reasoning as well as practical policy making contexts to marginalise political and ethical systems of justification. This logic would seem to preclude any issue without cross-border effects from inclusion on the international agenda. Since the GPG efforts seem destined to take over many of the traditional aid initiatives, this could have ethical and

developmental consequences as well as negative outcomes for communities in a crisis confined within their own borders.

While the provision of GPGs and aid to specific states can be separated conceptually, this segregation is much harder in overall development practice. As UNIDO notes:

> '…aid refers to international equity problems and its purpose is to eradicate poverty; therefore it should base its action on the doctrinal realm of distribution; while, by contrast, public goods supply refers to the correction of market failure, seeking to arrive at better efficiency levels by focusing its analysis of the wide doctrinal field of economic allocation' (UNIDO, 2005: 55).

Furthermore, it is clear that some funding is currently being diverted from aid to the provision of GPGs,[1] albeit the exact share in question remains a matter of debate.[1] This diversion of funds and the mission creep into aid and development by international organisations such as the WTO designed with somewhat different purposes,[1] could eventually lead to a greater detraction from the assistance given by the developed to the developing and least-developed countries. In spite of the mixed track record of traditional aid initiatives the diversion of funds away from the developing world has yet to be proved to be the right strategy. Since GPGs are supposed to benefit all and the rationale for their justification is self-interest, pure aid and development efforts could potentially suffer greatly from the institutional reform and reallocation that may result from the ascendancy of GPG argumentation. For instance, considering the current unsatisfactory representation of developing countries in the decision-making bodies of the IMF,[1] it cannot simply be assumed that the developmental aspect would be outweighed by the 'benefit-for-all' element of GPGs in the re-allocation of resources within institutions.

Lack of state capacity and normative 'political will' in developing countries.

The combination of two conditions militates against the meaningful engagement of many developing countries in the international collaboration for the provision of public goods. First, the debate over what constitute public goods have to date largely been conducted in arenas which developing country influence over the debates in the International Economic Institutions is at best limited.

Second, the dynamics of multilateral collective action that had been seen to be emerging throughout the early 1990s at both global and regional levels has been altered in important ways under the impact of financial crises in Asia and Latin America. In developing countries, the priority has become one of minimising 'public bads' rather than supplying public goods. Public policy aimed at the minimisation of public bads tends to be a reactive process, which states pursue mostly on an individualist rather than collective basis. State policy making elites bruised and humiliated by the financial crises of the last century are clearly conscious of their diminished sovereignty in the new one. They remain cognisant of the need to control the public bads that emanate not only from the crises but also from the effects of technology on cultures, eco-systems and the international order (especially the spread of drugs, crime, terrorism, disease and pollution). They do not appear willing for the further erosion of sovereignty that would be required to tackle these problems collectively. Hence, the sovereignty issue overrides consideration of delivering global public goods in many parts of the developing world. This has seriously eroded the capacities and the willingness of developing countries to provide public goods and participate in global public goods agendas. The financial crisis did not constitute the sorts of 'common interests' that were considered to be the basis for global collective action.

Up-scaling the public domain to the global level

We now understand, at least better than we did prior to the financial crises of the late 20th century, that the divorce of markets from politics and institutions — or of the private from the

public — is unsustainable. The spotlight in policy and academic debates has thus fallen on the role of public authorities in minimising a raft of public bads associated with market failure, social exclusion and financial volatility, and on the public domain as an arena in which market and non-market social relationships can be effectively mediated. As yet, however, we have no way of up-scaling the public domain to the global level. The over-developed global economy is unfortunately matched by an under-developed global polity.

It is the development of a better understanding of GG2 that will be central to the global governance agenda, and especially our ability to deliver global public goods, in the coming years. Much of the literature on it has so far represented an extension of the 'domestic analogy' to the extra-territorial, or global, context. That is, it extends the model of democratic accountability that we have come to understand and accept in the developed world to the global context. The weakness of the domestic analogy is that all but the most minimal of democratic constraints present within a domestic polity are absent at the global level. There is no serious institutionalised system of checks and balances at the global level. And, as we have seen in the early 21st century, institutional constraints that do exist have little purchase on the behaviour of major powers, especially a hegemon, should they choose to ignore them. Nor is there a meaningful global public sphere in either a legal or a sociological sense.

Thus for GG2 to be meaningful—acceptable to a large group of principal actors in global politics and at the same time remain supportive of GG1–-there has to be understanding of the fundamental differences between unrealisable conceptions of cosmopolitan global democratic governance on the one hand, and systems of accountability that can have real political purchase in global public policy on the other. Claims to 'legitimacy', or rather the absence of it in global public policy, are frequently a euphemism for the rejection by the weaker actors of the asymmetrical structure of power in the contemporary global order. This is an unfortunate political reality. Exercises to enhance the accountability of global governmental actors that do not take seriously notions of procedural fairness will do nothing to fundamentally alter the structural nature of global power.

This has several implications. First, we can expect that the nature of what constitute 'global public goods' will continue to be strongly contested. Second, and to be blunt, both the ability and political will of the US to offer self-binding hegemonic leadership, under-writing multilateralism as a principal institutional form of global governance, will continue to be problematic. Third, without reform, resistance amongst global 'rule takers' to hegemonic order will grow. Susan Strange and Charles Kindleberger, saw the US in 20th century as an 'altruistic hegemon' delivering multilateral public goods. In the early 21st century, as Bhagwati and Panagariya argue, 'we have a "selfish hegemon" delivering the opposite'.

Thus the next step in the enhancement of GG2 needs to be modest. It will certainly not appeal to radical transformationalists. It will not deliver an 'ideal-type' global democracy (with universalist participation) predicated on globalising or upscaling the domestic analogy. But, it does recognise the ability to enhance, and in some instances consolidate, existing or nascent patterns of legitimacy and accountability. Legitimacy must be embedded in shared norms (usually of elites, but wherever possible of national publics, of the major state actors) and be under-written by judicial instruments (such as the ICC and increasingly the dispute settlement mechanism of the WTO). It should also be enshrined in negotiation practices that are not only efficient (GG1) but also open and inclusive (GG2). Enhancing our capabilities in these areas should be at the core of a reformist agenda to enhance GG2. This is not abstract political theorising its core concerns cast massive policy shadows. The key issue is the degree to which these shadows can be positive or negative.

At the core of any chance for enhancing GG2 remain states as actors and traditional instruments of diplomacy, especially multilateralism, that have been marginalised in recent years. Multilateralism as an instrument for generating legitimacy in the 21st century is, as

Robert Keohane notes (2005) ‘contingent’. Multilateralism does not exist prior to states. But, states are not the only actors and their legitimacy stems from the support of the people they purport to serve. Legitimacy is a ‘contested concept’ with many differing understandings (see Clark, 2005). In order to have an appreciation for the prospects of the successful implementation of a range of GPGs we have to be clear about that of which we speak. Hence, we should adopt a twofold understanding of legitimacy as both a normative and a sociological concept as follows:

‘[N]ormatively, an institution is legitimate when its practices meet a set of standards that have been state and defended. … In the sociological sense, legitimacy is a matter of fact. An institution is legitimate when it is accepted as, and worthy of being obeyed, by relevant audiences. When the relevant audiences believe in a particular normative theory, normative legitimacy tends to coincide with sociological legitimacy (Keohane, 2005: 2).

This is, of course, a very static view of legitimacy and one that may be less in keeping with the 21st century than the 20th. However, using a definition such as this allows us to ask hard questions about the legitimate status of an intermediate institutional global public good such as the WTO for example. Is it, and its actions, legitimate? We may answer ‘absolutely so’ if we can answer both the normative and the sociological question in the affirmative. The answer is ‘only partially so’ if we can only answer in the affirmative to the normative component of the definition of legitimacy. In the first instance, we see the existence of GG1 and GG2. In the second instance, we see only the existence of GG1. But, it is unrealistic to look for absolute legitimacy for international institutions. GG1 and GG2 have never existed in combination. Rather we must aim for what Keohane (2005:16) calls ‘comparative legitimacy’. Thus in the absence of absolute legitimacy (that is in the absence of a positive sociological definition of legitimacy) it may well be necessary to search for lower order tests of acceptance; maybe by searching for acceptable institutional ‘accountability’ rather than legitimacy (see Grant and Keohane, 2005).

This brief report is not the place to address these questions fully. Rather for the purpose of this exercise it is sufficient to assert that on the basis of the day-today journalistic-cum-empirical evidence to be drawn from examining successive MTN Rounds, and especially the current one, is that there are clearly substantial questions to be asked about both the normative and sociological legitimacy of the WTO. In order to underwrite the legitimacy of the WTO as an intermediate public good we need, at the very least, to inculcate a feeling amongst most contributing actors (and not just the key ones)—states and non-state actors alike—a view that, if not legitimate in a sociological sense, the WTO is at least acting legally in the normative sense and is at least ‘accountable’, and accountable not only to states in a traditional international relations understanding but also to those wider reaches of civil society that now demand greater voice in global public policy.

This is especially the case given the changing nature of multilateralism in the 21st century. The movement from cooperative regimes to incipient, increasingly ‘legalised’ systems of governance (Keohane, 2005: 9 and Goldstein and Martin, 2000)—epitomised in the shift from GATT to the WTO—has raised the stakes on the legitimacy question and increased the range of actors with a right to ‘voice’. If governance increases the expectations of compliance on the part of the governed, then it also raises expectations of accountability from the institutions (and their agents) seeking the compliance and superior levels of justification for the decision taken. In the absence of such expectations being realised, it is hardly surprising that WTO rule takers in particular assume that the WTO operates primarily by the conventions of power politics delivering coerced decision making, false consensus and inequitable outcomes.

2. Some Policy Recommendations

The debate over GPGs represents a key dimension in contemporary global governance and international organisation. Expanding on the existing neo-liberal economic perspectives on international relations, concepts such as positive/negative externalities, non-rivalry and non-excludability are introduced into literature to remedy problems of collective action on a trans-national scale and especially in development contexts. The arguments are invariably presented in a scientific and 'depoliticised' manner. While much of this emerging economic literature on the theory and practice of global public goods is good economic theory and good technocratic policy analysis, it is poor political theory with little or no understanding of the ability of politics (as opposed to governance) to inhibit policy implementation. The theory of GPGs has little or no understanding of the salience of 'real world politics' in the contemporary global era. It thus becomes increasingly necessary to distinguish between politics and governance since politics, and particularly whether a policy is deemed to be 'legitimate' or not.

Presently, 'politics' in the public goods literature is seen largely as the effective and efficient making of public policy and where the enhancement of property rights and the reform and development of institutions is the key to success. But the 'rediscovery of institutions' is insufficient. To the extent that they privilege efficiency over accountability they isolate the institutions of global governance and their decision making from the lobbying for interests, which keeps them undemocratic and thus largely lacking in legitimacy. *The legitimacy issue, seen through the eyes of the rule taker, will be the dealmaker or deal breaker in the development of a GPG strategy for the early 21st century.*

Recommendation 1: *Policy makers need to develop a more critical understanding of both the distinction between 'politics' and 'governance'.*

In order to address recommendation 1, the issue of the 'legitimacy' of intermediate institutional public goods such as the WTO as a vehicle to ehnace and guarantee a liberal trading regime needs to be addressed full on. As indicated, for a range of both historical and contemporary reasons, 'absolute legitimacy' of the kind available to states in their policy making behaviour is a non-starter for international institutions. Thus second order strategies need to be adopted.

Recommendation 2: *The Issue of 'Legitimacy' needs to be addressed full on in the implementation of a global public goods strategy.*

This comes in three parts:

- Institutions and institutional actors need to treat deliberative democracy seriously.
- Establishing the primacy of the principle of 'procedural fairness' in the negotiation process for the delivery of GPGs.
- In the absence of sociological legitimacy, agents should strive for greater institutional accountability.

Enhanced deliberative democracy represents one way of revealing, and maybe addressing, the manner in which the WTO operates primarily by the conventions of power politics delivering coerced decision-making, false consensus and inequitable outcomes. Enhanced deliberative democracy—that is the creation of what Habermas (1990:86-7) calls an 'ideal speech situation' which ensures inclusive, free, rational, symmetrical and non-coercive discussion and where there are no limits on the remit of the discussion—would reduce power asymmetries and help secure a fairer bargaining process than currently exists within the context of multilateral trade negotiations (see Kwa, 2003). Clearly, many participants in the current MTN do not accept that the deliberative process as currently constituted is rationalist and produced through deliberation rather than power politics. Indeed, the historical record

suggests that the MTN processes to-date have been driven by restricted (green room) deliberations of the major powers and issue specific coalitions, increasingly on a North-South Basis. [1] The pattern of negotiation in MTN rounds to-date has seen '… a semblance of law based negotiation in the launch phases of trade Rounds, but domination and coercion by powerful western states for most of the rest of this process' (Kapoor, 200: 529; but see also Kraweski, 2001 and Steinberg, 2002).

The legitimacy, and prospects for the WTO to avoid perpetual stand-off, rancour and indeed failure of the kind seen in Seattle, Cancun (and possibly Hong Kong?) requires the establishment of principles of both procedural fairness, justice and greater accountability discussed in greater detail in the longer report. Let us not forget that in any negotiation, and especially an MTN Round, it is invariably a few powerful states or coalitions of states that set the agendas at the expense of weaker, less technically equipped and politically well organised states. Following Cecilia Albin, I use justice in a general generic sense to mean '… general standards for allocating collective benefits, opportunities and burdens among members of a community.' 'Fairness' is a much more applied concept. It gives guidance to what is a reasonable way to implement justice in a given context (Albin, 1993: 223-44. But, without justice and fairness prospects of negotiating the successful implementation GPGs will be limited.

If the WTO is a global public good, as much of the GPG literature assumes, then it is a strange one. It has clearly produced losers as well as winners and the overall aggregate welfare that is generated by its regulatory footprint is not necessarily perceived to be spread equally across all participants in the global economy; and perception is every bit as important as reality in many instances of North South dialogue. It is perhaps no surprise therefore, that 'justice as process' is often every bit, if not more, important for the mostly developing world rule takers rather than is 'justice as outcome'. From an economic theory of public goods, under-written by methodological assumptions of rational self-interest, this would no doubt appear irrational. But as literature, spanning the political spectrum, tells us, it is in the bargaining process that structural asymmetries between North and South have traditionally been at their most evident.

As a first principle, it is here that notion of what is a public good is for many developing countries becomes and remains at bets a contested concept and, at worst, sees intermediate institutional public goods such as the WTO lacking legitimacy. This leads to a problem for theories advancing the provision of public goods. The empowerment of developing countries as negotiators, in the absences of procedural fairness, may prove to be a serious obstacle to collective action problem solving in general and the provision of Northern inspired global public goods such as the WTO in particular. In the absence of both procedural fairness, as much as 'outcome fairness', the temptation by developing countries to thwart the aspirations of the developed countries is only likely to grow. Procedural fairness is a necessary, if not sufficient condition to guarantee outcome fairness. At the very least decisions taken by real consensus 'enhance the perception of the outcome being fair and balanced' (Albin, 2003b: 379-40) and a positive perception is a vital ingredient in any process of institutional legitimation.

Principles of justice and fairness. Any consideration of the role of the principal International Economic Institutions within an overall theory of public goods must focus on their role as venues for negotiations and increasingly as venues to ensure that a theory of global public goods is under written by assumptions of justice and fairness. This is an issue of politics requiring negotiated settlements. Collective action problems require negotiated outcomes and these are secured in political activity between the principal actors.

This is not simply a technical issue of bridging the participation gap, as identified by Inge Kaul and her colleagues in the 1999 volume on *Global Public Goods*. Nor is it just an issue of

how to incorporate new actors into the multilateral spaces (especially civil society actors) traditionally occupied by states. These are all necessary conditions of enhancing global governance Type II but they are not sufficient conditions. These are also questions about power, or more accurately the asymmetries of power, and what that does to the prospects for GPGs provision. The missing ingredients are the principles of justice and fairness[1] and how these are to be delivered under conditions of persistent asymmetries in the power relations between developed and developing country actors. Without justice and fairness prospects of negotiating the successful implementation GPGs will be limited.

In theory, GPGs are public and non-excludable; but irresponsible or selfish use especially over consumption or free riding leads to resentment and resistance. Notwithstanding the attempts to equate the use of GPGs within a developmental framework, it is usually the stronger states that are in a position to behave in an irresponsible way, as in the use of environmental resources for example, while it is the poorer or developing states that dispute the just and fair use of GPGs. Since GPGs need multilateral cooperation to produce them collective action is unlikely if this resentment and stand-off prevails. Thus there is a pressing need for the application of principles of fairness (both of outcome *and* process) if GPGs are to provide for the 'equitable utilisation of shared resources'.

There is little consensus on how to establish an ethic of justice and (re) distribution and how we develop meaningful conceptions of accountability and representation that provide, or re-create, the necessary legitimacy for the international institutions that will be responsible for delivering GPGs to the world's rule takers.

Insitutional rule makers (from the developed world) tend to privilege global governance Type I while rule takers (developing country government officials and civil society actors) tend to privilege global governance Type II. Thus the difference between success and failure will revolve around the degree to which the principle of justice and fairness underwrite a GPG bargain.

Justice as process and procedural fairness for co-operative action. Procedure is as important as outcome for many developing countries. Issues of 'justice as process' is therefore often every bit, if not more, important for the mostly developing world rule takers rather than is 'justice as outcome'. It is here that the notion of what is a public good has for many developing countries become a contested concept.

The empowerment of developing countries as negotiators, in the absence of procedural fairness, may prove to be a serious obstacle to collective action problem solving in general and the provision of Northern inspired global public goods such as the WTO in particular. In the absence of both procedural fairness and outcome fairness the temptation by developing countries to thwart the aspirations of the developed countries is only likely to grow.

In the absence of procedural fairness co-operative action is not likely. Procedural fairness is a necessary, if not sufficient condition to guarantee outcome fairness; that is a fair distribution of both positive and negative externalities arising from an agreement.

Multilateral economic institutions as GPGs. If a multilateral economic institution such as the WTO is to be thought of as a GPG then it needs to be not only an effective and efficient instrument of policy making beyond the territorial state (GG I) it also needs to diminish what is widely agreed to be a democratic deficit that arises from the two speed process of the rapid globalisation of the world economy on the one hand and the considerably slower globalisation of governance on the other.

The multilateral institutions should play the major role in bridging the gap between Types I and II governance. They should underwrite and enhance cooperation in the interests of all

participants in an accountable and transparent manner. Their aim should be to ensure the stability of the global economy (assumed to be an unalloyed public good) and provide problem-solving strategies for new stresses on the system as they emerge.

Democratic input in the WTO. The WTO has clearly produced losers as well as winners. The overall aggregate welfare that is generated by its regulatory footprint is not necessarily perceived to be spread equally across all participants in the global economy. Because power asymmetries remain the key to explaining outcomes in the WTO negotiations, the WTO is seen by many as a vehicle for the advancement of so-called public goods that serve the interests of the developed world first (such as Intellectual Property Rights), rather than those of greater salience to the developing world (such as health and poverty issues).

How to restore the principled believe in multilateralism as a *modus operandi* for global problem solving remains a live issue. It remains neither feasible nor desirable, to continue towards global economic integration at a rate greater than is compatible with the desires of nation states (either via traditional forms of representation) or their peoples (through new discursive, non-statist forms of representation). Democratic input is necessary by greater inclusion of the developing nations and new actors from civil society in the decision-making processes.

For instance in the case of WTO, most civil society actors, especially those with a development focus critical of the WTO and how it conducts its business, are mostly not regarded as sources of ‘expert knowledge’ on the international trade regime. Rather they are seen as antagonists and activists. Their role in the decision-making processes of the WTO have not been, nor indeed is it likely to be, legitimised or normalised in the manner of corporate actors.

Current strategies for addressing the governance issue. A twofold strategy appears to be emerging. One strategy is to continue attempts to allow greater participation by non-governmental actors and increase the capabilities of the developing states in the inter-governmental process by concerted WTO-friendly capacity building. This route, from within a reformist camp, is slow and judged by results not to be particularly effective.

A second strategy straddles both reformist and abolitionist camps. This is the increased pursuit of activities parallel to, but separate from, the existing multilateral inter-governmental process. This emerging approach is not without difficulties of its own. Like the first strategy, it is reformist, but in other ways very different. It is, in effect, an attempt to create a ‘new multilateralism’ for the 21st century, one that changes assumptions of global order and attempts to alter policy outcomes *from below*. It contrasts with what we might call the multilateralism of the 20th century, in which international institutions extended their remit geographically (by widening institutional membership), functionally (by deepening coverage of issues) and inclusively (by the cooption and socialisation of recalcitrant actors into the dominant neo-liberal market mode) *from the top*.

The challenge is now how to *combine* the reactivation of the welfare and regulatory roles of states with economic models that continue, more or less, to revolve around liberalised (and progressively globalising) private sector activity.

Concluding remarks. Globalist imaginings of governance, encapsulated in attempts to deliver a programme of global public goods of the kind outlined by the UNDP and UNIDO are limited in their practical applicability because of their limited understanding of the need for a multi-dimensional approach to global governance. What is required, it is argued, is a broadening of the GPG discourse to acknowledge the importance of ‘justice’ and ‘fairness’ in the successful development of GPGs.

If the economic theory and practice of GPGs is not embedded within this wider normative context, and especially those intermediate institutional GPGs meant to facilitate the liberalisation of trade (as opposed to pure GPGs such as clean air or fresh water) then discussion of the relationship between trade on the one hand and 'development', as more than simply a rationalist enterprise on the other, will continue to take place in 'parallel universes'.

Thus the next step in the enhancement of GGII needs to be modest. It will certainly not appeal to radical transformationalists. It will not deliver an ideal type global democracy (with universalist participation) predicated on the globalising of the domestic analogy. But, it does recognise the ability to enhance, and in some instances consolidate, existing or nascent patterns of legitimacy and accountability. Legitimacy emanates from the extension of principles of justice and fairness to GGI. That is, the effective and efficient delivery of public policy based on best practice but also under-written by general norms of fairness. Legitimacy must be embedded in shared norms (usually of elites, but wherever possible of national publics, of the major state actors) and be under-written by judicial instruments (such as the ICC and increasingly the dispute settlement mechanism of the WTO). It should also be enshrined in what Albin calls 'fair negotiation practice'. This means negotiation practices that are not only efficient (GGI) but also open and inclusive. Enhancing our capabilities in these areas should be at the core of a reformist agenda to enhance GGII. This is not abstract political theorising. Successful, albeit gradually enhanced, such activities will eventually cast massive and beneficial policy shadows.

Re-evaluation of the public domain. In those regions of the world most affected by financial instability national governments attempted to redefine policy strategies in ways which provided a range of safety valves against the *socio-economic* 'dangers' of globalisation and liberalisation. The process of rethinking the scope and mechanisms of governance, as well as the concrete policy strategies it might entail, has as one of its central components a re-evaluation of the public domain as a means by which collective goods might be provided. One of the dominant understandings of the public domain, especially in Asian and Latin American countries, is of its essential (re)vitalisation or utilisation as a mechanism for the provision of a range of public goods crucial to the socioeconomic sustainability of markets. This view found its way into the policy debates of the international financial institutions, couched broadly in the language of the 'Post' or 'Augmented' Washington Consensus'.

But, liberalisation and deregulation were never simply sound economic theory. They were also contentious political practice. Rather than being recognised as welfare enhancing overall they were (and still are) seen to have negative redistributive consequences that disturb prevailing social structures and which the 'invisible hand' of markets is incapable of addressing.

Social injustice has come to be associated with the absence of effective economic regulation, or at the very least with the process of deregulation which most countries were engaged in from the 1990s. As a result, the *objectives* of market economics, as much as the functioning of the market economy itself, are deemed to stand in need of re-evaluation. Growing concerns about the power of the 'stateless market' pointed to a (re-) recognition (in policy and intellectual circles) of the importance of the institutional and social embeddedness of markets as well as the ways in which the functioning of domestic and global markets depends on political consent.

Theory of international public goods. The provision of GPGs is essentially an attempt to externalize negative cross-border 'spillover effects of events and policies in one country on other countries' which remain 'unmediated by classically competitive markets'.

The principle of subsidiarity prescribes that the externality 'should be addressed at the lowest government level consistent with effectiveness' (The Secretariat of the International Task

Force on Global Public Goods, 2005: 5). This, in turn, means the level closest to the problem where resources to secure the provision of the public good are available or can be generated. For some, the subsidiarity principle assumes assistance from rich to poor in securing the provision of these public goods.

Undersupply is a characteristic of public goods at the national and the international level. But when the public good is trans-national the problem of collective action becomes even more pertinent. The solution to these problems has previously been at the discretion of the sovereign state, which has the authority to legitimately enforce its decisions. But at the international level, there is no such authority to mitigate the free-rider problem, collect taxes and secure the provision of the public good. This idea was already captured in the principle of 'anarchy' by the theory of international relations a long time ago.

PART II

REGIONAL STUDIES

Regional vs. Global Public Goods: The Case of Post-Communist Transition

Marek Dabrowski
Artur Radziwill

1. Introduction

The end of the 1980s and the beginning of the 1990s saw the rapid collapse of the communist regimes of the former Soviet bloc[96]. This happened first in Central and Eastern Europe in 1989 with the Round Table agreement and the electoral victory of the Solidarity movement in Poland, gradual political liberalization in Hungary, the fall of the GDR and the Berlin Wall, the Velvet Revolution in the former Czechoslovakia, the roundtable agreement between Communist Party and opposition in Bulgaria, and the bloody uprising against the Ceausescu regime in Romania. Then, two years later, the political monopoly of communist parties was broken in Albania, part of the former Yugoslavia, and the former USSR.

After the communist system collapsed, all post-communist countries faced the difficult challenge of political and economic transition to democracy and modern capitalism. While former Soviet satellites in Central Europe and the Baltic republics managed to carry out this process quickly and at relatively low economic and social cost, and were rewarded with the 2004 EU accession, other countries went through much more difficult and painful transformations, accomplishing less in economic and social terms and paying higher prices than their more advanced neighbors. Among this relatively disadvantaged group the Balkan countries have performed better in terms of economic and political reforms than have the twelve former Soviet republics formally belonging to the Commonwealth of Independent States (CIS). GDP evolution in these three groups of countries is presented in figure 1.

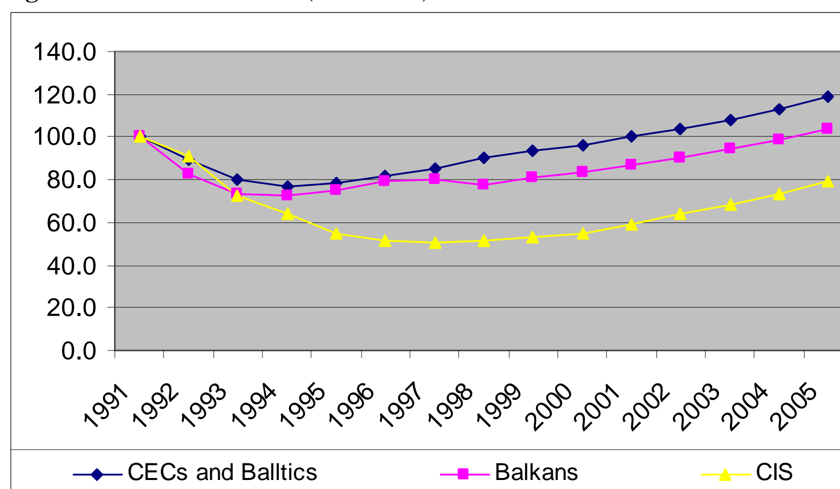
Many comparative studies seek to analyze the causes of such differentiated transition outcomes. They refer to differences in starting conditions (the role of the Soviet structural, institutional and cultural legacy), ethnic conflicts, transition strategies adopted at the beginning of transition, domestic politics and many other factors[97]. Most of these address the role of national policy choices and national institutions even if they attempt to group countries according to similar criteria or into regional subgroups.

---

[96] This is the revised version of the paper presented at the Conference on 'International Public Goods for Economic Development' organized by the Weatherhead Center for International Affairs of Harvard University, at Cambridge, Ma on September 7-8, 2005. Authors would like to thank participants of this conference for their interesting and critical remarks as well as the participants of the seminar at the Birkbeck College, University of London in August 2005 for their comments on an early draft of this paper. Our CASE colleagues James Cabot, Vitalij Dorofeyev and Henryk Kalinowski provided an excellent research and editorial assistance, which helped to prepare this paper.

[97] See, among others, Aslund (1994); Aslund (2002); Aslund, Boone, and Johnson (1996); Balcerowicz (1994); Balcerowicz and Gelb (1995); de Melo, Denizer and Gelb (1996); Dabrowski (1996); Fischer, Sahay, and Vegh (1996); Havrylyshyn *et al.* (2000); Fischer and Sahay (2001); Stiglitz (1999a, 1999b); Dabrowski, Gomulka and Rostowski (2001); Mau (2000); WEO (2000); EBRD (1999; 2000); World Bank (2002).

Figure 1 GDP evolution (1991=100)



Source: EBRD Transition Report, various issues.

While skipping the 'classical' discussion on the role of various transition strategies and national factors determining choice of strategy, we would like to concentrate on the role of the international environment in determining this choice. We would like to focus our attention on three particular factors: (i) external anchoring of national reform process; (ii) international trade arrangements and (iii) international financial stability. If we understand the concept of the international public good (IPG) as '*public goods whose benefits reach across borders*' (see Kaul, 2002) we will deal in this paper with the role of IPGs in determining transition process outcomes in Central and Eastern Europe, the Balkans and the former USSR. This research agenda is justified by the active involvement of international organizations in policymaking across transition countries.

According to classical definition (Samuelson, 1954) public goods are non-rival (i.e. consumption by one person does not reduce consumption opportunities for others) and non-excludable (i.e. nobody can be prevented from consumption). Consequently, '*international public goods (IPG) can be defined as a good, once provided, that has largely global/international (even regional) non-rival and non-excludable benefits. National public goods (NPG), once provided, benefit largely, if not entirely, the residents of the country in question*' (ODI, 2000). From this theoretical perspective none of the three factors analyzed in our paper can be considered as a pure international public good. These kinds of goods are perhaps better defined as 'club' goods (Buchanan, 1965 and Cornes and Sandler, 1996). In the case of club goods, members are tempted to maximize their utility by restricting membership, which leads to insufficient supply. This characteristic seems to reflect particularly well the nature of the regional integration block – the European Union – that has chosen to provide mentioned goods to some, but not all, transition economies[98]. In this respect, global institutions were more willing to provide these goods in a more non-discriminatory fashion. Our discussion will be therefore concentrated on the relative importance of the delivery of regional club vs. global public goods.

Our paper is organized in the following way: Section 2 focuses on the relative role of the EU as a provider of external anchoring of reforms. Section 3 compares the role of the WTO and regional trade initiatives. Section 4 analyzes the role of the International Monetary Fund (IMF) as a provider of international financial stability. Section 5 discusses prospects of

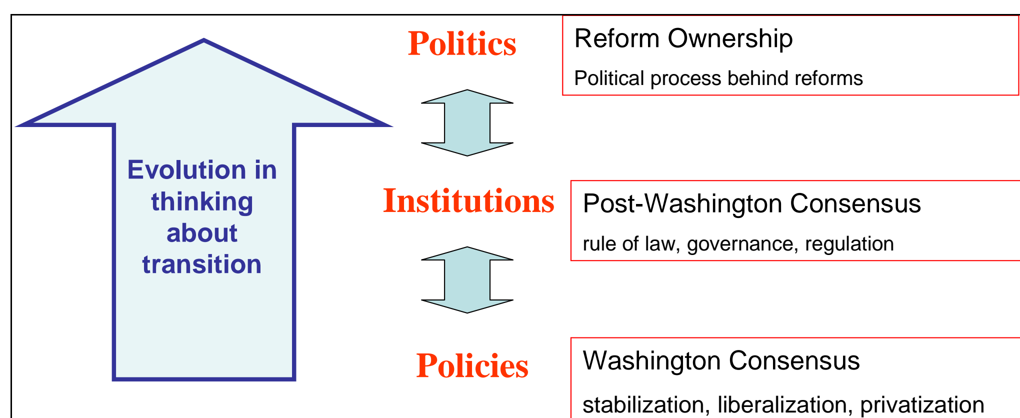
[98] See the analysis of NATO expansion in the context of club goods theory in Sandler and Hartley (1999).

regional goods delivery in Europe and other geographical regions. Section 6 offers summary of findings.

1. External anchoring of national reform process

Given the scope and scale of distortions, wide geographical coverage and differentiated initial conditions, transition has provided a new impetus to the study of growth inducing policies. Differentiated results among countries following the recommendations of the Washington Consensus (including macroeconomic stabilization, internal and external liberalization and privatization) surprised observers and pointed to the importance of previously overlooked institutional factors[99]. *Ex post* this conclusion seems natural, since institutional reforms were at the core of the transition towards democracy and market economy. But institution building processes proved more difficult than expected. Systematic failures in many countries focused attention on the political economy of reforms, incentives and country ownership. This evolution of thinking about factors most crucial to successful transition is represented in figure 2. This new paradigm is relevant for the discussion of the role of IPG. Although most important institutions have a national character and must be created through the domestic political process, transition experience has shown that external factors can play an important role that we define, following Berglof and Roland (1997), as external anchoring of reforms.

Figure 2 Main factors of successful transition



The literature on political economy of reform explains why external anchoring might be important or, in other words, why anchoring reforms domestically is not always possible (see Rodrik, 1996 and Fukuyama, 2004 for overview). Dewatripont and Roland (1992) argue that policymakers face two sets of policy constraints. *Ex ante* political constraints might prevent reforms from being implemented. Not only aggregate but also individual uncertainty about the results of reforms can prove an essential barrier to reforms (Fernandez and Rodrik, 1991). *Ex post* political constraints deal with the possibility of policy reversal. The two constraints are not always independent; some reforms are not successfully implemented because of the risk of future reversal. Attempts to impose hard budget constraints, for example, or to shed labour by compensating job losers, can fail due to time inconsistency problems. Schleifer et al (1993) and Roland and Verdier (2003) show how multiple equilibria can arise in the transition process due to interactions between incentives to become producers or predators and costs of law enforcement.

External anchoring can have a benevolent role in overcoming these problems[100]. Such role of external factors is not new to the debate in development economics. On the contrary, it has

---

[99] See the brief review of the broader debate on the role of institutions in Rodrik (2004).

[100] Obviously, the reform process is not impossible without external anchoring. China and Vietnam

been hotly debated in the literature on external conditionality[101]. While unconditioned foreign aid often discourages reforms (Sachs, 1994; Casella and Eichengreen, 1996), the role of traditional conditionality is to make sure countries do not delay necessary changes. Unlike conditionality that is quite often associated with imposing reforms, we define external anchoring as promoting both supply and genuine demand for reforms. Nevertheless, external anchoring requires giving up some aspects of sovereignty and it is rare that any country is willing to do so in respect to any other country, especially a bigger and more powerful neighbour (e.g. Mexico vis-à-vis US). As a result, external anchoring in most cases cannot be provided through bilateral relations but calls for international collective action.

In transition countries, most external anchoring of reforms was provided by two types of actors: regional institutions (the EU and NATO) and global institutions (the IMF, the World Bank and the WTO). The relative influence of regional and global institutions has been different in various countries. For Central Eastern Europe, the Baltics and, increasingly, the Balkans, regional integration has proven essential and very effective in providing external anchoring. In contrast, the CIS countries have depended exclusively on global institutions with much less satisfactory results. In discussion below we focus on the two most important providers of external anchoring: the EU and the IMF.[102]

2.1 The role of the EU integration process

Below we describe the external anchoring provided within the European integration process through incentives, conditions and monitoring. Figure 3 presents the main stages of this process. For the Czech Republic, Hungary, Poland and Slovakia - countries that started reforms first and implemented them forcefully and decisively, European integration was the strategic direction from day one of transition. However, the very first phase of reforms was driven less by specific consideration about accession strategy than by the general enthusiasm about parting with communism, building a 'normal society' and reintegrating with the 'free world'.

This period, known as the 'honeymoon' or 'period of extraordinary politics' (Balcerowicz, 1994), could not last long and the consolidation of reforms required further fuel. Fortunately, the strong desire to 'come back to the west' (Mizsei, 2004) was welcomed by the European Economic Community (European Union since 1993), which signed comprehensive Europe Association Agreements with these countries in 1991. At this moment, newly associate

---

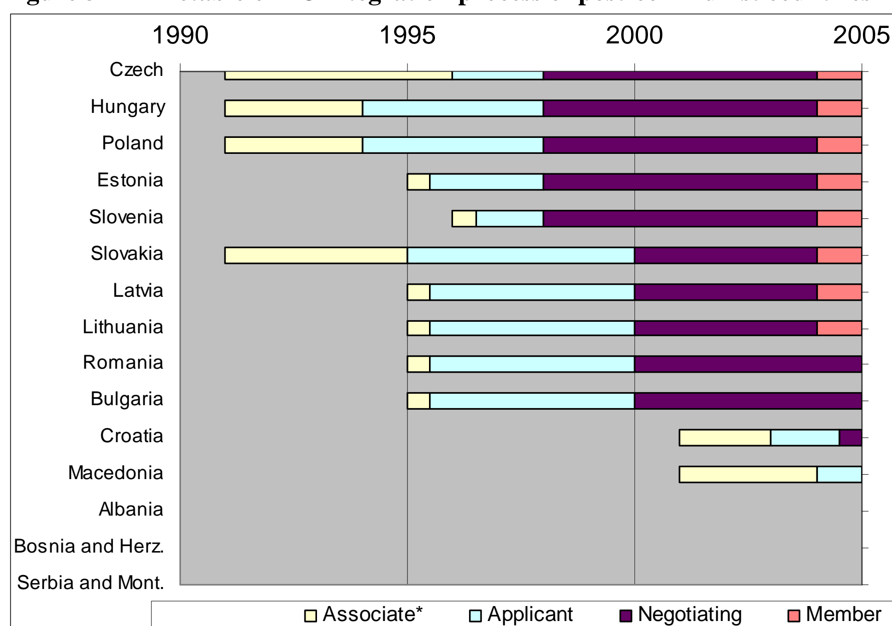
provide important (although somewhat controversial because of the authoritarian nature of their political regimes) examples of the success of a self-anchored transition process.

[101] For discussion, see: Easterly (2001), IMF (2001), Drazen & Isard (2004).

[102] In the discussion below, we will not comment on the anchoring role of some other important regional and global organizations. The North Atlantic Treaty Organization (NATO) is the most influential and effective regional security organization in the world and, for a number of transition countries, with the dominant strategic goal of 'coming back to the West', joining NATO was equally, if not more, important a stimulus for reforms in the political sphere as was EU accession. WTO has not been important so far in providing external anchoring. For countries participating in the EU integration process, EU institutions and conditionality have overriding character compared with the WTO's more narrow and weaker conditionality (see also Section 3 of this paper). This role has changed, to some extent, in the case of big CIS countries such as Russia, Ukraine or Kazakhstan, now applying to become WTO members. For them some WTO entry requirements - avoiding import discrimination in indirect taxation, adjustment of domestic energy prices, protection of intellectual property rights, opening of financial sector to foreign investors – play a helpful role in determining domestic reform agenda. The World Bank was very active in virtually all transition countries and provided both financial resources and technical advice for reform process. However, its external anchoring impact was smaller than that of the IMF for two reasons. First, WB adjustment lending decisions are usually dependent on getting a prior IMF 'stamp of approval', i.e. satisfying the IMF conditionality. Second, WB adjustment lending offers usually much smaller amounts than IMF loans. The impact of other international organizations like OECD, BIS, UNDP, OSCE, Council of Europe was either marginal or purely sectoral.

countries had already managed to build the fundamentals of democracy and free market economy, however sustainability of reforms was still questionable, while the macroeconomic situation was dismal and the prospect for further progress uncertain. What association agreements signalled was a clear commitment to enlargement. This commitment was, however, linked to the conditionality formulated in Copenhagen in 1993.

Figure 3 Timetable of EU integration process of post-communist countries



** Europe Association Agreement (CEECs and Baltic States, Bulgaria and Romania), Stabilization and Association Agreement (Croatia and Macedonia). EAA was first signed by Czechoslovakia and then by Czech and Slovak Republics.*
Source: http://europa.eu.int/comm/enlargement/index_en.html.

The Copenhagen conditionality (box 1) was vague and imprecise, which gave some observers the impression that it was lax. However, in subsequent years, it proved to be extremely demanding because of its open-ended character. It was also made clear during the summit in Madrid in 1995, that administrative capacity and true implementation would be assessed (Gotisan et al., 2004). As a result, the Copenhagen criteria continued to anchor reforms in the region for the next ten years, while the EU continued to play the membership carrot and stick game, promoting reform consolidation and deepening in the region, equally for countries that started to reform later and for whom prospect of membership, both because of geopolitical and economic reasons, seemed initially more distant but not less desirable. The Baltics, Slovenia, Bulgaria and Romania, all signed Europe Agreement agreements with the EC within three years of the Copenhagen summit and, by 1996, all Central European and Baltic states, as well as Bulgaria and Romania, had applied for EU membership.

Agenda 2000, adopted by the EU in Luxembourg in 1997, confirmed the commitment to enlargement, but also showed a strong signal that the EU would not tolerate quick accession of countries lagging in the political, economic and administrative reform process. In fact it was concluded after a detailed review of each applicant state that none of them (some in the 8th year of the transition process at this time!) fully satisfied the Copenhagen criteria. Nevertheless, five countries were allowed to start accession negotiations - Czech Republic, Estonia, Hungary, Poland and Slovenia (we refer to these countries in the rest of this paper as the Luxembourg group). Opening negotiations did not imply automatic membership, however. It meant merely that they '*could be in a position to satisfy all the conditions for*

membership in the medium term if they maintain and strongly sustain their efforts of preparation'.[103]

Box 1 Copenhagen Criteria for EU Accession, June 1993

'Accession will take place as soon as an associated country is able to assume obligations of membership by satisfying the economic and political conditions required. Membership requires: stability of institutions guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities, the existence of a functioning market economy, as well as the capacity to cope with competitive pressure and market forces within the Union, the ability to take on the obligations of membership including adherence to the aims of political, economic and monetary union.'

Source: Conclusions of the Presidency, European Council, Copenhagen, 21-22 June, 1993, SN 180/93.

The progress of economic and institutional reforms in Bulgaria, Latvia, Lithuania and Romania was assessed as not satisfactory enough to open negotiations, while Slovakia was excluded from the Luxembourg group because of the democratic deficit under the Meciar regime. The stick of exclusion was visibly presented. This, together with exclusion from the NATO process, led to a democratic regime change in Slovakia, which energetically transformed its political scene and accelerated economic reforms. The new reform effort was also taken in remaining four countries, particularly impressing in Bulgaria after a deep financial and political crisis in 1996-1997. Accordingly, the EU enlargement strategy was modified at the summit in Helsinki to reflect the view that, at that moment, a carrot rather than a stick was the more effective tool with which to promote reform (compare quotes in box 2). Bulgaria, Latvia, Lithuania, Romania and Slovakia were all allowed to start negotiations in 2000 (we refer to these countries in the rest of this paper as the Helsinki group).

Box 2 New Accession Strategy, Helsinki 1999

'The risk in taking this 'hard line' approach is that the countries concerned, having already made great efforts and sacrifices, will become disillusioned and turn their backs on us. Their economic policies will begin to diverge, and an historic opportunity will have been lost - perhaps forever'.

'The time has come to inject new momentum into the enlargement process and give a strong signal of its [the Commission's] determination to bring this process forward as quickly as possible'.

'Negotiations should be opened in 2000 with all candidate countries which meet the political criteria for membership and have proved to be ready to take the necessary measures to comply with the economic criteria'

Source: Romano Prodi, speech to European Parliament, 13 October 1999, Speech/99/130 at: *http://europa.eu.int/rapid/start/cgi* and European Commission, Composite Paper, EC Cons Doc 12053/99, 13 October 1999.

But if this carrot proved effective, it was only because the stick was firmly in the hands of the European Commission. Negotiations proved difficult. Annual progress reports prepared by the Commission were often critical, with candidate countries being reminded on many occasions that the opening of negotiations did not necessarily lead to early accessions, and with the European Commission revisiting issues previously believed to have been resolved, according to the principle that nothing is agreed until everything is agreed (see box 3 below). Negotiations allowed the European Commission to effectively monitor the comprehensive

[103] *Agenda 2000*, EC Cons Doc 9984/97, Vol. I, Part Two (VII).

process of institutional quality improvements in all major areas of public functions (Roland, 2005).

Box 3 EU Accession negotiations

'The decision to enter into negotiations does not imply that they will be successfully concluded at the same time. Their conclusion and the subsequent accession of the different applicant States will depend on the extent to which each complies with the Copenhagen criteria and on the Union's ability to assimilate new members'.

'The decision to close chapters provisionally has generally been taken according to the following criteria: full acceptance of the EU acquis, absence of requests for transitional periods, satisfactory answers to EU questions. Moreover, the EU, while accepting provisional closure, has insisted on the global character of the negotiations (nothing is agreed until everything is agreed), as well as on the need for satisfactory progress in the preparations for accession in each of the candidate countries. In this respect the EU side announced that it will monitor progress under each chapter throughout the negotiations.'

In the course of negotiations the European Commission has been monitoring progress of implementation of *acquis communautaire* in following chapters (areas): Free Movement of Goods, Persons, Services and Capital, Company Law, Competition, Agriculture, Fisheries, Transport, Taxation, EMU, Statistics, Social Policy, Energy, Industry, Small and Medium Enterprises, Science and Research, Education and Training, Telecommunications, Cultural and Audiovisual Matters, Regional Policy, Environment, Consumer and Health Protection, Justice and Home Affairs, Customs Union, External Relations, CFSP, Financial Control, Financial and Budgetary Provisions and Institutions.

Sources: Luxembourg European Council, December 1997, Presidency Conclusions, para 26 and European Commission, Composite Paper, Reports on progress towards accession by each of the candidate countries, EC Cons Doc 12053/99, 13 October 1999, p 32.

Having successfully concluded negotiation, eight transition countries joined the European Union in May 2004. These countries not only included the Luxembourg group countries, but also Latvia, Lithuania and Slovakia, each of whom had accelerated reforms sufficiently to catch up with the progress of reforms, negotiations and the adoption of the *acquis*. Bulgaria and Romania are expected to join in 2007. All these countries have made impressive progress in all sorts of reforms on their way to accession, as shown is figures 6-8.

In the Western Balkans, EU accession opportunities followed the resolution of the Kosovo conflict and the establishment of the Stability Pact for South and Eastern Europe in 1999. Croatia was the first country to sign the Stabilization and Association Agreement (SAA) and started accession negotiations in October 2005, while other Balkan countries are understood to be increasingly engaged in the EU enlargement process. Among them Macedonia has already signed an SAA, Albania is negotiating one and Bosnia and Herzegovina and Serbia and Montenegro are in the stage of preparations. The rapid acceleration of reforms in these countries is visible in figures 6-8.

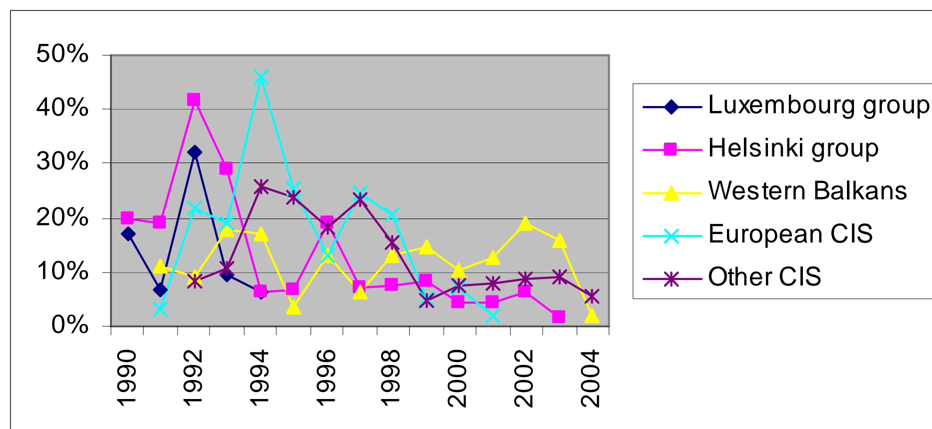
2.2 The role of the IMF

Characteristically, all CIS countries have been excluded from the EU integration process. While some sort of cooperation between the EU and the CIS countries has been institutionalized in the form of Partnership and Cooperation Agreements (PCA), none of them has been considered eligible for the EU membership, even in the distant future. As a result the international financial institutions have been the most important actors, attempting to provide external anchoring of reforms to CIS countries. This is particularly true of the IMF which, following the debt crisis of 1982, started to place '*more emphasis on structural reforms and achievement of sustainable economic growth*' (IMF, 1987), and which seemed to be prepared

to assume the responsibility of monitoring, managing, and supporting the post-communist transition process. Most post-communist countries became members of this organization at the very beginning of their transition.[104] Long-lasting and active presence in the CIS countries and some other transition countries (see figure 4) has meant that the IMF has played the most prominent role in the post-communist economic transition process of all global international organizations and its conditionality has become an important reference point in domestic policymaking (Dabrowski, 1998; Gomulka, 1995).

Figure 5 shows that, at the time of transition, the incidence of structural benchmarks in IMF supported programs indeed increased dramatically. Unfortunately, it is clear from figures 6-8 that CIS countries that were most exposed to IMF conditionality, reformed the least. Moreover, the period of peak of IMF structural conditionality in the second half of the 1990s was a period of reform stagnation and even reversal in most countries.

Figure 4 Disbursements under IMF programs: percent of country quota



Note: Luxembourg group (Czech Republic, Estonia, Hungary, Poland, Slovenia), Helsinki group (Bulgaria, Latvia, Lithuania, Romania, Slovakia), Western Balkans (Albania, Bosnia and Herzegovina, Macedonia, Serbia and Montenegro), European CIS (Belarus, Moldova, Russia, Ukraine), Non-Euoropean CIS (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan).
Source: Own calculations based on IMF, Country Information, Transactions with the Fund, www.imf.org.

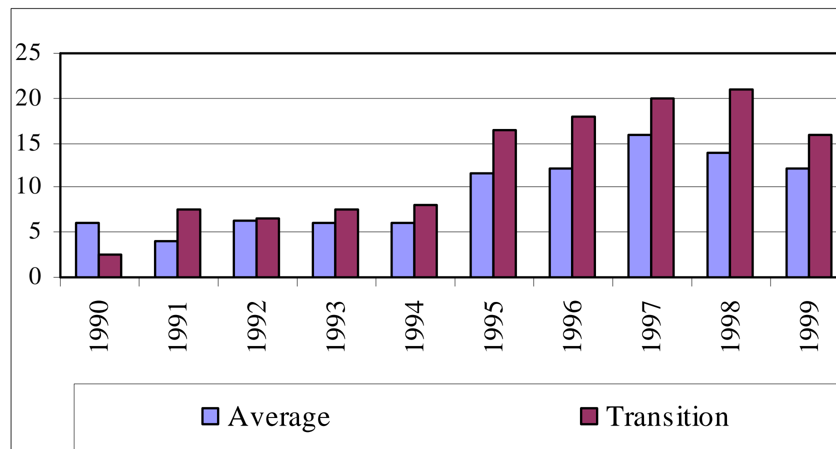
2.3 Progress in political, institutional and structural reforms

To illustrate these differences in the effectiveness of external anchoring we compare the results of transition across groups with different levels of engagement in the European integration process and IMF cooperation. Figures 6, 7 and 8 present the aggregate indicators of reforms in political, institutional and structural spheres, respectively. Among countries involved in the EU accession process, we distinguish the ‘Luxembourg group’, ‘Helsinki group’ (see Section 2.1) and the Balkan countries which joined the EU integration process within the Stability Pact framework. CIS countries have all been excluded so far from the European integration process and so they were entirely dependent on international financial institutions to anchor reforms. Reflecting at least partly the heterogeneity of the group, we have split the CIS countries into European and non-European groups. In most instances, the European CIS have faced transition problems comparable to, although more intense than, other European transition economies, while for non-European CIS, these similarities are less obvious (lower level of initial development in Central Asia, oil discoveries in Caspian Sea countries, etc.). We shall analyze not only differences across countries but also in timing of reforms.

[104] Four communist countries - the former Yugoslavia, Romania (from 1972), Hungary (from 1982) and Poland (from 1986) - belonged to the IMF earlier. However, with the exception of the former Yugoslavia, there were not Fund-supported programs in these countries.

Transition countries belonging to the ‘Luxembourg group’ achieved relatively high standards of democratization, quality of institutions and structural reforms early in the transition process. In the following years, all countries of this group consolidated these initial gains. While the goal of going back to the West guided these countries throughout the transition process, IMF programs were discontinued early in the transition process.

Figure 5 Average number of structural benchmarks for programme (1987-1999)



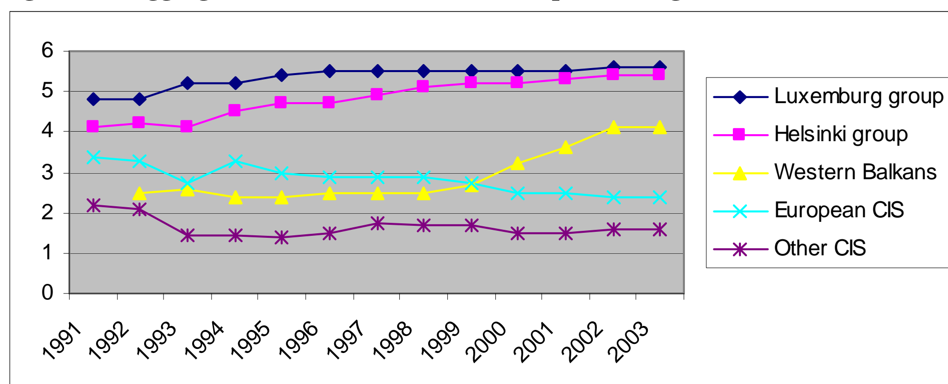
Source: IMF (2001).

For countries belonging to the ‘Helsinki group’, the reform progress was more uneven. The gap in democratization, institution building and structural policies temporarily increased, as some countries experienced periods of reform reversals. In particular, Slovakia experienced episodes of sharp political reversal under government of Vladimir Meciar (1994-1998). However, the growing fear of being left aside from the EU and NATO accession for good helped Slovakia to produce one of the most spectacular political turnarounds after 1998 parliamentary election. Slovakia not only managed to catch up with the Luxembourg countries in accession negotiations, but is viewed today as the leading reformer in the region. Latvia and Lithuania were devoted reformers, but compared to Estonia and given the level of post-Soviet distortions, the reform process was slower and less systematic. Again those countries managed to orchestrate sharp accelerations in reforms following the opening of the window of opportunity to join the EU together with the ‘Luxembourg group’ countries. Bulgaria, and especially Romania, proved to be rather reluctant reformers in the first years of the transition process. For those countries as well, the decisions taken in Luxembourg and Helsinki were instrumental in speeding up reforms.

It shall be noted that the ‘Helsinki group’ that had a longer history of cooperation with the IMF, especially Bulgaria and Romania, exhibited the characteristic pattern of longer-term dependence on this organization. However, the role of international financial institutions was reduced substantially, once the EU accession process had been launched.

In the Western Balkans, improvements in the political situation started to take place after 1999. Importantly, the end of the conflict and the fall of authoritarian regimes coincided with launching the Stability Pact for Southern Eastern Europe sponsored by the EU, which gave the Balkan countries a clear membership perspective. Subsequently, Serbia, and Montenegro democratized very rapidly, however strong improvements were also characteristic of Albania and Croatia. This period also marked the acceleration of structural reform with chances for moderate gains in institutional quality. These countries cooperated with the IMF throughout the transition process; however spectacular reform gains happened only when EU accession prospects had been opened.

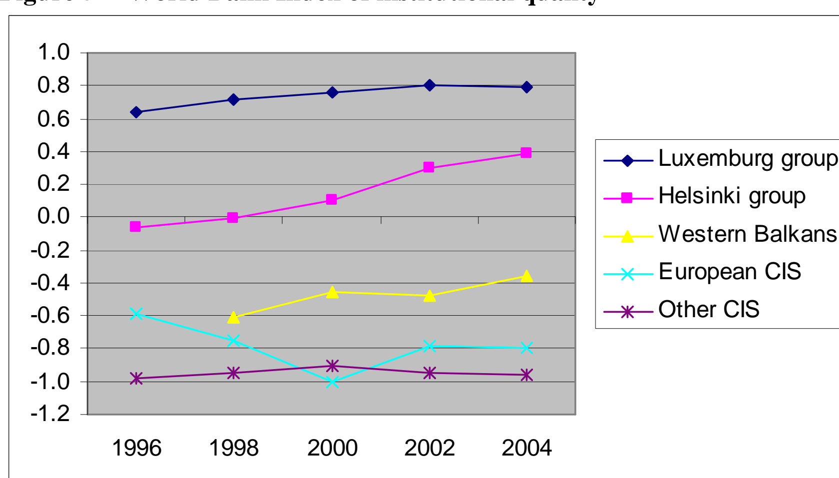
Figure 6 Aggregate index of civil liberties and political rights



Note: Country grouping: see description of figure 4.
Source: Freedom House, unweighted average of indices of political rights and civil liberties
In summary, all countries involved in the European integration process seem to be converging to high standards of democratization and functional market economy, although the process is far from complete in the Western Balkans. Unfortunately, nothing can be less true about the direction of changes in CIS countries. This 'great divide' (Berglof and Bolton, 2002) might be only partly explained by less favourable initial conditions in CIS countries.

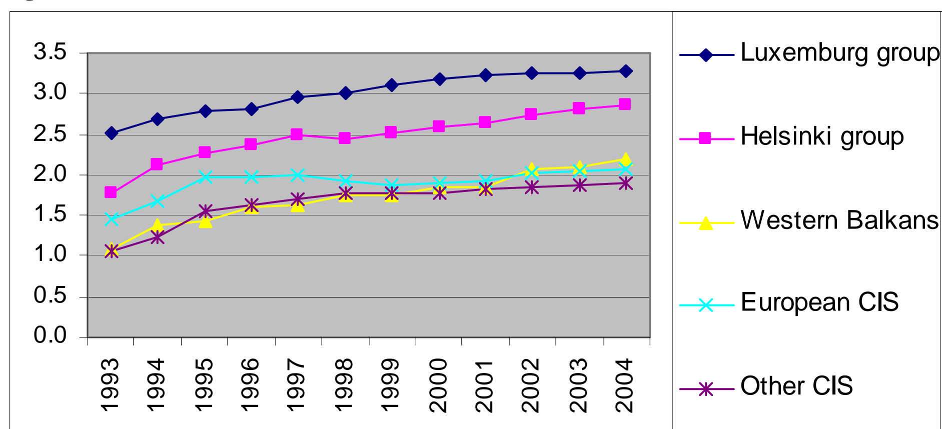
Indeed the start of reforms in these countries was relatively successful. Following the collapse of the Soviet Union, the European CIS countries managed to build the fundaments of democratic societies and achieved standard comparable to that of the 'Helsinki group' and higher in comparison to the Balkans. In terms of structural reforms, these countries were almost at par with the 'Helsinki group' as late as 1995. However, all CIS countries failed to consolidate these early achievements. On the contrary, standards deteriorated and started to diverge from the European standards during the second half of the 1990s. Until the recent wave of democratic revolutions in the region, negative political tendencies characterized most other CIS countries, although the reversal of democracy was strongest in Central Asia and Belarus. This was accompanied by a stagnation in institutional quality and deceleration of structural reforms. All these negative developments happened in countries in which there was a strong presence of international financial institutions, but which were unconditionally excluded from the European integration process.

Figure 7 World Bank Index of institutional quality



Note: Country grouping: see description of figure 4.
Source: World Bank, Unweighted average of rule of law, government effectiveness, control of corruption and quality of regulation.

Figure 8 EBRD index of structural reforms



Note: Country grouping: see description of figure 4.
Source: EBRD Transition Reports, various issues. Unweighted average of competition policy, enterprise reform, banking and non-banking financial sector reform.

2.4 Comparing EU and IMF conditionality

The table below might provide some hints about what has made the EU so much more effective in anchoring reforms. We distinguish three factors: incentives, conditions and monitoring.

The EU integration has been seen by accessing countries as a civilization upgrade with understandable, realistic and highly desirable benefits. Being inside or outside the EU could determine the fate of the nation and its people in the decades to come. Therefore, incentives to meet accession criteria could not have been stronger. Moreover the criteria themselves have been largely in line with popular desire to live in democratic, free market economies, ruled by law. It has been also well understood that accessing to the EU would be a difficult process and countries in non-compliance with the Copenhagen criteria would not be admitted to the EU. As attention has been put on reform implementation and long-term progress, faking real actions through 'paper reforms' and only temporary improvements have been excluded.

Characteristically, most countries involved in the European integration process managed to maintain consistent reform strategies despite unstable political environments, frequent elections and weak and short-lived coalition governments. In countries without the European anchor, political instability translated into policy inconsistency and reversals. Although Sachs (1994) underlines that the initial widespread desire to 'return to Europe' did not automatically translate into consensus on specific policies, the EU accession conditionality with subsequent progress reports provided much of the roadmap for reform consolidation and deepening.

On the contrary, incentives to implement IMF programs in a consequent and consistent way are weak or non-existent. Some people obviously dislike the idea of cooperation with IFIs for political and ideological reasons; but, more importantly, the silent majority cannot see any obvious personal gains from its success. Attached conditions are either abstract (macroeconomics), highly technical or controversial (like privatization or restructuring of certain enterprises). What is even more important, the IMF programs (the same concerns the World Bank) do not touch at all political conditions and political institutions while the latter have very often a strong impact on a quality of economic institutions and economic policies.[105]

[105] See Dabrowski and Gortat (2002) for analysis of interdependence between political and economic reforms in the former communist countries.

Table 1 Comparing EU and IMF conditionality

EU accession criteria	*IMF program conditionality*
Incentives strong carrot/stick mechanism (EU membership/exclusion) important to public at large	*Incentives* weak carrot/stick mechanism (loan disbursement/ non-disbursement) irrelevant to broader public
Conditions broadly defined (democracy, free market, European law) strong public understanding and support	*Conditions* narrowly defined (abstract macroeconomic, technical or specific structural benchmarks) scant public understanding and support, opposing interest groups
Monitoring high credibility of enforcement (strong interest to keep non-performers outside EU) full compliance required – 'nothing is agreed until everything is agreed' (prevents paper reforms and policy reversals) long term horizon ('it will take as much time as needed')	*Monitoring* low credibility of enforcement (IMF staff interested in loan disbursements) frequent non-implementation - waivers, new programs following program failures (allows for paper reforms and policy reversals) short term horizon (short-term, e.g. quarterly point deadlines)

Furthermore, IMF officials assessed progress in short term perspectives at predetermined intervals, facing perverse incentives to overlook underperformance to keep programs going. As the Russian Boris Fedorov put it, "*the IMF was pretending that it was seeing a lot reforms. Russia was pretending to conduct reforms*".[106] In short, it seems that the IMF, despite its recent attempts to do so through public discussions (Drazen & Isard, 2004), can do little to provide external anchoring to reform, i.e. to promote the willingness to reform when it is not already in place.

Finally, higher effectiveness of European anchor has much to do with its unique institutional design. Opposite to membership in the UN system, Bretton Woods institutions, WTO and other similar multilateral organizations, joining the EU requires giving up a significant part of a national sovereignty in economic, political and legal spheres. The EU is a kind of confederation, having its own supranational legislative, executive and judicial organs being able to guarantee a free movement of goods, services, capital and people and enforce directly the *acquis*, something what the IMF, World Bank or WTO can only dream about. As a result, these global institutions might be constrained to delivery of specific global public goods, such as global trade liberalization or international financial stability and they will be successful only if endowed with a clearly defined mandate, enough resources to conduct their missions and sufficient enforcement mechanism.

3. International trade arrangements

Historically, centrally planned economies were isolated from international markets by state monopolies on foreign trade, lack of trade, investment and production autonomy on the enterprise level and total administrative price controls, which caused huge price and allocative

[106] Cited in McQuillan (1998).

distortions. Their bilateral and multilateral trade flows were organized on the basis of central planning decisions and inter-governmental transactions coordinated in the organizational framework of the Council of Mutual Economic Assistance (CMEA, sometimes known as Comecom). Although four communist countries – Yugoslavia (from 1966), Poland (from 1967), Romania (from 1971), and Hungary (from 1973) – belonged to GATT, their membership was mostly formal due to the incompatibility of their trade and economic systems with other members and the obligatory character of intra-CMEA trade decisions.[107]

However, when the communist system, CMEA and the USSR collapsed, GATT/WTO agreements did not become the dominant trade regulations in the region. In the case of Central Europe and the Baltics, the European Union (the European Economic Community before 1993) offered early on the Trade and Associations Agreements (TAA)[108], going far beyond the GATT/WTO arrangement and including the EU membership option. In trade policy terms, EU membership means the full custom union with the common external trade policy and access to the Single European Market.

In some cases (notably Baltic countries) TAA were signed before individual countries became GATT/WTO members (see Table 2). The same happened at the end of the 1990s and the beginning of the 2000s in the Western Balkan region in the framework of the Stability Pact for South Eastern Europe, when post-Yugoslav countries and Albania got an opportunity to negotiate and sign the Stabilization and Association agreements (SAA) with the EU[109]. Although signed later and including weaker EU membership guarantees than TAA, the SAA also was far more radical in terms of removing trade and investment barriers than were WTO provisions. Again, the WTO accession of Balkan countries happened either contemporaneously or after the signing of the SAA.

Table 2 Transition economies: milestones in global and regional trade integration

	WTO (GATT)		TAA/SAA/PCA	
	Accession year (1st / last country)	*Membership (% of countries)*	*Signature year (1st / last country)*	*Coverage (% of countries)*
CEECs +Bulgaria+ Romania	1948/1996	100%	1992/1993	100%
Baltic States	1999/2001	100%	1994	100%
Western Balkans	2000/2003	60%	2001	100%
CIS	1998/2003	33.3%	1994/1998	75%

Source: World Trade Organization, European Commission.

The generous trade liberalization offer of the EU led to rapid trade creation between the entire Central and Eastern Europe and the EU, on the one hand, and trade diversion vis a vis other trade partners of CEE countries, on the other (see Table 3).

[107] The former Yugoslavia represented the most market-oriented trade system among the four mentioned countries. Its economic links with the rest of the communist bloc and the USSR was also the weakest – it had only 'observer' status in the CMEA.

[108] They were supplemented by free trade agreements with the then European Free Trade Area (EFTA) countries and free trade zone between the future EU members themselves (Central European Free Trade Area – CEFTA).

[109] Similar to TAA, they have been also supplemented with a network of bilateral free trade agreement between current and future SAA beneficiaries.

Table 3 Transition countries: geographical structure of export (in % of total export)

		Western Europe	*Transition economies*	*Others*
CEE	1995	64.2	23.1	12.7
	2003	74.2	17.2	8.6
Baltic States	1995	47.1	47.4	5.5
	2003	61.4	30.5	8.1
CIS	1995	34.1	40.4	25.5
	2003	39.1	31.2	29.7

Source: World Trade Organization, International Trade Statistics 2004.

The CIS countries were left out of the EU integration process and even out of the opportunity to liberalize trade with the EU[110]. Contrary to Central European, Baltic and Balkan practice, the EU did not offer CIS countries the opportunity to negotiate and sign even limited trade liberalization agreements prior to, or in parallel with, their WTO accession, insisting instead on different sequencing: WTO accession first and only starting after free trade feasibility studies and negotiations. Furthermore, four CIS countries, which are already WTO members - Kyrgyzstan (from 1998), Georgia (from 2000), Moldova (from 2001) and Armenia (from 2003) – did not get a free trade negotiation offer yet and any hypothetical timetable in this respect is unclear.

Most CIS countries have not become WTO members yet in spite of the quite intensive accession negotiations of some of them (particularly, Russia and Ukraine). Those who are already WTO members (see above) cannot demonstrate any serious evidence that their membership contributed to expanding their trade flows (Mogilevsky, 2004). It seems that as long as the biggest CIS countries (Russia, Ukraine and Kazakhstan) stay outside the WTO, the benefits of smaller countries coming from their participation in the global trade arrangements will remain limited due to lack of regional network externalities.

Left outside global and European trade liberalization processes, CIS countries took several, mostly unsuccessful attempts to build their own regional trade block (see Table 4). The CIS itself, among other goals (like setting the mechanism of peaceful political dissolution of the former Soviet empire) was to be a kind of post-Soviet common market. However, the subsequent multilateral and bilateral free trade agreements between CIS countries were never fully implemented. The same concerned more ambitious integration projects between smaller number of countries such as the Custom Union between Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan, later renamed into the Eurasian Economic Union (the Russian acronym EVRAZES), the Union of Belarus and Russia and the Single Economic Space between Belarus, Kazakhstan, Russia and Ukraine (the Russian acronym EEP). Their failure was caused by a number of political, economic and institutional reasons: lack of political trust between partners, asymmetry of their economic and political potentials, divergence of national economic interests, various pace of economic reforms (countries such as Belarus, Turkmenistan and Uzbekistan try to maintain, at least partly, a non-market economic system), the lack of effective enforcement and arbitrage mechanism and others. To the extent to which this 'spaghetti bowl' type of regional trade liberalization partly works, it helps very little in restructuring and modernizing CIS economies, because all partners represent the same development problems. In this respect CIS trade liberalization mechanisms cannot be considered a substitute for global or European trade and economic integration.

[110] Apart from the Partnership and Cooperation Agreements (PCA) with the EU, which included limited trade provisions like the most-favored-nation (MFN) clause.

Table 4 Intra-CIS trade agreements

Name of organization/ agreement	*Date of foundation*	*Member countries*	*Trade aim*
Agreement on Economic Union	1993	11 CIS states initially, Georgia joined later	free-trade area
Custom Union / Union of Belarus and Russia / Union State of Belarus and Russia	1995/1997/1999	Russia, Belarus	integration towards full economic union
Central Asian Economic Union / Central Asian Economic Cooperation / Central Asian Cooperation Organization CACO	1994/1998/2002	Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan (since 1998), Russia (since 2004)	free movement of goods, services, labor and capital
Custom Union / EVRAZES – Eurasian Economic Community	1995/2000	Russia, Kazakhstan, Belarus, Kyrgyzstan (since 1996), Tajikistan (since 1998)	customs union
GUUAM, Free Trade Area since 2002	1996	Georgia, Ukraine, Azerbaijan, Moldova and Uzbekistan (since 1999)	free-trade area, (counterbalancing Russian influence)
Single Economic Space (EEP)	2003	Belarus, Kazakhstan, Russia and Ukraine	free movement of goods, services, labor and capital

Sources: I. Burakovsky, Regional economic integration as an element of economic security *http://www.unece.org/trade/workshop/OSCE_0304/presentations/Burakovski.doc*, International Economics, Regional Trading Agreements, *http://intl.econ.cuhk.edu.hk/rta*, Regional Trade Agreements, *http://ecetrade.typepad.com/rtas/ses_rta*, Central Asian Cooperation Organization, *http://ecetrade.typepad.com*, Commonwealth of Independent States, Central Asian Gateway, *http://www.cagateway.org*.

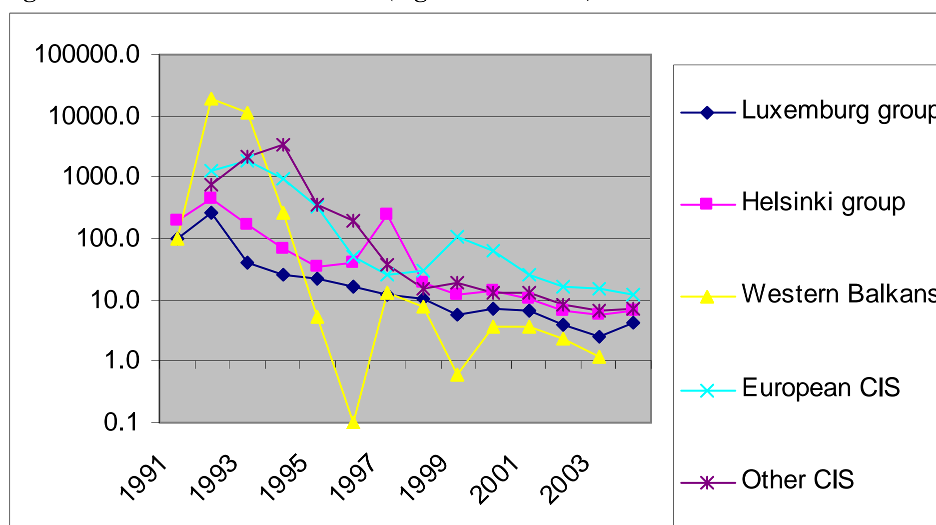
Summing up, in the area of international trade arrangements the former centrally planning economies (similar to the entire Europe) benefit mostly from regional public goods. The role of global public good (WTO arrangements) is marginal at the moment as the trade exposure of transition countries to non-EU WTO members remains limited. Those transition countries which have already joined the EU, or are going to join this bloc in the near future, have to participate in the common EU external trade policy for good and bad. Their economies benefit from the huge Single European Market and its four basic freedoms (movement of goods, services, capital and people) and from relatively low common external tariffs for most manufactured products. At the same time, they participate in the EU Common Agriculture Policy, probably the biggest global public bad in the trade sphere. Most CIS countries remain outside not only European, but also global, trade arrangements, continuing in some respects their previous autarkic way of development. The WTO and the international community at large can do little to change this situation.

4. International financial stability

The former communist economies have experienced several episodes of financial instability during the last 15 years: high inflation/ hyperinflation in the early transition years, and a series of currency and debt crises in the second half of 1990s. The latter involved several countries: Bulgaria (1996-1997), Czech Republic (1997), Russia (1994 and 1998), Ukraine (1998-1999), Moldova (1998), Georgia (1998), Kyrgyzstan (1996, 1998-1999), Kazakhstan (1999) and others.[111]

[111] For a more detailed analysis of currency crisis episodes in transition economies and their roots and consequences – see Dabrowski *et al.* (2003).

Figure 9 Annual inflation rates (logarithmic scale)



Note: Country grouping: see description of figure 4.
Source: EBRD Transition Reports, various issues. Unweighted average of competition policy, enterprise reform, banking and non-banking financial sector reform.

Inflation rates in different groups of transition countries are shown in figure 9. The 'Luxembourg group' managed a gradual but swift and largely monotonic disinflation process. The disinflation process in 'Helsinki group' was disturbed by financial crisis in Bulgaria and, to a lesser degree, instability in Romania in 1996-1997. The Western Balkans experienced years of hyperinflation but later kept inflation under control. It took many years for the CIS countries to reduce the very high levels of inflation that followed the collapse of the Soviet Union. Eventual disinflation occurred after the regional financial crisis in 1998.

While the question remains as to what extent the macroeconomic and financial stability of an individual country depends on the quality of its own macroeconomic policy and financial regulations (evident NPG) and to what extent on external factors and international collective actions (IPG), it is difficult to claim that the international dimension of financial crises does not exist at all. Empirical evidence clearly shows that the August 1998 financial crisis in Russia was triggered to some extent by the Asian financial crises of 1997-1998, as well as by serious flaws in domestic policies. In turn, the Russian crisis had a very serious contagion effect for other CIS countries (see Rawdanowicz, 2003) and, to a smaller extent, for other transition economies (EBRD, 1999). It also contributed to destabilization on global financial markets in the fall of 1998 and to the acceleration of the Brazilian crisis in the beginning of 1999.

The IMF, as the main international actor responsible for addressing the issue of financial stability at both the global and the regional level, went generally in the right direction with its policy advice to individual countries and its program conditionality[112]. The IMF insisted on fighting inflation, keeping the money supply under control, strengthening central bank independence, decreasing fiscal deficits, improving financial regulation and conducting

[112] We do not want to neglect the important role of other organizations like the World Bank group, regional development banks, Bank of the International Settlements (BIS), OECD. However, their role is either supplementary to IMF (WB and regional development banks), or cover only certain group of countries (OECD), or their institutional mandate is very narrow (BIS – related to prudential banking regulations). Some monitoring role can be played by private institutions such as rating agencies, NGOs and research institutes but they have neither financial resources, nor enforcement mechanism to take the active policy steps.

various structural reforms. On the other hand, looking back and with the benefit of hindsight, one may demonstrate a number of IMF systemic failures in relation to transition economies.

First, conditionality of the so-called first-generation Fund programs (compare figure 4) launched in the first half of 1990s was generally very weak and could not prevent high or even very high inflation caused by high fiscal deficit and its monetary financing, avoid huge balance-of payments imbalances. This relates, in first instance, to the Systemic Transformation Facility (STF), a special window of soft-financing for transition countries existing in 1993-1995, under which the Fund accepted *de facto* inflation targets of 5 to 10% per month and budget deficits around 6 to 10% of GDP. This type of adjustment program could not help in macroeconomic stabilization in individual countries and in the entire region (see Dabrowski, 1998).

Second, the IMF had problems with adopting a clear strategy with respect to the further existence or dissolution of the ruble area in the former USSR in 1992-1993, which led to serious macroeconomic destabilization in almost all USSR successor states[113]. Already in 1990-1991 the State Bank of the USSR lost control over the credit emission conducted by most of its republican branches (see Dabrowski, 1997) and this situation became even more dramatic after the formal dissolution of the Soviet Union at the end of 1991. Fifteen *de facto* independent central banks[114] issued the same currency, which led to dangerous free riding behavior (see Sachs & Lipton, 1993). Continuation of the single currency area would require either very close coordination of monetary policies of new national central banks and strong mutual trust, or giving up monetary sovereignty of national central banks in favor of the Central Bank of Russia. Both variants were politically unrealistic.

Third, the IMF was unable to prevent the Russian financial crisis in August 1998 and the series of follow-up crises in other CIS countries. It was closely connected with the weakness of the so-called second-generation Fund's programs: Stand-by Arrangements (SBA) and Extended Fund Facility (EFF) in the case of Russia, Kazakhstan, Moldova and Ukraine and the Enhanced Structural Adjustment Facility in low-income CIS countries such as Georgia and Kyrgyzstan. Generally, there were four main type of flaws in the IMF programs in the CIS region in the second half of the 1990s: (1) unrealistic assumptions concerning GDP growth, exports, and budget revenues led to the formulation of stabilization programs that were sustainable only if these assumptions were realized, (2) lax conditionality undermined macroeconomic discipline, (3) improved access to international sources of deficit financing was a source of accumulation of debt while accumulation of domestic arrears was implicitly tolerated, (4) ineffective conditionality in the area of structural reforms stimulated only 'paper reforms' and not real restructuring of the economy (Antczak, Markiewicz, and Radziwill, 2003).

Fourth, in concentrating on policy surveillance and policy advising of its members, the IMF often overlooks regional and cross-country consequences of individual countries' policy choices. Again, the best example can be demonstrated by the 1998-1999 series of financial crises in CIS countries where nobody was conceptually prepared in advance to deal with the contagion effects created by the sharp devaluation of the Russian ruble; an event which was likely to happen. But even in more 'normal' times, IMF advice on, for example, the choice of the exchange rate regime does not always take into account 'network externalities' for

---

[113] Odling-Smee and Pastor (2001) describe in detail the IMF position regarding the ruble zone, presenting a lot of internal Fund documents. They claim that the IMF was neutral with respect to two major options, i.e. continuing the ruble area vs. introducing national currencies. However, many experts (see e.g. Lipton and Sachs, 1992) considered the Fund's position as *de facto* supporting continuation of the ruble area.

[114] At the same time most of them were politically dependent on both the legislative and executive branch of the newly formed national governments, preferring populist monetary policies.

neighbors and major trade partners[115]. This may be a bit surprising as the IMF's original historical mandate was to facilitate exchange rate stability and discourage the competitive devaluations that damage international trade.

Fifth, in many transition economies the IMF supports *de facto* intermediate (hybrid) monetary/ exchange rate regimes,[116] which proved to be particularly vulnerable and fragile in cases of unexpected shocks and speculative attacks (see Obstfeld & Rogoff, 1995; McCallum, 1999; Eichengreen & Hausmann, 1999; and others). This seems to be the unintentional by-product of the Fund's recent reluctance to support 'hard' peg in the form of a currency board or unilateral dollarization/ euroization. After limited involvement in some currency board experiments in the 1990s (Bulgaria in 1997 was the last such episode) the IMF became increasingly hesitant to support this 'corner solution,' which can be a very attractive option for a small open economy with inherently limited monetary policy credibility[117] Instead, many small transition economies have been pushed by the IMF to experiment with independent monetary policy and more flexible exchange rate arrangements (this is true, for example, of the CIS countries after 1998-1999 financial crises). As many of those countries suffer serious credibility problems and have operational difficulties with introducing free floats and direct inflation targeting,[118] the actual effect of IMF policies has been a continuation of the intermediate (hybrid) regimes, most frequently close to the fixed but adjustable peg or narrow band, which usually offer the worst solutions from the point of view of financial stability.

In order to give a correct and fairly balanced picture regarding the IMF role after the series of financial crises in the second half of 1990s one cannot forget, on the positive side, the huge effort to increase the transparency of the Fund's operations themselves (on-line publication of practically all country, regional and thematic reports, policy assessments, analyzes, lending decisions, country data, etc.), data dissemination of its members and data quality and comparability (the Special Data Dissemination Standard). The regular reports on the Observance of Standards and Codes (ROSCs) in member countries relate to such issues as accounting, auditing, anti-money laundering and countering the financing of terrorism (AML/CFT), banking supervision, corporate governance, data dissemination, fiscal transparency, insolvency and creditor rights, insurance supervision, monetary and financial policy transparency, payments systems, and securities regulation. All these measures help to decrease uncertainty, information asymmetry, herding and moral hazard behavior on the international financial markets.

As the post-transition macroeconomic situation stabilizes in the region, an increasing number of countries no longer require the IMF sponsored adjustment programs. The Fund's lending activity increasingly concentrates on low-income CIS and Balkan countries, which are the subject of PRSP programs. In other transition countries the IMF monitoring role has been gradually decreasing, being limited to regular Article IV consultations and the above mentioned reports on the Observance of Standards and Codes (ROSCs).

On the other hand, the IMF role in the first period of transition is partly being taken over and crowded out by the EU. This relates to EU new member states (NMS), formal EU candidates

---

[115] We think that this kind of dilemma can be observed even more in regions other than Central and Eastern Europe and the former USSR.

[116] These are the regimes in which central banks tried to control both the exchange rate and monetary aggregates (or interest rates).

[117] This probably came on the top of strong critique of peg exchange rates after the Mexican, Asian, Russian and Brazilian crises in the second half of 1990s. The collapse of the Argentinean currency board in 2000-2001 could additionally have contributed to this reservation. However, this position does not make a sufficient distinction between the intermediate (hybrid) regimes like fixed but adjustable peg and credible currency board or unilateral dollarization/ euroization.

[118] Calvo and Reinhart (2000) call this phenomenon 'fear of floating'.

(Bulgaria, Romania, Croatia and Turkey) and potential EU candidates (Western Balkan countries). The scrutiny about meeting Copenhagen accession criteria (functioning market economy) meant that macroeconomic and financial sector indicators have been closely monitored and signs of instability would definitely be interpreted as arguments against accession. Certain elements of the *acquis*, in particular full independence of central banks and an explicit ban on central bank financing of fiscal deficits, have had a direct positive impact on financial stability. Eventually NMS are expected to join the Economic and Monetary Union (EMU) and adopt the Euro[119] which should eliminate completely the risk of currency crises and significantly reduce the risk of debt crisis (due to the EU fiscal discipline mechanism). From this perspective the EU fiscal rules, EMU, the Euro as a common currency and the Stability and Growth Pact (SGP) should be considered the real regional public goods in the area of financial stability[120]. In fact, in anticipation of future EMU membership, international financial markets already at the beginning of 2000s decreased risk premia in relation to EU candidates and then NMS.

5. Prospects for regional public good delivery

Before we draw conclusions about potential role of regional public goods, we should answer a series of important questions related to the future potential of a European anchor and chances to duplicate it in other geographical regions. Can the positive experience of EU accession-related external anchoring be repeated in relation to the countries, which have recently claimed their interest in becoming future EU members (like Moldova, Ukraine and Georgia)? Can the recently designed and launched European Neighborhood Policy (ENP), directed at CIS, Middle East and Northern Africa countries, be successful if it does not include the EU membership prospects? Pushing the question even further, is it possible to emulate the European integration model on other continents? Finally, can any lessons be drawn for global international organizations attempting to anchor reforms worldwide?

Unfortunately, it seems that momentum for further EU enlargements is currently very low. EU politicians, faced with a rejection of the Constitutional Treaty as result of French and Dutch referenda in May 2005 linked by many to 'enlargement fatigue', are unlikely to push for new rounds of accessions soon (apart from Bulgaria and Romania, which are to become members at the beginning of 2007). Indeed many politicians explicitly criticize treating European enlargement as a 'civilization project' and suggest concentrating attention on the interests and problems of current members.

Leaving aside the assessment whether such approach is correct or wrong one cannot be surprised by the fact that incumbent members of the 'club' may be reluctant to provide an unlimited access to its privileges to newcomers even if the latter are ready to meet all the entry criteria. This is a very nature of 'club goods', which the European integration is a typical example of. Enlargement of a 'club' involves definitely certain costs and risks to the incumbent members[121]. In the concrete case of the EU they are related, for example, to the size and structure of financial transfers, adjustment costs connected with expansion of the Single European Market, 'diluting' influence of some incumbents in a decision-making process on the EU level and making the latter more complicated and less predictable[122], etc.

---

[119] Six NMS – Estonia, Lithuania, Slovenia (all three from June 2004), Cyprus, Latvia and Malta (all three from April 2005) - already entered the European exchange rate mechanism ERM-2, which serves as the probationary two years period before eventual joining the EMU.

[120] Unfortunately, recent weakening of the SGP and the inability of several EU members to meet the EU fiscal criteria (deficit not exceeding 3% of GDP and public debt not exceeding 60% of GDP) may significantly decrease the value of this IPG (see Rostowski, 2004; Coricelli, 2005; Tanzi, 2005).

[121] Even if potential benefits both for incumbents and newcomers overweight the enlargement costs.

[122] However, the analysis of the potential consequences of 2004 Enlargement for a decision-making process seems to indicate that it did not necessarily lead to increase in the EU internal heterogeneity in

These costs might be particularly high in case of Turkey and Ukraine, which size, geopolitical location, demographic potential and institutional problems are considered as a serious challenge in some incumbent members states.[123] It means that future EU candidates will have to accept more distant and less certain 'carrot' and be subject of bigger 'stick' of potential exclusion. Whether such a less favorable balance of incentives (comparing to the 'Luxembourg' and 'Helsinki' groups – see Section 2.1) will produce enough reform determination remains an open question.

The same question can be addressed in respect to the ENP. The lack of explicit EU membership perspective creates doubts whether ENP can provide sufficient external anchoring to domestic reform process (see Milcher & Slay, 2005). On the other hand, one can try to imagine an attractive non-EU-membership 'carrot' for the EU neighbors in the form of enhanced security cooperation (NATO membership and/or close cooperation with the EU in the foreign and security policy spheres) in exchange for respecting European standards of human rights and democratic institutions (the first pillar of the Copenhagen criteria) and access to four basic economic freedoms in exchange for economic and institutional reforms (elements of the second and third pillar). While the early free movement of goods can be considered as an important benefit and the immediate proof of EU goodwill, the ultimate reward likely lies in the free movement of persons. Theoretically, these benefits can be delivered without actual EU membership and could become a part of the ENP or an even wider development compact.

Finding an effective non-EU-membership model of economic and political integration in Europe and in its closest neighborhood may be also important for countries, which are not interested in a full EU membership for various reasons, including Russia. This model could be based on the experience of West European countries which declined to join the EU but remain in a very close association with the EU (the European Economic Area in the case of Iceland and Norway, a system of bilateral agreements in the case of Switzerland).

This also leads us to the question on chances of repeating the EU experience in other geographical regions. At the moment the unique set of historical conditions, which led to launching the European integration project in 1950s (a desire to overcome national conflicts, in first instance a Franco-German rivalry, which led to the two world wars) and then to its subsequent expansions (willingness of less developed countries to join a club of richer neighbors, and overcome geopolitical consequences of the Cold War) seems do not exist in other regions. Although last few decades brought a lot of initiatives of economic and political integration in Asia, Arab countries, Latin America and Africa, most of them failed to deliver the expected results. The unwillingness to give up a significant part of national sovereignty in order to build effective regional institutions can be considered as the basic reason of this failure. However, one cannot exclude changes in this respect in future. Thus, learning from the EU experience makes sense. These lessons may be also partly useful for global institutions and arrangements being responsible for delivery of global public goods.

6. Summary of findings

Our reading of the evidence is that the EU, through the enlargement process, acted as the regional public (club) good provider, whose influence across time and countries was correlated with better transition outcomes. In particular, the consolidation phase in democratization, institution building and structural transformation was successful in countries reforming under EU accession conditionality, but not under other forms of conditionality. In the area of trade, gains from WTO accession were dwarfed by the impact of the opening of

---

terms of policy preferences – see Wyplosz (2005) in respect to strategic euro-integration choices and Paczynski (2005) in respect to inflation preferences.

[123] In the case of Turkey cultural and religious considerations also play an important role.

the EU trading block for accession countries. Finally, countries participating in EU integration showed more discipline in maintaining macroeconomic stability, while IMF programs were less effective in inducing stability in the absence of the European factor.[124]

While the evidence of correlation between EU accession and the successful reform process is rather clear, it is much more difficult to prove causality. Our preferred explanation is that the EU membership perspective is so attractive politically for the candidate countries that it helps to anchor effectively the entire reform process (for similar explanation see Mizsei, 2004 and Roland, 2005). However, other observers may argue that the membership perspective emerges as a result of progress in reforms or claim that some unobservable and fundamental factor, like geography, culture and religion can simultaneously drive both processes.

These are not mutually exclusive explanations and we suspect a virtuous circle. Better initial conditions of some countries made future EU membership more realistic, which stimulated reforms through an external anchoring mechanism. Reforms in turn enabled subsequent stages of integration process and raised hopes of membership even more. This again stimulated reforms to complete the virtuous circle. The circle was reinforced by trade and investment integration that promoted growth, made reforms more popular and strengthened constituencies for further integration and accession, while obviously was itself conditional on progress of reforms and meeting the *acquis*. In our view, the incidence of these virtuous circles does not reduce the benefits of European integration prospects, on the contrary, it makes the cost of early exclusion from the process even higher in terms of reforms.

Finally, we have some direct evidence of the existence of causality from integration towards reform. In particular, the exogenous shift in the European integration strategy in Helsinki in 1999 (see Section 2.1) led to the acceleration of reforms in affected countries. The same effect was repeated in the Western Balkan region as result of launching the Stability Pact for South Eastern Europe. The open threat of exclusion of Slovakia from the EU and NATO enlargement in the second half of 1990s clearly triggered the turnaround in political developments in that country. It is also noteworthy that reformist governments in CIS countries that have emerged as a result of recent democratic revolutions tend to declare EU and NATO as their strategic goals (Georgia, Ukraine). It suggests that countries actively seek the external anchoring.

In respect to promoting good governance and good policies on national level our analysis says that their long-term benefits should be considered by major domestic constituencies as realistic, understandable and widely desirable. While benefits of economic growth and poverty reduction are desirable and understandable, they might seem too distant and uncertain to strongly influence domestic reform effort. So the effective external anchoring of national reforms should involve the credible commitment on the part of developed countries and international organizations acting on their behalf to deliver attractive rewards (club benefits like external security and access to four basic economic freedoms), when the conditionality is fulfilled. To conditionality itself must be broad-based and going beyond the narrowly defined specific technical criteria (i.e., it must promote real democracy, rule of law and free market), demanding and focused on implementation, as it was in the case of the Copenhagen EU accession criteria. In other words, the offer consisting of honest conditions and irresistible rewards best summarized by the simple phrase: ‘do as we do, be one of us’, must be made. Such an offer is perhaps the international public good in greatest deficit today, also in the European neighborhood as momentum for further EU enlargement is currently very low and mechanisms of productive non-accession cooperation yet to be found.

[124] This paper does not include the analysis of two other international public goods: knowledge diffusion and adaptation and managing climate stability. However, in both policy areas the regional public goods offered by the EU (the European Research Area and the EU environmental standards) are more effective than their global equivalents.

References

Antczak, R., Markiewicz, M. & Radziwill A. (2003): *The Failure of the IMF In Preventing Currency Crises In CIS Countries*, in: Dabrowski, M., ed.: Currency Crises in Emerging Markets, Kluwer Academic Publishers, Boston/Dordrecht/London.

Aslund, A. (1994): *Lessons of the First Four Years of Systemic Change in Eastern Europe*, Journal of Comparative Economics, Vol. 19, No. 1.

Aslund, A. (2002): Building Capitalism: The Transformation of the Former Soviet Bloc, Cambridge University Press.

Aslund, A., Boone, P. & Johnson, S. (1996): *How to Stabilize: Lessons from Post-communist Countries*, Brookings Papers on Economic Activity, Vol. I, pp. 217-313.

Balcerowicz, L. (1994): *Understanding Post-communist Transitions*, Journal of Democracy, Vol.5, No.4, October.

Balcerowicz, L. & Gelb, A. (1995): *Macropolicies in Transition to a Market Economy: A Three-Year Perspective*, CASE - Center for Social and Economic Research, Warsaw, Studies and Analyses, No. 33.

Berglof, E. & Bolton, P. (2002), *The Great Divide and Beyond – Financial Architecture in Transition*, Journal of Economic Perspectives, Vol. 16, No. 1.

Berglof, E. & Roland, G. (1997): *The EU as an 'Outside Anchor' for Transition Reforms", in: A Bigger and Better Europe?,* Final Report to the Swedish Government from the Committee on the Economic Effects of EU Enlargement, Stockholm.

Buchanan, J. M. (1965): *An Economic Theory of Clubs*, Economica 32 (125) 1-14.

Calvo, G.A. & Reinhart, C.M. (2000): *Fear of Floating*, NBER Working Paper, No. 7993, November.

Casella, A. & Eichengreen, B. (1996): *Can foreign aid accelerate stabilization?*, Economic Journal, Vol. 106 (436).

Coricelli, F. (2005): *Design and Implementation of the Stability and Growth Pact: The Perspective of New Member States*, CASE - Center for Social and Economic Research, Warsaw, Studies and Analyses, No. 304.

Cornes, R. & Sandler, T. (1996): The Theory of Externalities, Public Goods and Club Goods, Cambridge University Press.

Dabrowski, M. (1996): *Different Strategies of Transition to a Market Economy: How do They Work in Practice?*, The World Bank, Policy Research Working Paper, No. 1579, March.

Dabrowski, M. (1997): *The Reasons for the Collapse of the Ruble Zone*, in: L. T. Orlowski and D. Salvatore (eds.): Trade and Payments in Central and Eastern Europe's Transforming Economies, Greenwood Press.

Dabrowski, M. (1998): *Western Aid Conditionality and the Post-Communist Transition 1990-1994*, Journal of Policy Reform, Vol. 2, pp. 169-193.

Dabrowski, M., Gomulka, S. & Rostowski, J. (2001): *Whence Reform? A Critique of the Stiglitz Perspective*, The Journal of Economic Policy Reform, Vol. 4, issue 4, pp. 291-324.

Dabrowski, M., and R. Gortat (2002): *Political Determinants of Economic Reforms in Former Communist Countries*, CASE - Center for Social and Economic Research, Warsaw, Studies and Analyses, No. 242.

Dabrowski, M., ed. (2003): Currency Crises in Emerging Markets, Kluwer Academic Publishers, Boston/ Dordrecht/ London.

De Melo, M., Denizer, C. & Gelb, A. (1996): *From Plan to Market: The Patterns of Transition*, The World Bank, Policy Research Working Paper, No. 1564, January.

Dewatripont, M. & Roland, G. (1992): *Economic Reform and Dynamic Political Constraints*, Review of Economic Studies, vol. 59(4), pp. 703-30.

Drazen, A. & Isard, P. (2004): *Can Public Discussion Enhance Program Ownership*, IMF Working Paper, WP/04/163.

EBRD (1999): Transition Report 1999, European Bank for Reconstruction and Development.

EBRD (2000): Transition Report 2000, European Bank for Reconstruction and Development.

Eichengreen, B. & Hausmann, R. (1999): *Exchange Rates and Financial Fragility*, NBER Working Paper, No. 7418, November.

Easterly, W. (2001): The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics, The MIT Press, Cambridge, Ma & London, England.

Fernandez, R. and Rodrik, D. (1991): *Resistance to Reform: Status Quo Bias in the Presence of Individual-Specific Uncertainty*, American Economic Review, vol. 81, pp. 1146-1155.

Fischer, S., Sahay, R. & Vegh, C.A. (1996): *Stabilization and Growth in Transition Economies: The Early Experience*, Journal of Economic Perspectives, vol. 10, No. 2, pp. 45-66.

Fischer, S. & Sahay, R. (2001): *The transition economies after ten years*, in: L.T. Orlowski (ed.): Transition and Growth in Post-Communist Countries, The Ten-year Experience, Edward Elgar Publishing Ltd., Cheltenham, UK; Northampton, MA, USA.

Fukuyama, F. (2004): State Building: Governance and World Order in the 21st Century, Cornell University Press, Ithaca.

Gomulka, S. (1995): *The IMF-Supported Programs of Poland and Russia, 1990-1994: Principles, Errors and Results*, CASE - Center for Social and Economic Research, Warsaw, Studies and Analyses, No. 36.

Gotisan, I., Kostrzewa, K. & Osmochescu, E. (2004), *Polish Best Practices on European Integration*, CASE - Center for Social and Economic Research, Studies and Analyses, No. 302.

Havrylyshyn, O., Wolf, T., Berengaut, J., Castello-Branco, M., van Rooden, R. & Mercer-Blackman, V. (2000): *Growth Experience in Transition Countries, 90-98*, IMF Occasional Paper, No. 184, April 19.

IMF (1987): Theoretical Aspects of the Design of Fund-Supported Adjustment Programs, IMF Occasional Paper, No. 55, September.

IMF (2001): *Structural Conditionality in Fund-Supported Programs*, International Monetary Fund, February.

Kaul, I. (2002): *What is a public good?*¸ Le Monde diplomatique, English edition, June, http://mondediplo.com/2000/06/15publicgood.

Lipton, D. & Sachs, J. (1992): *Prospect for Russia's Economic Reforms*, Brooking Papers on Economic Activity, 1992: 2.

Mau, V. (2000): *Russian Economic Reforms as Seen by an Insider: Success or Failure?*, Royal Institute of International Affairs, London, U.K.

McCallum, B.T. (1999): *Theoretical Issues Pertaining to Monetary Unions*, NBER Working Paper, No. 7393, October.

Milcher, S. & Slay, B. (2005): *The economics of the 'European Neighbourhood Policy': An initial assessment*, CASE – Center for Social and Economic Research, Studies and Analyses, No. 291.

Mizsei, K. (2004): *Central European Experience and the CIS*, in: Dabrowski M., Slay, B. & Neneman, J., eds.: Beyond Transition. Development Perspectives and Dilemmas, Ashgate, Aldershot, England.

McQuillan (1998): *The Case against the International Monetary Fund*, Hoover Institution, Essays in Public Policy, November.

Mogilevsky, R. (2004): *CIS-7 Perspective on Trade with EU in the Context of EU Enlargement*, CASE - Center for Social and Economic Research, Warsaw, Studies and Analyses, No. 282.

Obstfeld, M. & Rogoff, K. (1995): *The Mirage of Fixed Exchange Rates*, NBER Working Paper, No. 5191.

ODI (2000): Summary of meeting held at the Overseas Development Institute, November, http://www.odi.org.uk/speeches/booth5.html.

Odling-Smee, J., & Pastor, G. (2001): *The IMF and the Ruble Area, 1991-93*, IMF Working Paper, 01/101, August.

Paczynski, W. (2005): *ECB Decision-Making in an Enlarged EMU*, in: Dabrowski, M. & Rostowski, J. (eds.): The Eastern Enlargement of the Eurozone, Springer.

Rawdanowicz, L. (2003): *Propagation of Currency Crises – The Case of the Russian Crisis*, in: Dabrowski, M. (ed.): Currency Crises in Emerging Markets, Kluwer Academic Publishers, Boston/ Dordrecht/ London.

Rodrik, D. (1996): *Understanding Economic Policy Reform*, Journal of Economic Literature, Vol. 34, No. 1.

Rodrik, D. (2004): *Getting Institutions Right*, manuscript, April.

Roland, G. (2000): *Transition and Economics: Politics, Markets and Firms*, MIT Press, Cambridge, Ma.

Roland, G. (2005 forthcoming): *After Enlargement: Institutional Achievements and Prospects in the New Member States*, Proceedings of the third ECB conference "The New EU Member States: Convergence and Stability".

Roland, G. & Verdier, T. (2003): *Law Enforcement and Transition*, European Economic Review, vol. 47.

Rostowski, J. (2004): *The Stability and Growth Pact - Essential and Unfeasible*, CASE - Center for Social and Economic Research, Warsaw, Studies and Analyses, No. 275.

Sachs, J. (1994): *Life in the Economic Emergency Room*, in: Williamson, J. ed. (1994), The Political Economy of Policy Reform, Institute for International Economics.

Sachs, J. & Lipton, D. (1993): *Remaining Steps to a market-Based Monetary System*, in: Aslund, A. & Layard, R., eds.: Changing the Economic System in Russia, Pinter Publishers, London.

Sandler, T. & Hartley, K. (1999): The Political Economy of NATO. Past, present, and into the 21st Century, Cambridge University Press.

Shleifer, A., Murphy, K., & Vishny, R. (1993): *Why Is Rent Seeking so Costly for Growth*, American Economic Review Papers and Proceedings, May.

Samuelson, P. A. (1954): The *Pure Theory of Public Expenditure*, Review of Economics and Statistics, 36 (4).

Stiglitz, J. (1999a): *Whither Reform?*, paper for 1999 ABCDE Conference, Washington DC: World Bank. http://www.worldbank.org/knowledge/chiefecon.

Stiglitz, J. (1999b): *Quis Custodiet Ipsos Custodes? (Who is to Guard the Guardians themselves?)*, Challenge, 42 (6), November/December, pp. 26-67.

Tanzi, V. (2005): *Fiscal Policy and Fiscal Rules in the European Union*, CASE - Center for Social and Economic Research, Warsaw, Studies and Analyses, No. 301.

WEO (2000): World Economic Outlook, International Monetary Fund, April.

World Bank (2002): Transition. The First Ten Years. Analysis and Lessons for Eastern Europe and the Former Soviet Union, World Bank.

Wyplosz, Ch. (2005): Has Europe Lost its Heart?, CASE - Center for Social and Economic Research, Warsaw, Studies and Analyses, No. 293.

Sub-Saharan Africa and International Public Goods: The Weakest Link or a De-linked Region?

Jean-Claude Berthélemy
University Paris 1

1. Introduction

In the framework of international public goods (IPGs) production and consumption, sub-Saharan Africa has a rather specific position, due to the many weaknesses of African economies and political systems. This particular characteristic of Africa shapes both its access to IPGs and its capacity to participate in the provision of IPGs.

First of all, the availability of an international public good in the world economy does not imply that this good will be available everywhere, even though this non-excludable good. As suggested by the World Bank (2001), in addition to core activities required to produce public goods, there are also very often complementary activities needed to consume them. A classical example is scientific and technical knowledge, which is useless in absence of production facilities. Certainly the complementary activities are in most cases private instead of public goods. However, as argued by the World Bank, an optimal scheme of provision of international public goods cannot consider only their production; it must also provide for measures necessary to make sure that they can actually be consumed globally.

This issue is particularly relevant in the case of sub-Saharan Africa. African countries very often lack the capacities that are necessary to take advantage of existing international public goods (Ferroni and Mody, 2002). This is for example the case of trade multilateralism. Even if the WTO were able to fully enforce free trade rules, this does not mean that poor countries such as those in sub-Saharan African would be able to increase their participation in the world trading system. Similarly, even if new discoveries and scientific knowledge were freely available worldwide, poor sub-Saharan African economies would presumably be unable to use this knowledge, again for lack of capacity. This incapacity of sub-Saharan Africa to consume IPGs is a major component of the "de-linking" of the continent, a term initially coined by Emmerij (1989) to describe the inability of African countries to be actual participants in globalization; or of its "marginalization" (Collier, 1995).

Second, sub-Saharan Africa is in many instances the weakest link of the world economic system, in case of "weakest link public goods" (Hirshleifer, 1983), which implies that improving its capacity to participate effectively in the production of such IPGs is critical.

This is particularly the case with respect to the discussion of global health and control of communicable diseases as a public good. This is an area in which economic analysis provides clear policy recommendations, in the sense of in-kind transfers to the weakest agents, to help them contribute to the production of IPGs (Hirshleifer, 1983; Vicary and Sandler, 2002). There is, however, still a wide shortfall in the provision of such transfers. One reason may be that the weakest link nature of sub-Saharan Africa is somewhat mitigated by its de-linking, which alleviates the harm potentially inflicted to the world system by international public bads that it produces.

The de-linking of sub-Saharan Africa implies also in other instances that it has virtually no responsibility in global crises associated with the under-provision of IPGs. This is certainly true in the case of "best shot public goods" (Hirshleifer, 1983), but also in the case of public goods whose "aggregation technology" is linear and where the contribution of each participant depends to a large extent on its economic size. IPGs such as macroeconomic and financial stability or the protection of the global environmental resources are to some extent of this nature. Their production does not depend much on African contribution, given that Africa is for all practical purposes a negligible actor in the world economic system. Under such circumstances, there is a clear risk that specific needs of sub-Saharan Africa be merely ignored in the global deals struck to produce such IPGs, given that it is not a significant participant in such deals in any meaningful sense. This is another manifestation of the de-linking of the African region from the global system. In some instances, this de facto exclusion of sub-Saharan Africa may have only a negligible impact on African welfare, such as for instance in the case of relatively sophisticated rules aimed at enhancing financial market stability (e.g., the Basle II Accord on bank capital requirements). But in other instances, sub-Saharan Africa may be very vulnerable to crises associated with failure in the production of IPGs, such as adverse real business cycles, or the impact of climate change.

This paper is organized around the discussion of these three different consequences of the combination of sub-Saharan Africa's characteristics as the weakest link in the world system and as a de-linked actor in globalization: absence of complementary activities, the weakest link problem, and near exclusion of African needs from discussions on IPGs production.

A discussion sector by sector is necessary as well, given the specific technical aspects of each sector of production of IPGs, from macro-economic stabilisation to environment protection. In some areas, Africa is facing more than just one of the three issues just defined, but in all areas, it is possible to identify one of them as the principal source of concern from an African point of view. More precisely:

With respect to the inability of sub-Saharan Africa to take advantage of existing IPGs, for lack of complementary activities, three areas are of particular interest: the multilateral trade liberalization, the global financial stability and the knowledge diffusion and adaptation. iscussing the classical weakest link public good problem will be particularly relevant to analyze the areas of health and peace and security, in which Africa has been dramatically absent from progresses achieved or attempted worldwide. The near exclusion of African needs in IPGs discussions concerns principally the conservation of the global environmental resources.

This list of IPGs that are worth discussing from an African point of view should be complemented by a consideration of the question of poverty eradication. A lot of recent international debates and initiatives, particularly around the MDGs (Millennium Development Goals), have considered the objective of worldwide poverty eradication as an IPG, in the sense that it is acknowledged that this objective concerns not just the poor countries, but the whole international community. Conversely, some authors (e.g. Feronni and Mody, 2002) judge that poverty eradication should not be considered as an IPG, because if it were so, "all development activities would fall under the umbrella of IPGs, and the concept would have lost its edge". There are however at least two reasons to consider poverty eradication as an IPG in the context of this paper: first, the abject poverty in which a large part of the humankind lives, in spite of the many progresses achieved so far, is felt unacceptable by a growing number of citizens worldwide on ethical grounds; second, this extreme poverty, which is more and more geographically concentrated, may become in the long run a factor of risk for the rich countries themselves. Given the multi-dimensional nature of poverty, it is a cross-cutting issue, and will be addressed as such in this paper. It will be therefore considered in all sections, but will deserve some further discussion at the end of this paper.

We will need also to take in consideration, in this paper, some regional public good issues as well. One could think that the weakness of sub-Saharan African countries is due, at least in part, to the balkanization of the continent. Sub-Saharan African countries are typically small, and many are landlocked and have for this reason no easy access to world markets. It might therefore be considered that regional initiatives, either at the continental level or within sub-regions, could provide partial solutions to the production of IPGs for sub-Saharan Africa as a whole. There have been many such regional initiatives aimed at promoting the development of regional public goods within Africa, in almost all the areas that we have just mentioned. A second cross-cutting issue that we will have to consider is therefore whether regional initiatives may improve the situation of sub-Saharan Africa with respect to the production of and access to IPGs. We will explore this question in the course of discussion of each of the three components of the problem that we have just defined. Unfortunately, it will appear that the capacity of sub-Saharan Africa to produce regional public goods is extremely limited.

The rest of this paper will be organised as follows. In section 2, we will study the areas of trade, macroeconomic and financial stability, and knowledge, with a principal emphasis given to the inability of sub-Saharan Africa to take advantage of existing IPGs. In section 3, we will discuss the areas of health and peace and security, where the situation of sub-Saharan Africa can be best described in the classical context of the weakest link public good discussion. In section 4, we will consider the environmental debate, in which sub-Saharan Africa can be viewed as a nearly forgotten link in the global system. Section 5 further discusses the overarching question of poverty eradication and concludes.

2. The inability of sub-Saharan Africa to consume existing international public goods

International trade

African economies have a very small and decreasing participation in the world trading system. According to WTO figures, the share of Africa as a whole in world trade, which was about 7% in 1950, declined to 2% in 2000. Sub-Saharan Africa accounts for some 70% of total African trade, i.e. 1.4% of world export. This evolution suggests that the multilateral trade liberalization achieved under the auspices of the GATT and WTO has not benefited much to sub-Saharan Africa's integration in the world trading system. Basically, this trend reflects the de-linking of sub-Saharan Africa in the globalization process. This shows that the IPG-related problem of sub-Saharan Africa in this area is a simple one: Multilateral trade liberalization as an IPG has been realized to a large extent, whatever its imperfections, but sub-Saharan Africa has been unable to reap benefits from it.

There are however several reasons for this failure, which need to be discussed, in view of qualifying this preliminary assessment. One of them is associated with the declining terms of trade of sub-Saharan Africa. To a large extent, this decline is the mere result of African specialization in primary commodities, whose prices have generally declined over the past decades, with the exception of petroleum. Although this terms of trade decline is undoubtedly the simple and inevitable result of market forces, there is one area in which the GATT and WTO could have made a difference. This area concerns trade policies in agricultural products. Given sub-Saharan Africa's comparative advantage and specialization in agricultural commodities, this question of trade rules in agricultural products is a major issue for this region, for reasons that go beyond the simple question of terms of trade.

Until the creation of the WTO, agricultural trade policies were for all practical purposes not part of the negotiation agenda in the GATT. Since then, some attempts at reducing trade barriers and export and/or production subsidies in major developed economies – European Union (EU), Japan and United States – have been made, but with only limited successes. There are three separate issues in this area: Production and export subsidies on products that directly compete with African exportable products; subsidies on cereals and other staple food

that are substitutes to African domestic food crops; and tariff and non-tariff barriers against African agricultural exports.

The first issue concerns cotton and sugar principally. There has been an almost successful attempt at introducing the question of cotton subsidies in the Cancun negotiation agenda, by four African cotton producers, Benin, Burkina Faso, Chad and Mali, but this failed due to the overall failure of the Cancun conference. In 2001-2002, according to the International Cotton Advisory Committee, cotton subsidies worldwide amounted to about US$5.8 billion, which was nearly the amount of international cotton trade. 25,000 cotton farmers in the United States alone received subsidies worth some US$4.0 billion. Partly as a result of cotton subsidies, cotton price in the international market was almost halved between 1997 and 2002. Various estimates show that a removal of distortions would, over a decade, increase world cotton prices by around 12.7%, African cotton export receipts by 12.6% and African cotton production by 6%, principally at the expense of United States (Baffes, 2005). This is a clear case of sub-Saharan Africa being the forgotten actor in international trade negotiations, rather than of its inability to take advantage of multilateral trade liberalization.

As for sugar, which has been up to now heavily subsidized by the EU, the situation is different, because under its policy the EU also imports sugar from ACP countries. The ACP group is an inclusive group of African, Caribbean and Pacific countries, which have preferential access to the EU market in the context of the Cotonou convention (previously the Lomé convention). All sub-Saharan African countries are full members of this group, with the exception of South Africa, which has an observer status. In the current regime, ACP countries can export sugar at a price three times higher than the international market price, under a quota scheme. This subsidy represents 70% of their revenue in the sugar sector. This system, which has been very adverse to other developing countries, in particular Brazil, South Africa and Thailand, is due to come to an end in 2006, because the WTO ruled in September 2004 that it was incompatible with the GATT. The European Commission announced measures in this direction in June 2005. As a consequence, ACPs who are major sugar exporters, in particular Mauritius, are doomed to suffer a big loss of market shares in the world market, to the benefit of other more competitive developing countries such as Brazil. But so far the existing distortions in the multilateral trade regime have been basically favorable to them, rather than detrimental.

Other agricultural markets are depressed by agricultural subsidies in developed countries, such as the cereal market. The impact on sub-Saharan African countries is different, insofar as they are not natural exporters of cereals and of food products principally originating in the Northern hemisphere. Quite the contrary, they are more and more net importers of such commodities. When they are net importers, consequences of existing distortions on their terms of trade are positive instead of negative. In 2002, 15 out of 28 countries for which data where available from WTO were net importers of food commodities,[125] although the average African country was still a net exporter. There are however possibly negative economic and social consequences, when cheap imported staple foods displace domestic production, and depresse local markets, while the majority of active labor force still depends on agriculture for its survival.

There are also trade barriers protecting the agricultural markets of developed countries, but sub-Saharan African countries – with possibly the exception of South Africa – do not suffer much from this foreign market protection, because their main productions are tropical products, which do not compete with foodstuff grown in developed countries. Moreover, their closest relevant trade partner is the European Union, which has granted generous market access to ACP countries.

[125] Including, in particular, Benin, Burkina Faso, Guinea, Niger, Senegal, Sudan, Togo and Zambia.

Beyond trade in agriculture, sub-Saharan African economies have enjoyed a number of “special and differential treatments”. Such preferential treatments have been so far granted on a bilateral or regional basis, rather than through a truly multilateral process; nevertheless they have been essentially favorable to African economies. Only recently, since the Doha conference, the WTO has tried to move forward on a multilateral development agenda, but results are still in the making.

Thirty African countries belong to the group of so-called Least Developed Countries (LDCs), which has been recently the main beneficiary of special and differential treatments. The best-know recent initiative in this direction has been launched by the European Union, with its “Everything But Arms” (EBA) scheme, granting tariff and quota-free access to all products (but arms) exported by LDCs. It should be recognized, however, that such initiative is not particularly favorable to African countries. This is because sub-Saharan Africa already enjoyed preferential treatment before the EBA initiative, under The EU/ACP Lomé and Cotonou conventions, which have granted trade preferential agreements to ACP countries since the early 1970s. African LDCs account for only about 50% of LDCs exports, and will have therefore to share this free access privilege that they previously enjoyed with major non-African LDCs, particularly Bangladesh. Moreover, although a large majority of African countries are LDCs (and represent almost half of the African population), they account for only 19% of African exports. Therefore, the EBA initiative should not be considered as an initiative particularly favorable to sub-Saharan Africa. In other words, in this area, progresses toward a multilateralization of the global trade regime will be unfavorable to sub-Saharan Africa.

The old EU/ACP trade conventions system was in fact condemned to discontinuation, since it has been declared incompatible with GATT by the WTO. Consequently, it will be phased out and replaced by a new system by January 2008. The new system proposed to ACP countries is to negotiate with the EU Reciprocal Economic Partnership Agreement (REPAs), in which they would have to grant the Europeans reciprocal free access for most of their products, in reciprocity for their free access to the European market. Such reciprocity should be put in place within a 10-12 year timeframe. The foreseeable ultimate consequences of this change may be adverse to ACP countries. They already enjoy free access to the EU market for 95% of their merchandises, and this situation will not be altered by REPAs; nevertheless, so far they have been unable, with only very few exceptions (such as Mauritius) to take advantage of this free access to the European market. Conversely, the consequences of an opening of their markets to European products could be partly negative, if only for the loss of custom duty receipts that it would imply. It should be noted that LDCs will be exempted of this new system, because they will continue benefiting from the EBA scheme. This might however introduce a lot of complications, given that REPAs are supposed to be negotiated on a regional basis, and that each and every regional groupings that are considered contain both LDCs and non-LDCs.

Curiously, the United States introduced in the year 2000 a discriminatory agreement in favor of sub-Saharan African countries, almost at the same time as the old EU/ACP preferential trade scheme was ruled GATT-incompatible by the WTO. The AGOA (African Growth and Opportunity Act) system has granted a large group of African countries[126] free entry in the American market, including in the sensitive textile and clothing sub-sector. However, from the beginning, the AGOA has been conceived as a temporary scheme. It was granted initially until 2008, and has been extended in 2004 till 2015.

Apparently, the AGOA has had already a significant positive impact on a few African countries, particularly in the textile and clothing sub-sector. One reason for this relative

[126] The list of eligible countries varies over time, based on discretionary political decisions. In 2005, there are 37 eligible countries. See http://www.agoa.gov/.

success might be the relaxation of rules of origins for African LDCs. Recent research has shown that liberal rules of origin are critical for a strong trade response in sectors such as textile and clothing (Hoekman *et al.*, 2004).

Table 1 shows the evolution of the United States' import from the five largest African exporters of textile to this county in recent years. It clearly suggests a very large impact of the AGOA on these countries' exports, particularly in the textile sector. Among these countries, Mauritius exhibits however a different evolution, with a significant decline of textile exports. The most plausible reason is that, in order to take advantage of the rules of origin exemptions granted to LDCs, Mauritius has relocated part of its textile and clothing industry to neighboring LDCs (particularly Madagascar).

The impact of AGOA on non-fuel exports to the United States is however limited to few countries (principally the five countries analysed in Table 1). This suggests that, apart from these few countries, African economies have been in fact unable to take advantage of market access that they have been granted under special and differential treatment schemes, even when the rules of origin have been relaxed as in the AGOA. This observation is consistent with our central thesis saying that so far the principal problem of sub-Saharan Africa with the multilateral trade system has been its inability to reap benefits from foreign market opening already achieved since 1945.

Table 1 Impact of AGOA on five African countries

	Exports to the US (mn US$) (2004)	*Growth of exports to US (2002-04)*	*Share of textile (2004)*	*Growth of textile exports to US (2002-04)*	*Share of exports to US under AGOA (2004)*	*Growth of exports to US under AGOA (2002-04)*
Kenya	352	86.2%	78.8%	119.3%	81.4%	121.9%
Lesotho	467	45.3%	97.6%	42.0%	95.9%	40.8%
Madagascar	469	117.4%	69.0%	259.8%	67.5%	297.4%
Mauritius	270	-3.6%	83.9%	-10.9%	59.3%	40.4%
Swaziland	199	73.7%	89.9%	100.6%	89.0%	117.7%

Source: Computed from US International Trade Commission data.

The inability of sub-Saharan Africa to expand its exports, particularly in non-traditional products, is directly linked to its lack of export capacities. This problem may exist elsewhere but it is particularly acute in sub-Saharan Africa, for several reasons: huge transportation and communication costs, due in particular to weak infrastructure and low population density; small size of African economies and lack of viable regional integration schemes; absence of technically skilled workforce; and very rudimentary financial systems.

The recognition of huge export capacity gaps in sub-Saharan Africa has led in recent years to focus part of the discussions on African trade and development on the need to develop trade capacity building projects in favor of this region. In this respect, the WTO and development agencies have a major role to play. However, this has been recognized only recently, particularly at the Doha meeting in 2001. WTO and donors are now working together in this direction. This may bring some significant change in the future, after several decades of trade liberalization policies that were implemented without much consideration given to the export capacity constraint in developing countries in general and in sub-Saharan Africa in particular.

The WTO and OECD/DAC have identified since 2001 all projects related to trade capacity building in developing countries. For the three years 2001 to 2003,[127] various donors have

[127] Complete 2004 figures were still unavailable at the time of writing.

committed resources worth US$15.2 billion, 62% of which in favor of Africa. However, 77% of these funds are related to infrastructure building (transport and storage: 47%, communication: 3%, energy: 27%), which are not necessarily very specific to trade capacity building. The balance is spent for 17% on trade development (business support services and institutions, public-private sector networking, E-commerce, trade finance, trade promotion strategy and implementation, market analysis and development) and for 6% on capacity building related to trade policy and regulation.[128] The weight given to infrastructure in trade capacity building is possibly excessive. In particular, some experts consider that the development of SMEs is critical for building trade capacity, and this requires principally business support services and more generally an enabling business environment (see, e.g., Eifert, Gelb and Ramachandran, 2005).

Trade capacity building is certainly needed by African countries. Otherwise, most of them will remain unable to take advantage of the multilateral trading system that has been progressively built since WWII. Mainstreaming trade in development strategies – and in poverty reduction strategies as well – is nowadays considered as a priority by African governments as well as by many of their development partners, given the huge cost incurred by sub-Saharan Africa in being unable to participate actively in the globalization process. This should certainly be a key component of the development agenda of the WTO, in conjunction with other multilateral agencies and bilateral donors. In sum, there is now ample recognition that, in the area of international trade, complementary activities are necessary to help sub-Saharan African countries "consume" the IPG that is constituted by multilateral trade liberalization.

Macroeconomic and financial stability

With respect to macroeconomic and financial stability, two very different aspects need to be discussed from an African viewpoint. The first one relates to the significant macroeconomic instability that affects the economic environment of all trading countries. This instability is non-negligible, and international initiatives taken to cushion its impacts on African economies are probably insufficient. In this first area, sub-Saharan Africa may be described as a relatively forgotten actor in the global system, suffering from the inability of the principal actors to reduce macroeconomic instability and/or to offer smaller actors a protection against the corresponding shocks. We will study first this aspect, although it should not be overestimated. The economic instability in sub-Saharan countries comes also to a large extent from domestic policy shocks. In this second area, international institutions, particularly the IMF, have over the past two decades implemented in sub-Saharan Africa a significant capacity building investment, which has played useful role in spite of some shortcomings.

Sub-Saharan Africa is even less participating in financial globalization than it is in the global trading system. The only significant economy that has noteworthy linkages with the world financial markets is South Africa.

According to South African authorities, global financial stability would be a relevant international public good for South Africa. The South African financial markets and the rand have been hit by the shockwaves of the Asian crisis, particularly in 1998, together with Russian and Brazilian markets. This has come at the worst moment for South Africa, which was trying to set up a new economic strategy to revive its sluggish economic growth.

Towards the end of 2001, the rand experienced a further speculative attack, following the Argentinean crisis. However, the true reasons for this sharp plunge of the rand (by 24% against the US dollar during the last quarter of 2001) remained unexplained for most observers in South Africa, given that the fundamentals of macroeconomic policy were considered satisfactory. There were rumors of speculative manipulations, but the Myburgh

[128] These percentages are for Africa as a whole, including Northern Africa.

Commission, which had been created to investigate rand trading during 2001, was unable to prove that there had been any illegal market manipulation by traders.

With the benefit of hindsight, one may think that the rand plunge in 2001 was more of an overshooting nature than anything else. As a matter of fact, it was followed by an equally abrupt recovery, which in the end severely deteriorated South African competitiveness. Whatever the reasons, these recent ups and downs in the rand market certainly showed the fragility of the South African financial markets in the context of financial globalization. They do not explain, however, much of the trends in economic performances of the South African economy, which were almost equally disappointing when capital flew in and out.

What happens in South African financial markets has repercussions on its small neighbors, particularly those who belong to the Common Monetary Area in Southern Africa (Lesotho, Namibia and Swaziland), as well as Botswana. However, the impact on the rest of the continent is minimal.

As in other developing regions, international currency fluctuations have an impact on many African countries. This is particularly true for the Franc Zone members, whose currencies, the CFA Francs, have been pegged to the French Franc – and then to the euro – since the 1940s.[129] The sharp fluctuations of the euro against the US dollar, which are obviously exogenous to the fundamentals of Franc Zone countries, may have significant impacts on these economies. However, among the channels through which these fluctuations affect the Franc Zone countries, the influence of the exchange rate on price competitiveness is not necessarily the most significant. This is so because these countries are almost only exporters of primary commodities, and have only very small industrial bases competing with foreign suppliers; this implies that trade share losses or gains associated with currency fluctuations are minimal. The strongest impact is on producers of exported commodities and, particularly when domestic price fluctuations of exported commodities are cushioned by the governments, on fiscal accounts. Consequently the standard negative impacts of appreciation of the CFA francs, when the euro appreciates against the dollar, are attenuated by positive fiscal consequences. In recent years, when the euro was strong, Franc Zone countries had relatively favorable growth performances, with the obvious exception of Côte d'Ivoire.

The most significant impact of global macroeconomic and financial instability on sub-Saharan Africa is related to commodity markets. Fluctuations in commodity markets are not only very wide, but they have also in some circumstances a rather high degree of persistence. This means that they are not just short terms fluctuations, against which exporters could possibly buy insurance through the futures markets, but risks that have a significant non-insurable component.

Recent research produced by the IMF[130] has shown that the terms of trade shocks on sub-Saharan African countries have usually very long durations. The speed of reversion of terms of trade to their mean, as measured by the time necessary to dissipate half of the effect of the initial shock, is less than 2 years for 16 countries (out of 42 countries studied by the IMF), but between 2 and 4 years for 7 countries, and above 4 years for 19 countries. Among the latter, 11 countries have undergone terms of trade shocks that can be considered as permanent: Angola, Botswana Cameroon, Congo, Cote d'Ivoire, Gabon, Kenya, Mauritania, Nigeria, South Africa and Uganda.

---

[129] Members of the Franc Zone are those of West African Monetary Union (Benin, Burkina Faso, Cote d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo) and of Central African Monetary Union (Cameroon, Central African Republic, Congo, Gabon, Equatorial Guinea and Chad), and Comoros.

[130] See Cashin, Mc Dermott and Pattillo (2004).

In addition to terms of trade fluctuations, the volumes of exports are very unstable, due to variations in climatic conditions. Overall, sub-Saharan African countries face huge instability in their export receipts. The consequences of this instability have been extremely negative in the past, notably because booms were not properly managed by governments, who typically found themselves insolvents after the busts, for having overspent previously.[131] Lessons may have been learnt from previous mistakes, but it remains that African governments lack instruments to insure their economies against such balance of payment shocks. There would be certainly a need for financial instruments that would help cushion these shocks.

Given that such shocks are international in nature, and cannot be managed by governments of poor countries individually, there have been some attempts by the international community to provide them with at least partial solutions, but none of them has been successful so far (Mendoza, 2003).

One of them was the so-called Stabex mechanism, offered by the European Union to the members of the ACP group in the context of the Lomé convention. The Stabex provided for financial assistance to countries when they had experienced a severe decline in the receipts associated with their main agricultural commodity exports. This was a very cumbersome system, which involved long delays before a financing decision could be reached. As a consequence, when assistance was provided, it reached the recipient country several years after the initial shock. Due to these delays, rather than being counter-cyclical, this assistance became in fact pro-cyclical in some circumstances.[132]

The IMF has also in principle a facility available for assistance in case of sudden shortfall in export earnings – the Compensatory Financing Facility. However, its financial terms are almost the same as those applying to Stand-By Arrangement, which make them a relatively unattractive instrument for African governments who cannot afford to borrow resources at market conditions. This kind of mechanism is consequently not very relevant for sub-Saharan Africa. Only conditions similar to those of the PRGF (Poverty Reduction and Growth Facility) would possibly give this instrument some value for sub-Saharan African countries.

These concessional terms are already granted since 2001 to PRGF-eligible countries that access another IMF financial facility, the emergency assistance fund, created to deal with emergency situations such as post-war interventions. Concessional emergency assistance has been granted recently to a couple of post-conflict sub-Saharan African countries (Burundi and Central African Republic). But such emergency financing decisions, which rely on funding of the grant-element by bilateral donors, are easier to make on a case by case basis for a very limited number of situations than for shocks such as those occurring in terms of trade, which are very frequent and common to all African countries.

A further complication comes from the pro-cyclicality of aid. Using data from 1969 to 1995, Pallage and Robe (2001) have shown that for the vast majority of sub-Saharan African countries, aid received is a highly volatile source of income, and that it is overwhelmingly pro-cyclical. Pallage and Robe show also that this issue is specific to sub-Saharan Africa, although this is the region that has the highest dependence on foreign assistance. The reasons for aid pro-cyclicality, although it ought to be anti-cyclical to reduce the vulnerability of poor countries, may be the following: disbursement are in some instances conditioned by performance criteria, which cannot be met under severe cyclical stress; fluctuations in output and terms of trade may increase social and political disorder, resulting in reduced involvement from the donors; aid allocation decisions are made after long lags, implying that emergency assistance may arrive when the crisis is over; donors pursue their own interest when giving

[131] A classical example is Côte d'Ivoire – see Berthélemy and Bourguignon (1996).
[132] For a discussion of the Stabex, see Collier *et al.* (1999).

aid to recipients, and it may be in their own interest to favor countries with relatively good performances, who could be for instance more reliable clients and business partners.

Whatever the reasons, it is clear that in a more appropriate international aid architecture the donors as a group ought to afford counter-cyclical aid flows to recipient countries, and this would be particularly desirable in the case of sub-Saharan Africa, given the extremely high volatility of African economies.

In recent years, there have been attempts at introducing innovative commodity risk management, using market mechanisms. An international task force has been created in 1999, by international agencies, donors and private sector operators, with the World Bank acting as the execution agency. The first implementation of price risk management projects started in 2002. However, as recognized by the task force itself, market based instruments can provide only limited cover of commodity-related risks to low-income countries. This is true as well for sub-Saharan Africa as a whole, with very few exceptions. This is due to the already mentioned rather long duration of price fluctuations for a number of commodities exported by sub-Saharan African countries; to the fact that hedging instruments are not available for several commodities (e.g. tea); and to the absence of hedging instruments to cover risks associated with fluctuations in export volumes. The international task force on commodity risk management has also started developing weather risk management instruments, but so far none has been used in sub-Saharan Africa. As a matter of fact, lessons learnt from existing experience suggest that sub-Saharan Africa might face significant obstacles in this area, if only because the development of weather-based indexes requires long climatic time series of excellent quality. A pilot study is however underway in Malawi.

Would regional arrangements help solve the macroeconomic instability problems faced by sub-Saharan African countries? There have been in fact already many attempts in this direction, with very limited success.

The best known initiative is the monetary integration within the Franc Zone. Within the Franc Zone, the fixed peg of the currencies to the euro, together with related precautionary monetary policies, has created a haven of monetary stability. However, there are two limits to this experience. First, it is based in the end on the full backing of the convertibility of the local currencies by the French Treasury. In counterpart, the French Treasury exerts surveillance on monetary policies implemented by the local central banks, with a relatively high degree of centralization given that these central banks are only three in number: the BCEAO (Banque Centrale des Etats de l'Afrique de l'Ouest) for members of the West African Monetary Union (WAMU), the BEAC (Banque des Etats de l'Afrique Centrale) for member of the Central African Monetary Union and the Banque Centrale des Comores for the Comoros. The French Treasury is therefore both a sort of external agency of restraint and a guarantor for the Franc Zone members. Scaling up this system to the whole of sub-Saharan Africa would prove difficult, because it would mean a multilaterally agreed loss of monetary independence for the region as a whole. In fact, the recent attempt by Gambia, Ghana, Guinea, Nigeria and Sierra Leone at creating a competing West African Monetary Zone (WAMZ), which would be in the end merged with the WAMU, has been so far rather ineffective, in spite of the creation in Accra in 2000 of the West African Monetary Institute, supposed to become the future central bank of the WAMZ.

Second, monetary stability does not mean macroeconomic stability. A fixed exchange rate may be an obstacle to efficient business cycle management when the terms of trade are highly volatile, because then the equilibrium exchange rate critically depends on the terms of trade fluctuations. On this point, analyzing short-term cyclical components of economic activity provides a useful tool to compare macro-economic instability in Franc Zone members and non-members. A test performed on the standard deviation of the cyclical component of GDP

per capita,[133] measured over the 1950-2002 period, shows in fact that this volatility has not been statistically different in the two groups of countries, although it has been on average somewhat lower in Franc Zone members. Similar results are obtained for maximum values and minimum values (peaks and troughs) of the cyclical components (see Table 2).

Table 2 The Comparison of cyclical component of GDP per capita in Franc-Zone members and non members

	Franc Zone members	*Non-members*	*Level of significance of difference*
Standard deviation	.034	.039	38%
Minimum	-.097	-.134	26%
Maximum	.111	.103	63%

Note: the cyclical component is measured (in logarithms) as the difference between the actual series and its transformation by a Hodrick-Prescott filter.
Source: Author's computation.

It should be recognized that macroeconomic policy mistakes, both in Franc zone members and elsewhere, have been frequent and have influenced African macroeconomic instability. With respect to monetary policy, retarding the CFA francs devaluation in the Franc Zone until January 1994, when it had been obvious for several years that it had become overvalued, in view of the sharp decline in terms of trade starting in the end of the 1970s, was certainly a policy mistake. To be fair, French politicians had a responsibility in this decision, but in the end the last blockage came from African political leaders. Outside the Franc Zone, many countries have faced standard monetary instability episodes due to monetary financing of their fiscal deficits. This is true even for a country like Ghana, which has been praised for its economic reforms, but which has been unable until the last few years to avoid cyclical inflationary episodes, correlated with the political election cycle. Fiscal policies have been even worse until the mid-1990s, starting with the already mentioned episodes of unbearable over-spending during the commodity boom of the mid-1970s, which initiated the debt crisis incurred by most sub-Saharan African countries in the 1980s.[134]

In the area of macroeconomic policy making, the international financial institutions, particularly the IMF, have played a major role in sub-Saharan Africa through policy advice. Most of the countries in the African region have, or have had at some point, assistance programs from the IMF, through which the IMF has a significant influence on the conduct of their macroeconomic policies.

In fact, sub-Saharan Africa is probably the developing region that still receives today the highest amount of policy advice not only from the IMF but also from other multilateral institutions and bilateral donors as well. The usual day of an African Minister of Finance is to a large extent devoted to meetings with foreign experts who come either to deliver their advice or to get information to prepare their next report. In a typical sub-Saharan African country the IMF has a permanent resident representative,[135] whose office is frequently located within the Ministry of Finance or at the Central Bank, and who interacts daily with senior policy makers.

[133] GDP per capita is measured in PPP, based on the Groningen Growth and Development Centre and the Conference Board database. http://www.ggdc.net/. See Berthélemy (forthcoming) for reference on the computation of the long term and cyclical component.
[134] For an analysis of macro-economic policies during the adjustment period in sub-Saharan Africa, see Husain and Faruqee (1994).
[135] In April 2002, the IMF had 86 resident representative worldwide.

In view of the relatively poor performances of African economies, one may reasonably ask what the average value of such advices is. There are probably several issues at stake here, in the African context:

Any advice given by an expert – even when this advice comes along with a conditional financing – has no impact if the policy maker who adopts this advice does not really believe in it. This is probably true everywhere, but given the very fuzzy information base that is available in sub-Saharan Africa it is even easier there than anywhere else to tell an expert that his policy advice is thoroughly followed and to implement a totally different policy.

Advices are sometimes contradictory, for lack of real coordination of the various donor agencies. It has been observed, in some cases, that at the same time the World Bank gave a policy recommendation and that the IMF gave exactly the opposite advice.[136]

Policy recommendations are not necessarily based on a thorough knowledge of local economic conditions. Such recommendations are more useful if they have been discussed in detail with national professionals of high caliber, who are still missing in some African Ministries of Finance. There is probably in this respect a vast difference between sub-Saharan Africa and other developing regions, although this situation is slowly improving, thanks to long terms efforts devoted to training professional African economists.

In support of policy advice, Africa receives also a lot of technical assistance, and of training as well. As an example, Sub-Saharan Africa receives about one-quarter of all IMF technical assistance.[137] This is supplemented by technical assistance from other donors. The typical African country has resident technical assistants within the Ministry of Finance and/or the Central Bank, who are directly involved in the policy making process. The IMF has also opened two regional technical assistance centers, in Tanzania in 2002 (for Eastern Africa) and in Mali in 2003 (for Western Africa). In addition, African civil servants and policy makers receive a significant amount of training on macroeconomic policy making from the IMF, either in Washington DC or at the joint African Institute (joint with the African Development Bank) in Tunis: Africans accounted in 2002-2003 for 19% of the total number of weeks of training given by the IMF. However, most of this training has been given in Washington D.C., partly because of the modest capacity of the African Development Bank. In this area, the African ability to build and maintain regional training institutions is limited and certainly inadequate. The role of the African Development Bank is minimal, in spite of its association with the IMF. The African Centre for Monetary Studies, which was created in the early 1970s by the Association of African Central Banks to provide training on monetary and financial policies to African central bankers, has been closed down a few years ago.

If the quantity of macroeconomic policy advice and training received by sub-Saharan Africa is considerable and incontestable, its quality and its relevance are much harder to assess. The macroeconomic performances of sub-Saharan Africa do not suggest that this international public good has been up to now extremely valuable for this region, but we lack clear counterfactual observations to make such an assessment. Countries that have not received IMF/World Bank advice are very few, and their bad performances may be due to adverse political conditions such as civil wars.

It may be however noted that there has been over the years a marked tendency to improvement of macro-economic fundamentals such as public finance sustainability, balance of payment equilibrium, and inflation control. In the early eighties, the median fiscal deficit in

[136] See Berthélemy and Bourguignon (1996) for an example on trade policy in Côte d'Ivoire, where at some point the World Bank recommended trade liberalization and the IMF asked for custom duty increases.
[137] IMF and World Bank, Global Monitoring Report, 2005.

sub-Saharan Africa was between 6 and 7%; it is now between 3 and 4%.[138] The median current account deficit oscillated between 7 and 10%; it is now around 5%. The median inflation rate was around 12%; it is now around 5%.[139] This evolution is due to better monetary management in high-inflation countries and to fiscal reforms, including the introduction of expenditure management systems and of modern taxation instruments such as the VAT. The IMF and other institutions have certainly played a role in these achievements. According to many opponents to the IMF/World Bank adjustment programs, the prescription given to the patient has almost killed him/her in the 1980s and the early 1990s, when African growth plunged to dramatically low levels. There is no doubt, however, that in the early 1980s a majority of countries in sub-Saharan Africa had very deteriorated macro-economic fundamentals, which were unsustainable. Adjustment programs were therefore a necessity, even though other actions were needed, such as debt relief, which were taken too late by the donors.

One could rightly argue that international financial institutions have their own responsibilities in the crisis in which sub-Saharan Africa was caught in the 1980s. Cote d'Ivoire is a classical example, where the World Bank advised the government to borrow more in the 1970s to accelerate growth and diversification of the economy, and by doing so contributed to the complete collapse of its financial situation. Nevertheless, it is fair to say that they have learned from past mistakes, and that they are better equipped now to prevent such crisis situations and manage them when they happen in sub-Saharan Africa.

Moreover, for about already 10 years now, economic growth has somewhat recovered in the region, with median growth rates that are nowadays above 4%, while they were about 2.5% in the early 1980s. There is no doubt that macro-economic management has improved in sub-Saharan Africa since the 1980s debt crisis, and the Bretton Woods Institutions can rightly claim their part of responsibility in these successes, although African leaders have been themselves the principal actors.

In sum, even though sub-Saharan Africa has not received much assistance from the international community with respect to mitigation of macroeconomic external shocks, it has benefited from support by international institutions to better avoid internal shocks related to policy mistakes. At least over the past ten years, many sub-Saharan African countries have significantly improved their macroeconomic fundamentals, an achievement that is not independent of the transfer of knowledge and expertise that they have received in this specific area.

This leads us to the discussion of knowledge in general as an international public good. In this domain, the picture that we can draw of the current situation of sub-Saharan Africa is much less positive.

Knowledge

Knowledge is a strategic asset for development, and one that is dramatically missing in sub-Saharan Africa. Debates on the dissemination of knowledge and transfer of technology at the global level are frequently centered around the WTO discussions on the intellectual property rights rules. The TRIPS (trade related intellectual property rights) agreement reached during the Uruguay round has created common international rules that protect such rights. It is viewed by detractors of the WTO as an obstacle to the development of poor countries. Discussions on this subject between developed and developing countries are at a standstill in the Doha round, although a decision has been reached in August 2003 to introduce a waiver to the TRIPS concerning imports of essential drugs by the poorest countries. This waiver is meaningful for sub-Saharan Africa, in particular with respect to the purchase of anti-retroviral

[138] Source: Author's computations based on IMF World Economic Outlook database.
[139] Source: Author's computations based on World Bank World Development Indicators database.

treatments of the HIV/AIDS disease, but concerns obviously a very small part of the whole subject of international rules concerning intellectual property rights.

However, the TRIPS issue is only one part of the problem, which has many other facets. As far as sub-Saharan Africa is concerned, the following issues have been up until now probably more pressing than the protection of inventions by patents:

- Existing inventions are not necessarily adapted to conditions prevailing in sub-Saharan Africa, which means that even in a world where African countries would be exempted of paying patents, they would not have at their disposal a knowledge base adequate to solve their own problems;

- Successful development needs a combination of global knowledge and of local knowledge (Stiglitz, 1999) – in other words even if knowledge were a purely non-excludable public good, sub-Saharan African countries would be in many instances unable to consume it;

- Successful development requires not only technological knowledge about how to produce goods, but also knowledge about how to organize an efficient economic system, which is a non-excludable public good, but one which is under-produced in sub-Saharan Africa. This knowledge can be called "knowledge for development" after Stiglitz (1999). In a sense this category contains expertise on macroeconomic policies that we have just discussed, but it concerns also many other aspects of policy making.

The first issue is best illustrated by the initial failure of the green revolution in sub-Saharan Africa, which is probably the main area in which the region dramatically needs technological progress, in view of its frequent food security crises. The green revolution has been initiated by international efforts at producing high yield varieties (HYVs) of cereals by the IRRI (International Rice Research Institute) and the CIMMYT (International Maize and Wheat Improvement Centre). Further research has been done by a number of agricultural research centers around the world, including several in sub-Saharan Africa, principally under the umbrella of the CGIAR (Consultative Group on International Agricultural Research). During the 1960s and the 1970s, HYVs have not contributed to the modest growth of food production in sub-Saharan Africa, which was about 1.7% a year, that is much less than population growth (Evenson and Gollin, 2003). During this first phase of the green revolution, HYVs that where available were principally adapted to irrigated areas, and could not be successfully adopted in the semi-arid conditions of many sub-Saharan African countries producing cereals, while in tropical wet areas, the main food crops were made of pulses and root crops. Bad institutional and political conditions had also probably some influence on these poor performances.

However, agricultural research promoted by the CGIAR has been diversified, and has benefited to a growing extent to sub-Saharan Africa in recent years. Nowadays, the CGIAR invests 47% of its annual budget for creating solutions to problems of African farming.[140] CGIAR has four research centers in Africa – the African Rice Centre (formerly in Côte d'Ivoire, relocated in Benin due to the civil war), the International Institute of Tropical Agriculture (in Nigeria), the International Livestock Research Institute and the World Agroforestry Institute (both in Kenya). In addition the ICRISAT (International Crops Research Institute for the Semi-Arid Tropics), which has its headquarter in India, has seven decentralized centers in sub-Saharan Africa. All these efforts have led to results that are becoming visible. For instance, the African Rice Centre has produced a new variety of rice (the NERICA), which provides higher yields and is drought tolerant. Also, ICRISAT has

[140] Source: CGIAR website www.cgiar.org.

developed improved varieties of sorghum, millet, groundnut, chickpea and pigeonpea that are adapted to semi-arid conditions. Varietal improvement has also been achieved in sub-Saharan Africa with respect to maize and cassava. Overall, food production in sub-Saharan Africa has grown faster in the 1980s and the 1990s than in the previous decades, at a pace of 3.2% a year, and HYVs have contributed to this higher growth, although for a modest 0.5% (Evenson and Gollin, 2003). The fact is that such research takes a long time before being successful, and that more time is necessary to disseminate newly elaborated HYVs to farmers. Their dissemination requires also investments to promote local knowledge, necessary for a successful adoption of new varieties by a large number of small farmers. This may explain why progresses obtained so far are quantitatively unimpressive. Nevertheless, issues in this area are less and less associated with lack of investment in the supply of adequate international public goods to sub-Saharan Africa, and more and more with insufficient complementary vulgarization activities.

The absence of local knowledge necessary to complement global knowledge is pervasive in sub-Saharan Africa. A recent evaluation produced by the World Bank on knowledge performance ranks sub-Saharan African countries far behind most other developing countries. This indicator is a composite index based on education and human resources (adult literacy rate, secondary and tertiary enrolment rates), innovation systems (researchers in R&D, patent applications and scientific and technical journal articles) and information infrastructure (telephone, computer, and internet connection densities per person). Table 3 shows that sub-Saharan Africa has the lowest knowledge capacity, although it has an edge on South Asia with respect to information infrastructure. Only Botswana, Mauritius and South Africa have performances somewhat comparable to those of Latin American or East Asian countries.

Table 3 Knowledge performance of sub-Saharan Africa compared to other regions

Region/country	*Overall knowledge index*	*Education*	*Information Infrastructure*	*Innovation*
World	4.9	4.9	5.0	4.9
of which				
Developed Oceania	8.7	9.1	8.7	8.4
Western Europe	8.3	8.1	8.6	8.1
Europe and Central Asia	5.8	6.7	5.3	5.5
East Asia	5.3	5.0	5.5	5.3
Latin America	4.2	4.5	4.7	3.3
Middle East and North Africa	4.1	3.9	4.8	3.7
South Asia	2.0	2.1	1.3	2.5
sub-Saharan Africa	1.7	1.5	1.9	1.7
of which				
South Africa	5.0	4.5	5.3	5.3
Botswana	4.1	2.9	4.2	5.3
Mauritius	4.3	3.9	6.5	2.7

Note: all index are based on a 0-10 scale
Source: http://info.worldbank.org/etools/kam2005/home.asp, June 2005.

The absence of local knowledge is principally a local issue, and one cannot blame only the international community for the resulting incapacity of sub-Saharan African countries to take advantage of existing international knowledge. This calls, however, for investments complementary to those made in IPG production.

With respect to education, the lack of competence available in sub-Saharan Africa is firstly related to adult illiteracy rates that are still very high – the illiteracy rate is still around one

third on average, and a majority of adults are illiterates in still one fourth of the countries. Those illiterates are certainly concentrated in rural areas and in the agriculture, a sector where technological progress is particularly needed, and affordable. This high illiteracy comes from insufficient investments by sub-Saharan African countries in primary education, in comparison with other developing countries (Berthélemy, 2004). Secondly, investment in higher education has very low social payoff for lack of sufficient emphasis on technical and scientific education with standard quality. Thirdly, the yield of public education expenditure is lower than in other regions because secondary and higher education are relatively very expensive, due in particular to generous purses and social advantages granted to students and to low tuition fees. A reallocation of education expenditure to knowledge development priorities would at no budgetary cost improve the situation in many sub-Saharan African countries.

There is one area, however, where the international community has a rather direct responsibility in the dire situation in which sub-Saharan Africa is with respect to knowledge performance. This is the out-migration of a significant proportion of skilled individuals. According to World Bank estimates (Docquier and Marfouk, 2004), the emigration rate of individuals with tertiary education was in 2000 equal to 13.3% in Central Africa, 26.7% in Western Africa and 18.4% in Eastern Africa; while emigration rates of individuals skilled at secondary level were around 2%, and at primary level around 0.3%. In sub-Saharan Africa, only Southern Africa has relatively small out-migrations of skilled individuals (5.3%). The United Nations have estimated that 20,000 skilled people have left the continent annually since 1990, while, in order to fill the gap created by skill shortages, African countries spend US$ 4 billion a year to employ 100,000 non-African expatriates. [141]

In the medical sector, the out-migration of skilled workers has dramatic consequences in some countries, particularly in English-speaking Africa, which has been a significant source of migration of medical personnel to the United States and the United Kingdom. It has been estimated that 60% of the medical doctors trained in Ghana during the 1980s have left their country. There are more Malawian medical doctors in Manchester (UK) than in the whole of Malawi. Zambia has lost 550 of the 600 medical doctors it has trained since Independence. Developed countries are therefore tapping on a very scarce resource in sub-Saharan Africa, without paying the cost of initial training of these personnel. Given the growing mobility of labor, particularly for skilled labor, the availability of such skills is becoming more and more a global public good, and paradoxically sub-Saharan Africa consumes less of this resource than it produces, at least in critical areas such as the medical sector.

This issue is a serious one for sub-Saharan Africa, given its shortage of professionals, and the high cost it pays for the training of emigrating ones. Solutions to this problem should be searched in the framework of discussions on international public goods. One way to solve this issue would be to organize a reverse brain drain of experienced skilled personnel to their countries of origin, which would possibly transform the brain drain into a brain gain. There have been accordingly some recent attempts to mobilize the skilled diasporas for the benefit of countries of origin, but so far with extremely limited success in sub-Saharan Africa. Another possibility would be to organize compensation of the "donor" countries (the countries of emigration) for the cost of education of the migrating professionals, as argued by Stilwel et al (2003) who consider the medical sector. [142]

[141] Source: United Nations, *Africa Recovery*, vol.17, n°2, July 2003. http://www.un.org/ecosocdev/geninfo/afrec/.

[142] Similarly, in the context of discussions of global initiatives on HIV/AIDS, Bhargava (2005) proposes to charge on countries of immigration of medical personnel the opportunity cost of their training, and to put the collected resources in the Global fund to fight HIV/AIDS, malaria and tuberculosis.

Knowledge for development is an international public good that is produced by international institutions involved in development policy research. Worldwide, the production of this international public good is abundant, thanks in particular to the World Bank and other institutions. There is a need, however, to produce this kind of knowledge also outside of the World Bank, and in particular in institutions that are closer to the potential users of this knowledge. Some authors think that such knowledge should be indigenously produced by African researchers, particularly in the academia: "for Africa to find her way out of the abyss in which she finds herself, an alternative model is needed. This model is not likely to be found unless the African universities are strengthened and transformed" (Forrant and Pyle, 2002). Given the weakness of national university systems in sub-Saharan Africa – with the exception of South Africa – there is no doubt that efforts at the sole national level to strengthen the African capacity to produce development knowledge are doomed to fail. Only continental initiatives could possibly produce some results. This is an area in which the NEPAD (New Economic Partnership for African Development) should take initiatives, but so far no concrete step has been taken in this direction.

Some pan-African initiatives should be also considered downstream the university system. The AERC (African Economic Research Consortium) is one such initiative. The AERC has been created in 1988 with support of bilateral and multilateral donors and has developed over the year a significant program of research grants for junior African researchers. It has also started developing collaborative research projects at a more senior level downstream and a PhD program upstream. Although the AERC is rather specialized on a few economic topics (macroeconomics, trade policy, development finance and poverty analysis), it is an example of successful production of development knowledge. Nowadays, several African researchers who have benefited from the intellectual and financial support of the AERC are involved in policy making at senior level positions. However, this sort of initiative is much too rare, and well-established African institutions have not the same success in this area. For example, the African Development Bank, which has a research department, produces almost nothing in terms of research. It has produced on average 1.5 research working paper annually between 1983 and 1995, 6.7 between 1996 and 2002, and 0.4 since 2003. By comparison, the World Bank has produced, only in its series of policy research working papers starting in 1988, 227 papers annually, including 27 on Africa. This illustrates the huge gap existing between the production of development knowledge outside of sub-Saharan Africa and inside this region. This gap contributes to explain the difficulties faced by African countries in their attempts to accumulate development knowledge.

In a sense, the issue encountered here is comparable to that observed for agricultural research in the early years of the green revolution: development knowledge, as an international public good, is maybe adequately produced worldwide, but it is not really customized to the specific needs of the African continent, in part for lack of sufficient involvement of Africans in its production, and in part for lack of adequate local complementary activities. The observed evolution of progresses in the area of agricultural research under the auspices of the CGIAR suggests however that solutions can be found to this kind of issue. Relative progresses noted previously concerning the more limited area of macroeconomic policy expertise give also some hope.

3. Sub-Saharan Africa as the weakest link in the global community

We turn now to questions related to the production of "weakest link" international public goods. In this setup, actions taken by the different participant are complementary instead of additive, which implies that producing such IPGs depends on the contribution of the weakest participant. Other participants have then good reasons to provide the weakest link with assistance to improve its contribution. We study in this section two particular IPG sectors in which sub-Saharan Africa may play this role of weakest link: health, and peace and security.

Health

In the health sector, the prevention of communicable diseases is clearly a public good. With the globalization of travel and transportation, it has become more and more a truly international public good, as exemplified recently by the appearance of the West Nile virus in the United States (Kaul and Faust, 2001) and more recently the SARS crisis and the threat of an avian flue crisis. Thanks to the action of the World Health Organization (WHO) in particular, the SARS crisis was contained in a relatively short while. But imagine what would have happened if this crisis has had its origin in sub-Saharan Africa. The lack of functional public health systems in most African countries would have reduced drastically the efficiency of containment measures taken by the WHO. Sub-Saharan Africa is certainly the weakest link actor in the world system with respect to communicable disease prevention.

Also, "for many, the gross health inequalities between the industrial and developing world have become intolerable on purely ethical and moral grounds" (Tan, Upshur and Ford, 2003). Solving the health crisis faced by poor countries in general, and by sub-Saharan Africa in particular, can be viewed as an international public good in itself, whether diseases that decimate Africans are internationally communicable or not. This view can be described as a broad approach on health-related IPGs, by comparison with the relatively narrower approach considering only the need to fight internationally communicable diseases. Both approaches require strong initiatives to improve the public health sector.

Initiatives related to public health sector development in poor countries have correspondingly two dimensions: vertical projects, which aim at attacking a specific disease by appropriate means – be they vaccines, treatments or prevention – and horizontal projects, which consider in a more holistic mode the many complementary dimensions of the public health sector – infrastructure, personnel, drug procurement system and other inputs necessary for heath care provision. The vertical projects could be seen as the most appropriate in the context of discussions of narrowly defined health-related IPGs, once an implementable solution has been identified to eradicate the communicable disease or prevent its dissemination. By contrast, the broad approach of health as an IPG should probably involve horizontal projects. Current experience suggests however that, in all cases, horizontal and vertical projects should be combined (Tan, Upshur and Ford, 2003). Administering a vaccine campaign, for instance, is unfeasible if the public health system is not functional. Conversely, specifically targeted vertical initiatives, for instance to improve immunization against a few major diseases throughout the public health system, are also a necessary ingredient of attempts at improving the overall public health system. In this sense, the narrow and broad approaches of health-related IPGs issues cannot be disentangled. The battle against internationally communicable diseases cannot be won in absence of broad progresses in the public health sector of the countries of origin of the epidemic.

This discussion helps highlight the weakest link problem posed by sub-Saharan Africa in the provision of health-related IPGs: the continent is simply unable to participate in the worldwide control and prevention of epidemics given the many weaknesses of its public health sectors. The desperate situation in African public health sectors is due not only to lack of financial resources and infrastructure, but also to shortage of personnel, aggravated by the out-migration of skilled medical workers, already discussed earlier in this paper. It is therefore both the weakest link in the chain of prevention and eradication of communicable diseases, and the least capable to take advantage of the existing progresses in medical science. A strong collective international action is therefore needed on two accounts: first, to facilitate participation of sub-Saharan Africa in the production of IPGs related to the prevention of communicable diseases; and second to help sub-Saharan Africa to consume the existing IPGs constituted by the constant progresses in medical science achieved worldwide.

The most pressing issue certainly concerns the HIV/AIDS pandemic in sub-Saharan Africa. Although HIV/AIDS prevalence has fallen over the years in the developed world, it is still

dramatically increasing in most sub-Saharan African countries. Nowadays, 65% (35.4 million individuals) of children and adults living with HIV/AIDS are in sub-Saharan Africa, and the average prevalence rate in sub-Saharan Africa (7.4%) is nearly seven times higher than in the world as a whole (1.1%).

Sub-Saharan Africa faces many difficulties in its struggle against the HIV/AIDS pandemic. A few countries – the best known example is Uganda – have succeeded in controlling the spread of the disease through sustained prevention campaigns, but overall the situation has become out of control in many countries, particularly all the countries in Southern Africa, where adult prevalence rates are between 12.2% (Mozambique) and 37.3% (Botswana). The epidemic is also very strong in Tanzania, Kenya, Central African Republic, Burundi, Cameroon, Gabon and Cote d'Ivoire, where the prevalence rate is higher than 6%.

In recent years, many multilateral and bilateral initiatives have been taken to help affected countries tackle the HIV/AIDS crisis (Lewis, 2005). In a first phase – between 1996 and 2002 – these initiatives lacked coordination and were on a small scale, in comparison to the size of the resources that would have been needed. In 1996, when UNAIDS was created, global spending on HIV/AIDS initiatives in low-income and middle-income countries was just about US$ 300 million. In 2004, this amount had climbed to US$6 billion. However impressive it is, this figure is still half the needs estimated by UNAIDS, and such needs will continue to increase. [143] At the multilateral level, a major step has been the creation of the Global Fund to Fight HIV/AIDS, Malaria and Tuberculosis, in 2002. The Global Fund has already committed grants for a total amount of US$ 3.5 billion since it creation, and its planned total commitments by the end of 2006 are close to US$ 8 billion. Out of these US$ 8 billion, 5 will be spent on HIV/AIDS related projects. Sub-Saharan Africa will receive US$ 4.9 billion of funds.[144] Together with several multilateral (e.g. World Bank MAP – Multisector Aids Project –, African Development Bank) bilateral (e.g. the PEPFAR – President's Emergency Plan For AIDS Relief – of the United States) and private foundation initiatives, this recent and prospective evolution implies a real scaling-up of HIV/AIDS related initiative.

A second major scaling-up initiative has been the 3by5 campaign of the WHO, announcing an objective of putting 3 million people living with HIV/AIDS in developing countries on anti-retroviral (ARV) treatment by the end of the year 2005. This initiative is building on accelerated decline in prices of anti-retroviral treatments sold by the pharmaceutical industry, thanks to public-private partnership with the United Nations but also, ultimately, to the supply of generic medication by manufacturers in developing countries such as Cipla in India. The number of people receiving ARV treatment in sub-Saharan Africa has increase from 50,000 in 2002 (1.2% of the 4.1 million people in need) to 325,000 in 2004 (about 8% of the people in need). In Botswana, where the government has decided in 2002 to provide the medication free of charge through the public health system, 50% of people in need receive now ARV treatment.[145] Ratios are however much lower in countries such as South Africa (7%) or Zimbabwe (3%).

Africa is also the weakest link actor in the global health system with respect to immunization that could efficiently help eradicate diseases such as diphtheria, tetanus, poliomyelitis, pertussis, measles, yellow fever and hepatitis B. Sub-Saharan Africa is by far the region with the lowest immunization rates, with rates stagnating at 50% for the principal vaccines. Measles, which can be prevented with vaccine at a cost of US$ 0.80 per child, kills one child

[143] Source: United Nations, Africa Renewal, vol.19, n°1, 1005.
http://www.un.org/ecosocdev/geninfo/afrec/.

[144] Source: based on data available in the Global Fund website http://www.theglobalfund.org/.

[145] Source: United Nations, Africa Renewal, vol.19, n°1, 1005.
http://www.un.org/ecosocdev/geninfo/afrec/.

per minute in sub-Saharan Africa.[146] Progresses have been achieved recently with initiatives such as the creation of the GAVI (Global Alliance for Vaccine Immunization), which has been made possible by an initial grant of US$ 750 million by the Bill & Melinda Gates Foundation. GAVI had raised almost US$1.3 billion and received equivalent additional pledges by March 2005.[147] Up to now, GAVI has committed 65% of its funds to 39 sub-Saharan African countries.

In this area, some initiatives need to be taken at the regional level, instead of merely at the national level, given the trans-frontier spreading of communicable diseases. Such initiatives are always difficult to implement in the African context, with adverse consequences for wide regions. An example of this issue is provided by the vaccination campaign to immunize 70 million children against poliomyelitis in West and Central Africa under the umbrella of ECOWAS (Economic Community of West African States), in the context of the global polio eradication initiative launched by WHO in 1998. This initiative was presented in 2000 as a model of the ECOWAS regional integration policy. In 2004, it was reported by WHO that the region was on the verge of a new major poliomyelitis outbreak, although the same organization had predicted previously, on base of the ECOWAS immunization campaign, that this disease could be eradicated by the end of that year. The issue was blamed on problems with vaccinating people in Kano State in Nigeria, where Islamic clerics condemned the immunization campaign as an American plot to make Muslim Women infertile.[148] As a consequence, sixteen African countries, which had previously eradicated the virus, have now reported new cases. The virus has spread as far as in Botswana (3000 miles south) and Sudan (1000 miles east).

A final issue is that for some of the worst mass-killer diseases in sub-Saharan Africa, vaccines do not exist yet. With respect to research on vaccines, the continent has been until now in the position of the weakest potential beneficiary of innovations, given its small economic power and influence in international affairs. Diseases specific to developing countries, such as malaria, attract only small private research efforts for economic reasons. Only 3% of R&D in the pharmaceutical industry is directed toward diseases in developing countries;[149] and such research has not been a priority of public funding either. Under these conditions, it is no surprise that vaccines produced so far have not concerned some of the mass-killing diseases that are highly concentrated in the region, such as malaria and HIV/AIDS.

The inadequate structure of incentives to produce vaccines (as well as other pharmaceuticals) to prevent diseases that affect poor countries has been recognized for quite some years already by economists, who have proposed solutions to this problem (Kremer, 2002). One promising solution is to make advance purchase commitments for vaccines for such diseases, which would give the pharmaceutical industries the necessary incentive to invest in research in these areas (Levin, Kremer and Albright, eds., 2005). A step forward in this direction has been taken at the G8 Summit in July 2005, where G8 Heads of States and Governments have announced in June 2005 the creation of an International Financial Facility for Immunization, which would in particular provide for an advance purchase agreement as an incentive to develop vaccines for malaria and HIV/AIDS.

Peace and security

Peace is recognized as a very valuable international public good. The end of the cold war has provided a natural experience to judge the contribution of sub-Saharan Africa to the production of this IPG. The burden of military expenditure has receded in developing and transition economies since the end of the cold war and the number of people killed in armed

[146] Source: UNICEF: http://www.unicef.org/immunization/index.html.
[147] Source: based on http://www.vaccinealliance.org/.
[148] Source: BBC News, http:/www.bbc.co.uk/.
[149] Source: The Economist, 14 April 2005.

conflicts has decreased as well. Unfortunately, sub-Saharan Africa has not followed the same path, although the region was one of the principal battlefields of the cold war.

Military expenditure, as a share of GDP, has a clear declining tendency in the developing world since 1988, according to SIPRI (Stockholm Peace Research Institute) data. The (un-weighted) average share of military expenditure on GDP has decreased at a pace of close to 3% a year in non-African developing and transition economies, while it has remained stable in sub-Saharan countries. Among countries for which sufficient data are available to test the statistical significance of these trends, the ratio of military expenditure to GDP has significantly decreased in about 60% of non-African countries, while it has significantly increased or stayed stable in about 60% of sub-Saharan African countries. [150] Consequently, the burden of military spending on GDP is now on average higher in sub-Saharan Africa than in non-African developing and transition economies, while it was lower in the late 1980s.

Data assembled by PRIO (Oslo Peace Research Institute) on armed conflicts point to similar trends. Although worldwide the number of armed conflict per year has increased in the period following the end of the cold war, the number of battle deaths per year has significantly decreased. Conversely, the number of battle deaths has skyrocketed in sub-Saharan Africa, from about 20,000 per year before 1990 to about 60,000 since then. In recent years, about one out of two battle deaths has occurred in sub-Saharan Africa, which represents five times the relative size of the African region in world population.

Such data clearly suggest that, although the end of the cold war produced a peace dividend for developing countries as a whole, sub-Saharan Africa has by and large stayed absent of this process. This observation points to the weak capacity of the continent to build peace, even at a time when there were tangible signs of progress elsewhere in the world.

More detailed information reported in Table 4 show that the principal cause of armed conflicts in sub-Saharan Africa is linked to government disputes rather than to territorial disputes. They are principally civil wars, although in some instances internal conflicts become internationalized, such as in the case of Congo DRC.

Table 4 Occurrence of conflicts (yearly averages)

	Number of conflicts		*Battle deaths*	
	1960-1990	*1990-2002*	*1960-1990*	*1990-2002*
World	29	54	175188	121767
sub-Saharan Africa	7	16	19386	59716
% sub-Saharan Africa	24%	29%	11%	49%
of which				
about territory control				
World	16	31	122950	54641
sub-Saharan Africa	3	5	9351	19529
% sub-Saharan Africa	22%	17%	8%	36%
about government control				
world	13	23	52238	67126
sub-Saharan Africa	4	11	10035	40186
% sub-Saharan Africa	28%	46%	19%	60%

Source: Author's computation based on PRIO database on armed conflicts.

[150] Computed on countries for which at least 10 observations are available since 1988, using the SIPRI database.

Be they purely internal or internationalized or cross-border, conflicts have always repercussions on the neighbors (Collier, 2004). Such repercussions are related to displacement of refugees (in the mid 1990s there were 6.5 million refugees in sub-Saharan Africa); de-stabilization of other governments; disruption of trade routes; etc. Therefore, the internal nature of typical armed conflicts in sub-Saharan Africa does not imply that they are not international public bad. The cost imposed by a civil war on neighboring countries is comparable to its local cost (Collier and Hoeffler, 2004).

There are also economic repercussions outside of the region, notably because conflicts principally occur in resource-rich countries (e.g. Angola, Congo RDC, Cote d'Ivoire, Nigeria, Liberia, Sierra Leone), where foreign companies have business interests. However, in some cases, in spite of difficult economic conditions created by fightings, foreign companies reap benefits in conflicts. For instance, Guidolin and La Ferrara (2004) have shown that the market value of diamond companies involved in trading with Angola dropped at the end of the war between the MPLA government and UNITA in 2002.

For what reasons is sub-Saharan Africa so prone to armed conflicts? The principal responsibilities are to be found in the countries themselves, rather than outside, although the international community could, and in some cases does, intervene to build or maintain peace in African countries. In some cases, the persistence of conflicts may result from abject poverty (e.g. Somalia). In such cases the issue of conflict resolution cannot be dissociated from the overarching discussion on poverty eradication. But in a number of other cases, persistent conflicts occur in mineral resource-rich countries, suggesting that they are merely battles over control of mineral rents. As suggested by the counter-example of Botswana, however, this state of affairs occurs only when there are serious shortcomings in governance, and when the corresponding wealth is confiscated by the power in place. Access to valuable resources such as diamond or petroleum provides also the belligerents with means to finance their military procurements and operations for very long periods of time, as exemplified by the previous war in Angola.

These observations have suggested in recent years original international solutions, based on initiatives aimed at improving governance. The Kimberley process initiated in 2000 is one such initiative. It is based on an agreement between governments and the diamond industry to control diamond trading through the implementation of a certification scheme. In this context, diamonds sold by participants in a conflict cannot be traded in the legal market, which reduces considerably the purchasing power of the belligerents. Although the Kimberley process cannot be replicated in all commodity markets, it should be possible to set up similar arrangements in the timber market and in the oil market (Collier, 2004). According to Collier (2004) currently about US$1 billion of oil is looted in Nigeria, and part of this money is used to arm criminal gangs that could potentially resurrect secessionist movements.

Other initiatives aimed at improving governance could be taken by developed countries. One such initiative could be a better control of assets deposited in bank accounts in OECD member countries. Although some progresses have been made towards controlling money laundering and financing of terrorist groups, only little has been done so far to control assets deposited by corrupt politicians from developing countries in the international capital market, even when the illegitimate nature of the fortune amassed by such leaders was beyond doubt. On a positive note, however, part of the fortune amassed abroad by the late General Abacha has been recently repatriated to Nigeria.

Governance could also be improved by peer-pressure among African States themselves. This is probably the most innovative idea introduced by the NEPAD, which has created an African peer-review mechanism (APRM), comparable to mechanisms that already exist within the OECD or within the European Community. OECD and EC experience has indeed established that policies may be improved by peer-pressure, the peers acting collectively as an agency of

restraint, which is much more legitimate politically than purely external agencies of restraints such as the IMF or other international institutions. An African leader, it is hoped, will be more likely to follow advices from his/her peers than from purely external experts. Also, confronting African experiences – e.g. showing Liberia and Sierra Leone that Botswana has been for a long time able to manage properly the wealth produced by its diamond mines – may be a more useful way of identifying implementable best-practices than relying on non-African experiences. However, the APRM has been up to now very long to initiate (only one country, Ghana, has gone so far through the whole process) and, being organized on a voluntary basis, it will not be implemented in the worst cases, where governance improvements are badly needed, for probably quite a long time.

To conclude on this point, the international community has certainly different possibilities at its disposal to help improve the governance situation that is very often leading to civil wars in sub-Saharan Africa. These actions can be implemented at an affordable cost, but few of them have been implemented so far. The African community is also building some instruments to improve governance, through the APRM of the NEPAD, but the process is just starting and there are still many obstacles on this route. By the way, improving governance, and investing in integrity as opposed to corruption, is certainly also in itself a valuable public good. It should be recognized that this public good is very much of an international nature in the African context, given the inability of relatively fragile national governments to enforce integrity at home, when they are not themselves corrupt. If only the NEPAD could promote progresses in this direction, it would achieve a great leap forward in African development.

The modesty of international initiatives in this area is consistent with the fact that developed countries do not feel much concerned about armed conflicts that make huge numbers of victims in sub-Saharan Africa – killed people, victims of injuries or refugees. However, in recent years, the economic and human costs of armed conflicts in sub-Saharan Africa have been increasingly recognized as a major issue for the international community of aid donors. Part of this change of attitude is due to serious research on the economic aspects of conflicts produced at the World Bank under Paul Collier's guidance. It is also related to trends showing that costs related to civil wars are taking a very high toll on aid budgets.

One such trend is that humanitarian crises cost an increasing amount of money, and most of these crises are, in sub-Saharan Africa, related to conflicts. Emergency assistance from bilateral and multilateral donors to sub-Saharan Africa has grown exponentially since the end of the cold war, from a mere US$200 million (27% of total emergency assistance) in 1990 to US$2.7 billion (40%) in 2003. This trend implies that emergency assistance already consumes 10% of official development assistance to sub-Saharan Africa. Moreover, conflicts destroy investments in physical and human capital and may bring into question several decades of development, such as for instance recently in Côte d'Ivoire. At a time when donors are more and more concerned about the effectiveness of their assistance – whatever the reasons for which they provide such assistance – they naturally pay a growing attention to armed conflict situations and have more incentives to help Africans solve these conflicts.

In addition, once a civil war has started, it may have a very long duration. The African experience suggests that external interventions may be necessary to stop such armed conflicts. Diplomatic interventions have been frequently doomed to failure when they were not complemented by significant military intervention of peace-making armed forces, organized by the United Nation or regional organizations. These military interventions are themselves very costly, at a price that is usually unaffordable for the UN organization alone. The global return of successful interventions is however very high, given the economic and humanitarian costs of war, such as in the recent case of the British intervention in Sierra Leone (Collier and Hoeffler, 2004). However, only a foreign government who has for whatever reason a strong interest in resolving the local crisis would accept to support the burden and the risks of these military interventions. In addition, the intervention of a foreign country is confronted with

complex political legitimacy issues, notably when the intervening power is the former colonial ruler (e.g. the French intervention in Côte d'Ivoire).

In theory, the most likely solutions that could emerge are regional, given that all neighbors of a country at war have a strong interest in avoiding a spreading of the crisis, which may happen at any time. A good example of such situation is Cote d'Ivoire's civil war. Initially, the Ivorian crisis has been man-made by a bunch of politicians who wanted to seize power for themselves. The crisis has however been exacerbated in 2002 by factions from the neighboring Liberia. Basically, the presence of rebels at the Liberian border has added a third frontline, between West and East, in addition to the North-South frontline. An early intervention of the French army stabilized frontlines, but was insufficient to resolve the crisis, if only because the official government in Abidjan did not welcome this intervention – to the point that French soldiers were bombed by the loyalist air force. Later, French troops were complemented by troops from neighboring countries organized by ECOWAS (Economic Community of West African States), which have merely helped stabilize the frontline.

Although interventions at the regional level seem to be the best thing to do, in terms of production of peace as a regional public good, they have been however far from convincing up to now, due to the weaknesses of regional institutions. The efficiency of ECOWAS in organizing armed interventions in regional conflicts, in Cote d'Ivoire, Guinea Bissau, Liberia and Sierra Leone, has been doubtful so far. In part, this is due to insufficient means. However, ECOWAS troops have been also accused by observers of misconduct in Liberia in the 1990s and may have at that time contributed to the proliferation of rebel groups.

One particular issue in ECOWAS is that it is made of one regional giant, Nigeria, associated with a number of much smaller countries. This is not the best configuration to produce regional public goods, since small partners are always tempted to free-ride on the regional giant. A similar issue appears in Southern Africa, where South Africa is a giant among the members of SADC (Southern African Development Community). The ability of SADC to produce peace in its region is as doubtful as the capacity of ECOWAS to produce peace in Western Africa (Brauer and Roux, 2000).

The African Union (AU) is another legitimate institution, which may have a role to play in peace-making and peace-keeping in sub-Saharan Africa. The case of the Darfour crisis in Sudan amply shows that neither the AU nor its members have the necessary resources to set up military interventions capable of solving complex conflict crises. The AU is probably too broad to convince African countries to invest significant resources in this organization.

In sum, sub-Saharan Africa is, since the end of the cold war, the region of the world where producing peace, as an international public good, or merely as a regional one, is the most complex. Although the costs of wars are enormous for Africans, contributing to their resolution has not been so far a priority objective for the international community, and regional communities are often too weak to produce peace, for various reasons.

There has been some hope, after September 11, that this bleak prospect for African peace and security situation could be changed, because developed countries have discovered that terrorists could threaten their own security, and that there could be a link between terrorism and poverty. President George W. Bush has made explicit this viewpoint at the UN conference on development financing in Monterrey in 2002. Some analysts argue that the already significant internal terrorism in sub-Saharan Africa – as illustrated in the many cases of civil wars – creates an enabling environment for international terrorism that would have its base in the region. For instance, Cilliers (2003) argues that international terrorism in sub-Saharan Africa, reported by the US Department of State to account for 6% of all international

terrorism incidents between 1990 and 2002, [151]could well increase in the future. However, in 2003, there were only 6 incidents in sub-Saharan Africa, accounting for 3% of all events, and 0.3% of casualties. Recent country reports by the US Department of State indicates also that there were few significant international terrorist incidents in the African region during the year 2004, while there were many in other regions.

Moreover, the thesis arguing that there is a link between poverty and terrorism has attracted a lot of criticism from economists, who have shown, in particular, that terrorists were not in general from poor family background. At the microeconomic level, at least, the link between poverty and terrorism is doubtful (Krueger and Maleckova, 2003). At a more macroeconomic level, one may question it too. Up to now, the poorest countries in the world have not been those where international terrorism has taken root. Therefore, the notion that poor countries in general, and sub-Saharan Africa in particular, would deserve much more attention from the international community, because they would become otherwise the next fatherlands of international terrorists, cannot be supported in view of the available empirical evidence.

The idea that giving more assistance to poor countries would reduce the potential threat that they could create on international security is not backed by empirical evidence either. Azam and Delacroix (2005) have even shown that the correlation could be the reverse one, with a causality running from high terrorism potential to foreign assistance, which is given in an attempt to prevent international terrorism. This finding suggests that potential international terrorist threats may convince political leaders in developed countries, such as President George W. Bush, to give more support to countries that would be otherwise more prone to international terrorism than others. Whether targets of this new form of foreign assistance should be in sub-Saharan Africa remains however to be seen. Another unanswered question is whether this policy may achieve its objectives.

Certainly sub-Saharan Africa is one of the weakest links of the global system in the area of peace and security, and as such it deserves more attention. But the threat caused by sub-Saharan Africa on international peace and security has not been high enough so far to convince the international community to act as it should do in the case of a pure weakest link public good, i.e. to spend resources to help African build peace at home. Sub-Saharan Africa is here both the weakest link and a relatively insignificant actor as far as international peace is concerned. So far, as for the case of health, sub-Saharan Africa has been to a large extent de-linked from the global system, although the issue of armed conflicts has been recently taken more seriously into account, in view of their enormous economic and human costs. Unfortunately, at the regional level, where peace in each individual country is undoubtedly an extremely valuable public good for all its neighbors, regional African institutions have been so far too weak to make efficient collective action emerge.

4. Sub-Saharan Africa de-linked from the global community?

As we have just seen, in case of weakest link public goods, the fact that sub-Saharan Africa is the weakest link in the global community is not even sufficient to convince other members of this community, notably the developed countries, to provide it the necessary support that would optimally facilitate the production of the IPGs. This is to some extent related to the fact that, in a number of dimensions, sub-Saharan Africa is de-linked from the global system. When the production of public goods is of an additive nature, threats caused by the scourges that affect African daily life are even less perceptible from outside of sub-Saharan Africa, and the African region is simply forgotten in international discussions on IPGs. This is particularly true in the case of discussions concerning the protection of the global environment.

[151] Source: US Department of State website, http://www.state.gov/s/ct/rls/45388.htm.

Environment

Sub-Saharan Africa suffers directly from global warming, which is aggravating already very difficult climatic conditions in vast areas of the continent. A clear evidence of costs already incurred by the region as a result of global warming has been the impact beginning in 1997-98 of the "El Niño" weather phenomenon, which has brought floods to a large Eastern part of sub-Saharan Africa in that year and drought in Southern Africa as well. This has been just one event in a significant trend. In 1998, experts projected that climate change would cause severe droughts in sub-Saharan Africa by 2050, resulting in an additional 30 million people hit by famine.[152] With global warming, the already very fragile eco-system, in particular in semi-arid countries, will be inevitably damaged, reducing the arable land surface. In addition, the rising sea levels will particularly affect Western and Eastern Africa's coastal areas.

In economic terms, the region will be paying the highest cost due to the accumulation of CO_2 emissions. According to Hackl and Pruckner (2002), a doubling of CO_2 concentration levels in the atmosphere from their pre-industrial level, which is expected to happen by the year 2060, will cost Africa 8.7% of its GDP, to be compared with 1.3% for the United States or 1.4% for the European Union. The only other region that will face a comparable damage is South and Southeast Asia.

The prevention of global warming is typically an additive international public good that will not be produced if the principal economic powers do not accept to pay for it, although it is also in their own collective interest to do so. The fact that the Kyoto protocol has not been ratified by the United States, the largest producer of CO_2 emissions, is in this respect a negative signal. On their side, Sub-Saharan African countries, which have very few responsibilities in CO_2 emissions, have big stakes in climate change prevention, but very little say in the implementation of possible solutions to this problem.

Within the Kyoto protocol, the Clean Development Mechanism (CDM) provides an original instrument combining environment and development objectives. In this mechanism, industrialized countries that have agreed to reduce their CO_2 emissions can buy "carbon credits" (CERs – certified emission reduction) through financing investments leading to emission reductions in developing countries. CERs can be also acquired through investment in CO_2 sinks (afforestation and reforestation projects), but this provision is controversial and has led so far to very few projects. Given its low industrialization and energy consumption, sub-Saharan Africa is not going to reap much direct benefit from the CDM. In March 2005, only South Africa, Ghana and Tanzania had registered CDM projects, for about 7% of all claimed CERs, and South Africa alone accounted for half of this amount. Only one country (Tanzania) has so far a CO_2 sink project. [153]

In sum, even in the context of the Kyoto protocol, where major efforts have been made to come to collective action solution to the deterioration of global environment, sub-Saharan Africa is only a minor actor, and as a little noticed stakeholder.

This kind of issue is rather common when one considers the position of sub-Saharan Africa in other debates about global environment protection. Another example is natural resource depletion, such as in the case of fisheries. More and more, foreign trawlers come from the European Union and other distant regions (Japan in particular) to the West African cost to catch fish that is becoming scarce in their own seas. For a part, this foreign industrial fishing activity is regulated by bilateral agreements. The EU has negotiated such agreements with West African countries, through which their ships access fish resources in exchange of royalties paid to the local governments.

---

[152] Source: United Nations, Africa Recovery, vol. 12(2)., November 1998.
[153] Source: CDM Watch. http://www.cdmwatch.org/.

This system of catch permits would work fine if it were preserving the sustainability of the resource. However, this does not seem to be the case, probably for several reasons: European fishermen who receive direct subsidies from the European Commission have in fact incentives to over-produce, even though they pay royalties to the local governments; Monitoring their catches is almost impossible for African governments deprived of the necessary equipments; Preventing free-riding, from rogue boats, is impossible. [154]

The risk is that the problems created by over-fishing in areas such as North-East Atlantic be spread to South-East Atlantic, with much more damaging consequences for the populations living there, and needing access to this resource for their survival, than for Europeans. According to the FAO 2004 report on the State of World Fisheries and Aquaculture, the South-East Atlantic production has declined by 47% from its peak in 1978 to 2003, and over-fishing has been a main contributory factor to this trend. Currently, in this area, only about 12% of existing stocks are moderately exploited, the rest being already fully or over-exploited.

The economic and social consequences of depletion of this kind of resources can already be observed in other area, the Lake Victoria, where a fish export industry has expanded over the past 20 years, based on the exploitation of the Nile perch. Initially, the Nile perch has been introduced in the Lake Victoria by accident, during the 1950s. Being a predator, the Nile perch has progressively exterminated other species. This may be considered as an ecological issue, due to a loss in bio-diversity, but this evolution has initially improved food safety in the region, by providing new protein resources to the population. However, the development of industrial exportation of Nile perch filets has developed without any regulation, and there are now signs of depletion of this resource, due to over-fishing. The first to suffer from this depletion are local populations, who cannot afford anymore buying fish, and survive on residuals (fish bones) produced by the export industry.[155]

These few cases illustrate well the fact that, when it comes to environment, an area in which sub-Saharan Africa is threatened by the absence of international collective action, rather than threatening itself the global system, the continent interests are fully forgotten. These are certainly instances where solving the international collective action conundrum is the most difficult, from the viewpoint of sub-Saharan Africa.

The Lake Victoria example points however to African responsibilities as well. In this case, the riparian States of Lake Victoria, which are only three in number (Kenya, Tanzania and Uganda), should have acted collectively to set-up a collective regulation to prevent the over-exploitation of their resource. But, even in this relatively simple case, this kind of collective action solution has not emerged, each government maximizing its export earnings instead of pursuing sustainable development objectives. This tells us that African governments have certainly responsibilities in the inability of the continent as a whole to protect its own sustainable development against egoist interests of developed countries. This difficulty, in the case of the Lake Victoria Nile perch upcoming crisis, can be linked to the more general observation made earlier about the inability of African governments to produce regional public goods, even when only a small number of participating countries is potentially involved.

Difficulties in reaching consensus about producing regional public goods in the area of African environmental protection are numerous. One major upcoming issue is related to water

---

[154] Source: United Nations, *Africa Recovery*, vol.16, n°1, July 2003. http://www.un.org/ecosocdev/geninfo/afrec/.

[155] More information on the development of the Lake Victoria fishery and its economic and ecological consequences can be found in IUCN (International Union for the Conservation of Nature) reports. See for example Abila (2000).

management. According to the UNESCO, several water basins are at risk, and may lead in the future to regional conflicts. For eight water basin in sub-Saharan Africa (over a total of 29 contentious water basins worldwide), protests over access to water have already emerged (the Nile, the Kune, the Lake Chad, the Okavango, the Senegal, the Chiloango, the Limpopo, the Zambesi). These basins concern all in all 27 riparian countries in sub-Saharan Africa, that is more than one out of two countries in the region. [156] If these countries do not find in the future solutions to cooperate on the management of these common resources, this will inevitably create new conflict situations.

5. Conclusion

We have surveyed in this paper a number of IPG areas that are of particular interest for sub-Saharan Africa. Overall, the current situations of IPG under-supply, viewed from an African viewpoint, are very often related to the de-linking of the continent from the global economy.

In the area of trade, the principal issue appears to be that, with a few exceptions, sub-Saharan African economies have been unable so far to take advantage of the market access that they have enjoyed for quite a long time. Certainly, there is a need for fairer trade rules, notably with respect to agriculture, but one cannot blame only the international trading system for the failure of the continent in this domain. There is now ample recognition that African countries need to invest a lot in trade capacity building, if they simply want to participate in international trade. Both African governments and donors have responsibilities in this area.

In a sense, the de-linking of sub-Saharan Africa has protected it from the turbulences of global finance. This does not mean, however, that the continent does not endure external shocks. The extreme volatility of terms of trade inflicts a lot of damage to African economies, and the international community could certainly do more to help it cushion these shocks. At the very least, avoiding pro-cyclical aid flows, and trying to make them somewhat counter-cyclical, would be a progress, at no cost for the donors.

In the area of knowledge, the de-linking of sub-Saharan Africa is harmful. The core issue here is not the TRIPS rules, and the obstacles that they create against transfers of technology. The main problem is the incapacity of the continent to take advantage of the existing knowledge, for lack of sufficient local knowledge base and infrastructure. Inadequate education policies implemented by many African governments have a heavy responsibility in this state of affairs. In addition, the problem is compound by the fact that skilled labor tends to flee out of the continent. There are now serious efforts made by the international community to improve the scientific and knowledge base available for African development in some domains, particularly in agricultural research; but these efforts will be fruitful only if there are corresponding efforts on the African side to utilize the products of such R&D investments.

Concerning health, international R&D efforts targeted at finding cures or vaccines for diseases that are heavily concentrated in sub-Saharan Africa, such as HIV/AIDS and malaria, have been insufficient so far, but new initiatives are now upcoming, which should help improve this situation. However, again, producing such IPGs will be irrelevant if sub-Saharan Africa itself does not invest in local capacities, i.e. in the public health sector. This is a critical area in which assistance from the international community is necessary. So far the threat imposed by sub-Saharan Africa on the rest of the world because of the prevalence of a number of communicable diseases in the region has not caused serious international crisis. But this threat is real, and it should convince the donors to help the continent in this domain. This is certainly the area in which the theory of weakest link international public goods has the highest relevance, as far as sub-Saharan Africa is concerned.

[156] Source UNESCO World Water Assessment Programme.
http://www.unesco.org/water/wwap/index.shtml.

Although the weakest link theory should in principle be applicable in the area of peace and security, its relevance there is less straightforward, given that African security crises have been so far limited to the continent. The September 11 attacks have given rise to the hypothesis that there would be a link between poverty and terrorism, and that sub-Saharan Africa could become another fatherland for international terrorists. However, so far, these fears have been contradicted by facts. This does not mean that security crises in sub-Saharan Africa are not serious. Conflicts in sub-Saharan Africa are now responsible for half of the worldwide battle deaths, and these conflicts annihilate many efforts made by the international community to help the continent in its development. Resolving conflicts is principally the responsibility of African themselves, but the international community can and should assist them, notably through rules and regulations that would contribute to improve governance, and in some cases through military intervention.

Finally, the de-linking of sub-Saharan Africa from the world economy means that it has virtually no negotiation power to obtain the prevention of global environmental damages that do a lot of harm to it, such as the climate change or the depletion of natural resources. Such damages are costly for the world system as a whole, but are particularly harmful for sub-Saharan Africa, where they may have in the future the greatest impact.

In response to the desperate situation of sub-Saharan Africa, several proposals have been made to help eradicate poverty in this continent, where it is more pervasive than anywhere else. One such proposal has been put on the table of the 2005 G8 submit by Prime Minister Tony Blair, who has proposed a doubling of external financial assistance to sub-Saharan Africa. This renewal of interest of the international community for the future of sub-Saharan Africa corresponds to the viewpoint, which we mentioned in introduction, saying that the eradication of abject poverty worldwide should be considered as an international public good.

Poverty alleviation is however not merely a matter of doubling official development assistance. It is also a matter of solving a number of other IPG-related issues that are intertwined, such as vulnerability to shocks, food insecurity, illnesses, conflicts, environmental damages. Therefore, when we are considering the more traditional international public goods areas, we are also discussing solutions to the overarching objective of poverty reduction. The income dimension of poverty plays certainly an important role – and improving the ability of sub-Saharan Africa to participate in the world trading system would play a role in this direction. But two difficult questions remain: is more financial assistance feasible; and is it desirable?

The question of feasibility is related to the debates on the objectives of official development assistance (ODA). As far as bilateral aid is concerned, the available empirical evidence suggests that the self-interest of donors is a major motive for their assistance. In particular, aid allocation is very much influenced by trade linkages with the recipients. As a consequence, there is a significant negative bias of bilateral ODA flows against sub-Saharan Africa (Berthélemy, 2005). Implementing the British proposal of doubling aid in favor of sub-Saharan Africa would require that selfish donors change significantly their behaviors. In absence of a clear debate on the international aid architecture it is doubtful that such change would happen overnight. A consequence could be, in particular, that more assistance be given to those African countries that have the potential of becoming significant trade partners. At least a discussion on the allocation of assistance to African countries would be necessary, so that additional aid efforts be allocated on basis of the global objective of poverty eradication, and not of particular objectives pursued by donor countries.

On the desirability of doubling assistance to Africa, there are two questions: what is the absorptive capacity of sub-Saharan Africa; and does foreign assistance create negative incentives? The African absorptive capacity is limited, but certainly a number of African

countries could use efficiently additional aid resources. This is principally a matter of capacity building, notably related to the question of development knowledge. The issue of incentives is more complex. At microeconomic level, aid may trigger rent-seeking behaviors (Svensson, 2000). This is a serious issue, on which progresses cannot be achieved in absence of improvements in governance. At a more macroeconomic level, potential free-riding from the recipient countries could happen if poverty alleviation was considered purely as an IPG. This can be avoided only if ex-ante it is clear that the donors and the recipients have the same objectives. The Millennium Development Goals are an answer to this issue, but it remains to be seen whether all governments truthfully adhere to these objectives. Again, this is principally a matter of good governance.

In conclusion, solving the IPG-related issues in sub-Saharan Africa depends to a large extent on African themselves, even though the international community can and should assist them in a number of areas. The overarching condition of success is related to improvements in governance. This is true at the national level and at the regional level as well, given the many weaknesses that we have noted regarding the way African regional and sub-regional organizations deal with IPG issues.

References

Abila, Richar O., "The Development of the Lake Victoria fisheries: A Boon or Bane for Food Security?", IUCN project report no 8, 2000.
http://www.iucn.org/themes/wetlands/lakevictoria_fisheries.html

Azam, Jean-Paul, and Alexandra Delacroix, "Aid and the Indirect Fight Against Terrorism", mimeo, University of Toulouse, 2005 (paper presented at the HWWA Conference on Political Economy of Aid, Hamburg, 2004).

Baffes, John, "The Cotton Problem", World Bank Research Observer 20 (2005): 109-43.

Berthélemy, Jean-Claude, 2003. "To what extent education policies are pro-poor in sub-Saharan Africa? ", mimeo, University of Paris, 2004 (paper presented at the annual meeting of the European Development Research Network, Paris, 2003).

Berthélemy, Jean-Claude, "Bilateral donors' interest vs. recipients' development motives in aid allocation: do all donors behave the same?", mimeo, University of Paris, 2005, forthcoming, *Review of Development Economics*.

Berthélemy, Jean-Claude, "Convergence and Development Traps: How did emerging economies escape the under-development trap?", forthcoming in François Bourguignon and Boris Pleskovic (eds.), World Bank ABCDE 2005 conference volume, Whasington D.C., The World Ban, forthcoming.

Berthélemy, Jean-Claude, and François Bourguignon, *Growth and Crisis in Côte d'Ivoire*, Washington D.C., The World Bank, 1996.

Bhargava, Alok, "The AIDS Epidemic and Health Care Inadequacies in Africa: A Socioeconomic Perspective", *Journal of AIDS* (letter to the editor), 2005, forthcoming.

Brauer Jurgen, and André Roux, "Peace as n International Public Good: An Application to Southern Africa", *Defence and Peace Economics* 11 (2000): 643-59.

Cashin, Paul, C. John McDermott, and Catherine Pattillo, "Terms of trade shocks in Africa: are they short-lived or long-lived?", Journal of Development Economics 73 (2004): 727-44.

Cilliers, Jakky, "Terrorism and Africa", *African Security Review* 19 (2003): 91-103.

Collier, Paul, "The marginalization of Africa", *International Labour Review* 134 (1995): 541-57.

Collier, Paul, "Peace and Security", report for the International Task Force on Global Public Goods, University of Oxford, 2004.

Collier, Paul, and Anke Hoeffler, "The Challenge of Reducing the Global Incidence of Civil War", in Bjorn Lombor (ed.) *Global Crises, Global solutions*, Cambridge: Cambrdige University Press, 2004.

Collier, Paul, Patrick Guillaumont, Sylviane Guillaumont-Jeanneney and Jan Gunning, "Reforming Stabex", World Economy 22 (1999): 669-82.

Docquier, Frédéric, and Abdeslam Marfouk, "Measuring the international mobility of skilled workers(1990-2000), World Bank Policy Research Working Paper 3381, 2004.

Eifert, Benn, Alan Gelb, and Viaya Ramachandran, "Business Environment and Comparative Advantage in Africa: Evidence from the Investment Climate Data", Center for Global Development, Working Paper 26, 2005.

Emmerij, Louis (ed.), *One World or Several?*, Paris, OCDE, 1989.

Evenson, Robert E., And Douglas Gollin, "Assessing the Impact of the Green Revolution, 1960 to 2000, *Science* 300 (2003): 758-762.

Ferroni, Marco, and Ashoka Mody, "Global Incentives for International Public Goods: Introduction and Overview", in Marco Ferroni and Ashoka Modi (eds.), *International Public Goods: Incentives, Measurement and Financing*, Washington D.C, The World Bank, 2002: 1-29.

Forrant, Robert, and Jean L. Pyle, "Globalization, Universities and Sustainable Human Development", *Development* 45 (2002): 102-106.

Guidolin, Massimo, and Eliana La Ferrara, "Diamonds are forever, wars are not. Is conflict bad for private firms?, CEPR Discussion Paper 4668.

Hackl, Franz, and Gerald J. Pruckner, "How global is he solution to global warming?", *Economic Modelling* 20 (2003): 93-117.

Hirshleifer, Jack, "From weakest-link to best-shot: The voluntary provision of public goods, *Public Choice* 41 (1983): 371-86.

Hoekman, Bernard, Constantine Michalopoulos and L. Alan Winters, "Special and Differential Treatment of Developing Countries in the WTO: Moving Forward after Cancun, *World Economy,* 27 (2004):481-506.

Husain, Ishrat, and Rashid Faruqee, *Adjustment in Africa: Lessons from Country Case Studies*, Washington D.C., The World Bank, 1994.

Kaul, Inge, and Michael Faust, "Global public goods and health: taking the agenda forward, *Bulletin of the World Health Organization* 79 (2001): 869-74.

Kremer, Michael, "Pharmaceuticals and the Developing World", *Journal of Economic Perspectives* 16 (2002): 67-90.

Krueger, Alan B., and Jitka Maleckova, "Education, Poverty and Terrorism: Is There a Causal Connection?", *Journal of Economic Perspectives* 17 (2003): 119-44.

Levin, Ruth, Michael Kremer, and Alice Albright (eds.), *Making Markets for Vaccines: Ideas to Action*, Washington D.C., Center for Global Development, 2005.

Lewis, Maureen, "Addressing the Challenge of HIV/AIDS : Macroeconomic, Fiscal and Institutional Issues", Center for Global Development, Working Paper 58, 2005.

Mendoza, Ronal U., "The Multilateral Trade Regime: A Global Public Good for All?", in Inge Kaul et al. (eds.), *Providing Global Public Goods*, New-York: Oxford University Press, 2003: 455-83.

Pallage, Stéphane, and Michel A. Robe, "Foreign Aid and the Business Cycle", *Review of Development Economics* 9(2001): 641-72.

Stiglitz, Joseph E., "Knowledge as a Global Public Good", in Inge Kaul, Isabelle Grunberg and Marc A. Stern (eds.), *Global Public Goods: International Cooperation in the 21st Century*, New-York: Oxford University Press, 1999,: 308-25.

Stilwell, Barbara, Khassoum Diallo, Pascal Zurn, Mario R. Dal Poz, Orvill Adams, and James Buchan, "Developing evidence-based ethical policies on the migration of health workers: conceptual and practical challenges, Human Resources for Health [online journal] 1:8 (2003). http://www.human-resources-health.com/content/1/1/8.

Svensson, Jakob, "Foreign Aid and Rent-Seeking", *Journal of International Economics*, 51(2000): 437-61.

Tan, Darrell HS, Ross EG Upshur, and Nathan Ford, "Global plagues and the Global Fund: Challenges in the fight against HIV, TB and malaria, BMC International Health and Human Rights (online journal), 3:2 (2003). http://www.biomedcentral.com/1472-698X/3/2.

Vicary, Simon, and Todd Sandler, "Weakest-link public goods: Giving in-kind or transferring money, *European Economic Review* 46 (2002): 1501-20.

World Bank, Global Development Prospects, 2001 Report, Washington D.C., The World Bank, 2001.

The Case of Middle East and North Africa (MENA) Region

Samir Radwan
Economic Research Forum, Cairo

1. Introduction

The Middle East and North Africa (MENA) region has been struggling with reform for more than three decades. There is undeniable progress in terms of income and social indicators such as education and health. Moreover, the region is currently experiencing the strongest growth rate it had reached in a decade, more than 5.6% a year; as well as a 37% increase in the rate of employment creation. However, these recent positive indicators are mainly the contribution of the increase in oil prices which boosted oil revenues by 75% from 2001 to 2004,[157] and therefore it may be misleading to assume continuity due to the volatility in oil prices.

Though the latent potential of the region is believed to be promising, the region's current state of affairs suggests that resources available are not managed in a way to realize its full potential (See figure 2). Sluggish growth, alarming unemployment, poor industrialization, weak regional and global integration as well as high dependence on primary resources as a major source of income have all been common features of the region. Successive efforts for reform have often been undermined by several structural and institutional deficiencies that eventually reduced the outcomes of reform. It is not until recently that some serious reform efforts have yielded favorable outcomes in certain MENA countries, notably Egypt.

As home-grown approaches to reform have yet to be fully developed, several countries of the region have resorted to the advice of international institutions who offer what is believed to be "global solutions for local problems'. Such solutions are manifested in a set of packages for trade, financial and structural reforms that are seen as a global public good offered to restore desired order in time of economic turbulence, and induce momentum for sustainable growth. It is undeniable that institutions such as the World Bank, the International Monetary Fund and the World Trade Organization have influenced the policy agenda and decision making in the MENA countries. However, the outcome of such influence is not as obvious.

The success or failure of reform efforts has been a function of two distinct sets of factors; the first set includes the presence of some characteristics that undermine the capacity of the region to capitalize on the reform packages offered by international institutions. First, the MENA region has one of the world's most vivid histories of conflict; continuous episodes of political turmoil have always left economic reforms subdued by pressing political conditions. Moreover, the region has been one of the eminent areas on the global political scene, as one of the "hot spots" on the international political arena. This in fact rendered the region subject to foreign interests and was as such an essential target of several global plans and proposals for shaping its future.

The second set of factors accounting for the poor outcome of reform pertains to the relevance of the global public good offered (in terms of advice) and that was not necessarily tailored to fit the needs of the region. Policies proposed by international financial institutions were on many occasions resented by the public whenever they were perceived to touch upon

[157] World Bank, 2005.

necessities such as food subsidies or abandoning some deep-rooted protectionist measures that shield local industries from external competition.

It is worth noting at this point that though MENA is usually addressed as one region, it nevertheless exhibits a notable degree of heterogeneity. Given the specificity of different MENA economies, distinction may be made among three broad types: oil-surplus economies mainly members of the Gulf Cooperation Council countries (GCC); diversified economies (e.g. Egypt, Jordan, Morocco, Tunisia, Lebanon); and the marginalized poor economies (e.g. Sudan and Yemen). Each of these types of economies displays distinct characteristics, enjoys certain endowments and faces different sets of socio-economic problems.

This paper focuses on policy advice by international institutions as a global public good and attempts to explore the impact of this advice on the MENA region; assessing the relative weights of each the aforementioned factors in facilitating or impeding the full realization of the benefits of that global public good. The following section defines, for the purpose of this paper, the concept of policy advice as a public good based on a theoretical background. Section III provides a bird's eye view on recent economic performance in the region and the inherited challenges of the past. The paper then tackles in four consecutive sections how far did policy advice from international institutions respond to the problems of the region as pertaining to macroeconomic stability, global trade integration, investment climate, human resource development and poverty alleviation consecutively. Section VII draws the conclusion and stresses the need for an indigenous development effort.

2. Is policy advice from international institutions a public good?

For the last five decades, economic thought has been preoccupied with concerns about development and growth issues for individual nations; sometimes attempting to draw general conclusions on what was thought to be of common relevance to different economies. However, the emphasis remained for long on the interests of nations. Today, with the ever surging power of globalization, it is global rather than national issues that are at the forefront.

This shift has given impetus to the evolution of novel perspectives for traditional concepts; one issue of relevance is the concept of 'global public goods" which is a new perception sprouting from the concept of public goods. Attaching the term "global' to the concept, has begged a redefinition of the other two terms; namely "public" and "goods". Talking on the global level has induced the expansion of the public domain from one that is confined to state as a major player, to another one encompassing a number of equally dominant participants such as civil society organizations, businesses and households.[158]

According to the classic definition of the term, a public good has two main characteristics; non-rivalry in consumption and non-excludability of benefits. These characteristics mean that the good once made available is made available for the whole public in consumption, i.e. available for all. However, it is not always the case that markets offer public goods with these characteristics efficiently.[159]

However, the identification of public goods according to such criteria is now being revisited. As argued by Kaul and Mendoza,[160] being public or private is in many cases a matter of policy choice; i.e. a social construct. This means that attaching an attribute, public or private, to a certain good would largely depend on how the different interests of agents are arranged to provide the good, or seen in another manner, depending on their exclusiveness.

[158] Kaul and Mendoza, 2003.
[159] Kaul, 2003.
[160] Kaul and Mendoza, 2003.

Global public goods can be defined as those goods whose benefits accrue to more than one group of countries and do not discriminate against any group or generation.[161] In this respect, several universal arrangements can be regarded as Global Public Goods; global financial architecture and international trade system are two prime examples of these goods. They are a synthesis of globalization forces, as mounting interdependence among national entities has called for a sound global order that regulates commercial and financial cooperation across borders, heightening latent benefits and limiting potential down sides.

The presence of a global financial architecture dates back to post World War II, and the establishment of the Bretton Woods institutions in 1944; namely the World Bank with the prime goal of reconstruction of the devastated economies of the world war, and International Monetary Fund (IMF) with the task of coping with short term balance of payments and maintaining international monetary order. This was followed by initiatives for sowing the seeds of an international trade framework and thus giving birth to General Agreement for Tariffs and Trade (GATT) that was intended as an interim stage to the establishment of International Trade Organization (ITO). However, the establishment of an institutional body to govern trade worldwide failed to materialize before 1995 when the World Trade Organization (WTO) came to the scene as the only international entity responsible for dealing with the rules of trade between nations on the global or near global level.[162]

The international financial institutions provide three basic "goods": first, rules and regulation applying to international financial and commercial transactions that aim at maintaining a sound global financial and trade architecture; second, global knowledge through reports, periodicals and statistics published regularly; and third, is policy advice through technical assistance under the umbrella of tailored programs. Policy advice as a public good will be the focus of this paper.

Testing publicness through the conventional criterion, i.e. non-rivalness and excludability, we find that the policy advice in non-rival, availing it to one country does not preclude another from using it. With respect to non-excludability, policy advice *should* be available for all, where no one country can be excluded from making use of policies advised by international institutions. However, in practice there are several factors that deter the utilization of advice for some countries; indigenous difficulties, be it political (such as pressure groups) or economic (such as trade protectionist policies and weak industrial or financial structure), hinder the realization of the benefits of reform packages that are offered.

We can also test publicness according to the criteria suggested by Kaul and Mendoza in assessing individual public goods,[163] which classifies publicness as: publicness in consumption, publicness in decision making and publicness in benefits. From the perspective of consumption, the policy advice offered by international institutions is public as membership is readily available for all. With regard to publicness in formal decision making, the WTO follows a one-country one vote procedure; what makes a public decision making process. However, the matter may be different when it comes to the IMF and the World Bank as votes are weighted according to the financial contribution of nations.

From a benefits perspective, the publicness of benefits accruing from policy advice in not well established, given conditionality imposed on developed countries, internal deficiencies hindering the full utilization of advice, and the skewness of benefits distribution in favor of developed countries. Further investigation of the issue is provided in details below, in light of the experience of the MENA countries.

---

[161] Kaul, 2003.
[162] www.wto.org.
[163] For more details see Kaul and Mendoza, 2003.

3. Economic Performance in the MENA Region

There is a growing consensus that growth impediments in the region are rather structural in nature. Various studies have pointed to different causes for the poor growth performance such as oil dependence, regional political instability, weak governance, dominance of inefficient public sectors, as well as restrictive trade and investment regimes.

In 2003-2004, the MENA region experienced an economic turn-around and a pick up in growth rates to levels not experienced since the early 1990s with an average growth rate of 5.6%. On per capita basis, growth recorded 3.5% which is the highest since the oil price boom of the 1970s.[164] This turn-around has been mainly fueled by the surge in international oil prices which allowed the oil-dependent economies to accumulate revenues and increase public consumption and investment. According to the World Bank estimates, almost two-thirds of the increase in growth is attributed to the increase in government spending and investment.[165]

A number of features of this economic turn-around are worth highlighting. This upturn in growth has been only experienced by a small number of countries (Algeria, Iran, Saudi Arabia, and United Arab Emirates). In fact, almost half of the region witnessed a retreat in growth rates. Contrary to expectations, the war in Iraq did not cause region-wide instability that would disrupt growth. Perhaps, the two MENA countries affected the most were Jordan and Syria because of disruptions in their trade with Iraq.There is evidence of more prudent public spending by the oil-dependent economies during this boom compared to the 1970s. It is estimated that nearly 25% of the additional export revenue has been spent during this boom compared to about 60% during the 1mid-1970s boom. Intra-regional capital flows have also increased as Arab investors relocated their investments in the U.S. and Europe to the region. This has resulted in a significant increase in the stock market and real estate prices, which were most visible in Egypt and Saudi Arabia.

Notwithstanding this turn-around, the recent growth performance still falls short of what the region must achieve to rise up to the challenge of employment creation. To accommodate the growing number of entrants to the labor force, growth has to increase to 6-7% per annum which is unlikely to be realized until the structural impediments to growth are removed.

World Bank (2005) stated three pre-conditions which should be the focus of economic policy to unleash the region's growth potential: (i) increasing economic openness and industrial competitiveness; (ii) reduce the hegemony of the public sector and create an enabling environment for the private sector; and (iii) and accelerate the pace of economic diversification away from oil.

There is consensus that the performance of the MENA region during the 1980s and 1990s fell short of the region's potential. A major challenge is the inability of MENA economies to generate sufficient jobs to absorb the increasing numbers joining the labor markets every year. Unemployment in the region stood at 18 percent in 2002, the highest in the world, and this rate doubles for youth. With the recent oil price boom and associated growth in public expenditure, unemployment fell in some MENA countries however, there is concern regarding the unsustainable nature of job creation via relying on public expenditure outbursts due to oil booms.

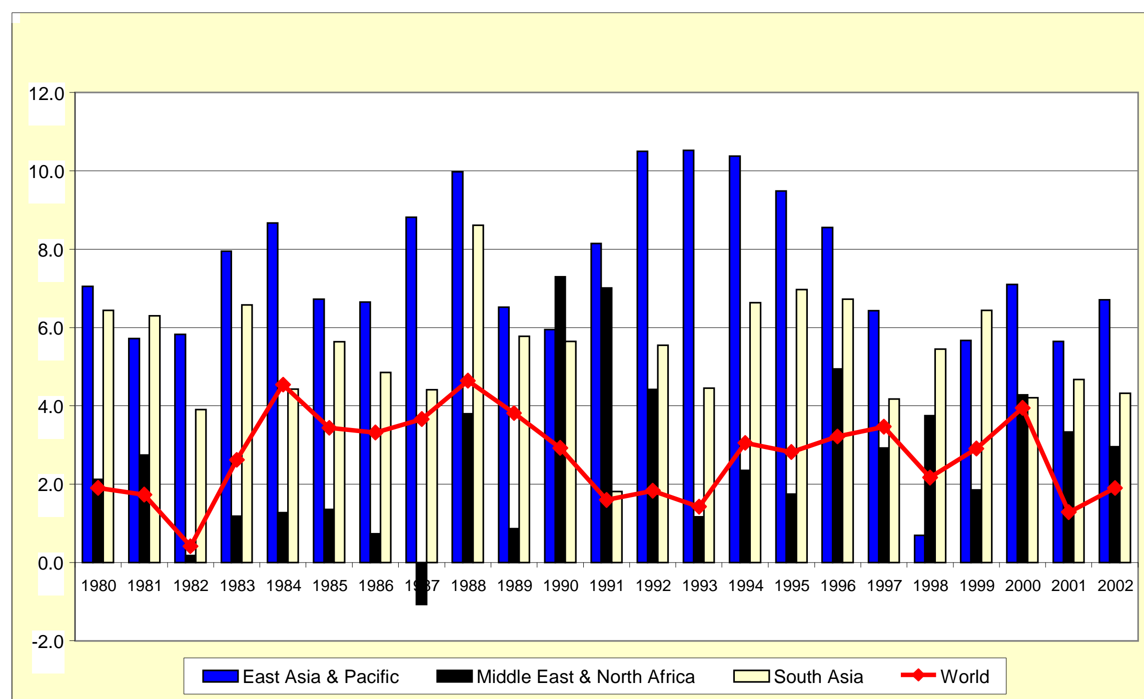
Any economic reform agenda in the region must take the objective of employment creation as its starting point. This is essential for progress, equity, and stability. Recent analysis of economic performance in the MENA region prior to the recent boom points to the region's

[164] World Bank, 2005.
[165] Ibid.

underperformance in three important dimensions: *economic growth*, *integration into the global economy*, and *job creation*. Comparative analysis signifies the dire need for serious reform if the region is to leapfrog into the ranks of successful development experiences. There is a widespread feeling that it is high time to exploit the region's underutilized potential, thus reversing the stigma of a region which is rich in resources, natural and human, but poor in performance.

Growth underperformance in MENA during the 1980s and 1990s can be observed on three levels. *First*, annual GDP Growth in the region has averaged 2.7 percent over the period 1980-2002 compared to 7.4 percent in East Asia and Pacific; 5.4 percent in South Asia; and 2.2 percent in Latin America. This performance has been at par with the world average during the same period. However, annual growth rates in the region have been subject to considerable volatility (figure 1), emanating primarily from vulnerability to exogenous developments such as oil price fluctuations[166] and political instability.

Figure 1 Annual GDP Growth in Selected World Regions (%)



Source: World Bank, World Development Indicators CD-ROM (2004).

Second, in terms of real per capita GDP growth, performance over the past two decades has been weaker than in other developing regions where real per capita GDP in the region has been stagnant, compared with an average annual growth of 6.3 percent in East Asia and 1.3 percent in all other developing countries (IMF, 2003). This sluggish performance masks a divergent performance in the region's sub-groupings: oil-dependent economies experienced a decline in real per capita GDP during the 1980s and negligible growth during the 1990s; while non-oil economies achieved average growth rates similar to other developing regions (with the exception of East Asia).

Despite the fact that some MENA countries belong to the group of high-income countries (such as Bahrain, Kuwait, Qatar, and UAE), this is not typically reflective of their state of

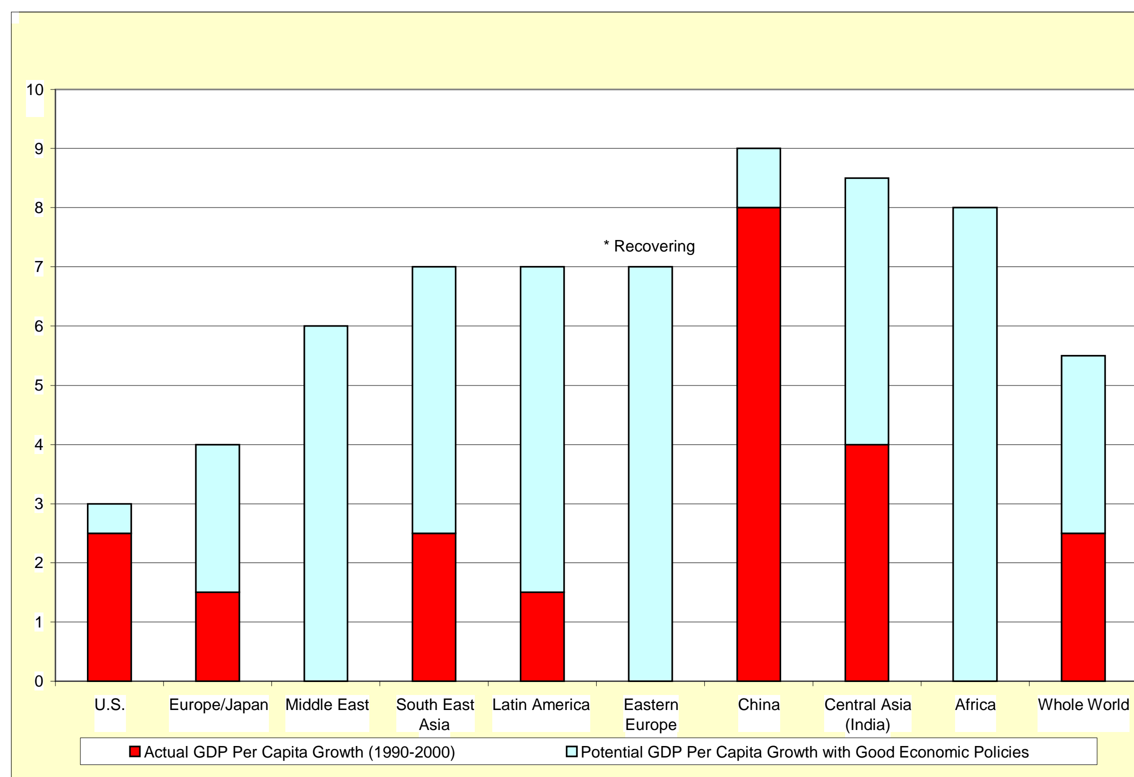
[166] It is worth noting that volatility in oil prices has been increasing since the early 1990s, and there are expectations that oil prices in the medium-term may not be favorable to oil-producing economies (Okugo, 2003).

economic development. Endowed with large oil and gas reserves and having small populations give rise to such an attribute; in terms of broader indicators of economic development, these countries still lag behind other developing countries which, despite having lower per capita income levels, have moved further on the development path beyond dependence on natural resources for growth and prosperity.

As for most countries in the region, they lie within the low and lower middle income groups with the exception of Lebanon, Libya, Oman, and Saudi Arabia which belong to upper middle income group.[167] It is worth noting that in 2002 GDP in the region accounted for about 2 % percent of World GDP despite the fact that MENA population accounts for 5% of the world population.[168]

Third, the region's performance is significantly at odds with its potential. Figure (2) displays regional performance with regard to the actual average growth rate in GDP per capita during the 1990s, in comparison with the potential growth in per capita GDP had there been good economic policies followed in each region. The Middle East region achieved a zero-growth rate compared to a potential of 6 percent. This suggests that there is plenty of room for policy reform to achieve the unrealized growth potential.

Figure 2 Actual Vs. Potential Growth in World Regions (in %)



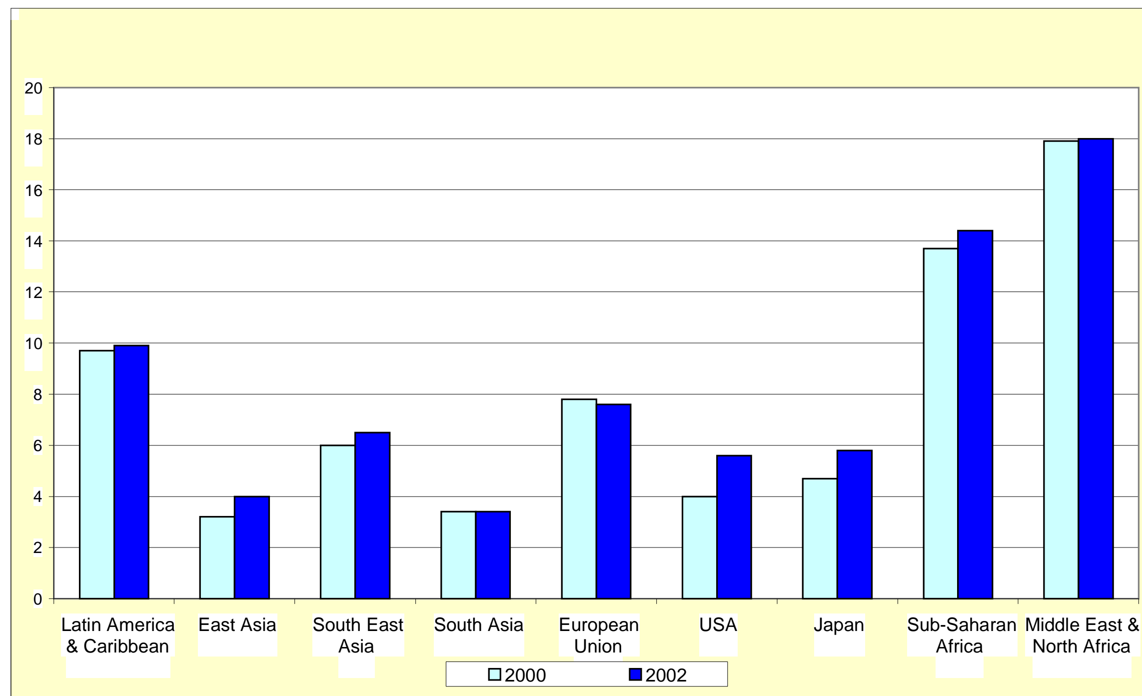
Source: Mckinsey Global Institute- EIU cited in Klein (2004).

The most significant outcome of economic performance in the region has been its failure to generate sufficient jobs for new entrants to the labor force, let alone reducing mounting unemployment. The region has the highest incidence of unemployment in the world. As a result of insufficient growth in the region, and deficiencies in labor market policies in some economies, the employment situation remains to be a source of concern. The unemployment

[167] According to the classification of the World Bank.
[168] World Development Indicators, 2004.

rate for the region was 18 percent in 2002, the highest among all world regions (figure 3). Unemployment rates range from below 1 per cent in Kuwait to over 25 per cent in Algeria and West Bank and Gaza Strip.

Figure 3 Open Unemplyment Rates for World Regions (%)



Source: International Labor Organization, Global Employment Trends (2002).

4. Macroeconomic Stability

Diversified economies of the MENA region were not usually subject to overwhelming economic crises but were yet characterized by sluggish and volatile growth. Low vulnerability to crises does not reveal resilience of the respective economies as much as it reflects poor integration with the global financial markets.

Nevertheless, most of the MENA countries were subject to serious foreign debt crises during the 1980s that rendered their ability for repayment of sovereign debt critically in question. Several incidences of debt squeezes have urged indebted countries to resort to the IMF for a bailout. IMF involvement entailed the provision of short term financial facilities that also went hand in hand with IMF- monitored structural adjustment programs. In several cases, the intervention of the IMF brought about debt rescheduling from Paris club official creditors and the London club commercial creditors that helped ease-off the crises. Morocco, Algeria, Egypt, Jordan, and Syria were all subject to similar experiences of accumulating debt followed by relief or rescheduling in a context of IMF assistance.

Episodes of stumbling current accounts were also recurrent in the region. They usually emanate from volatility of oil prices (a staple export and major source of foreign exchange earnings in most of the MENA countries) and other primary exports, as well as the vulnerability of traded services due to political instability in the region. Tunisia during mid eighties suffered a collapse in the price of oil, then the greatest source of foreign exchange, coupled with recessions in agriculture, phosphates and tourism, precipitating a foreign-exchange crisis. After the course of the crises, the government adopted a comprehensive

program of structural adjustment in return for IMF support.[169] Egypt has also been subject to several current account difficulties due to fickle tourism revenues that were continuously exposed to exogenous shocks. Such shocks have always resulted in increased current account deficits and left the whole economy in a downturn.

In the aftermath of several debt and current account crises, several countries of that group have been devoted to macroeconomic stabilization policies dictated mainly by the World Bank and IMF. These policies involve the usual balancing of the fiscal budget through cutting government spending, maintaining low inflation, allowing for market determined prices, and reducing the excess reliance on government regulation.[170] Introducing stabilization and structural adjustment programs were much faced by public and political resistance. This was because much of the dictated programs, by the World Bank or the IMF, entailed a sizable cut in public spending and thereby the reduction of government subsidies; in some instances, these cuts have caused an instantaneous rise in prices and thus mounting inflation. To the public and the political observers in the reforming countries, this meant that the largest part of the burden of reform is passed along to the poor, and much of blame was addressed to policy makers for adopting policies that were not tailored to the needs of the region. As a result, several governments were selective with regard to the components of IMF and World Bank-dictated programs they should execute, especially with those parts having a direct social bearing.

On the economic front, the outcomes of most stabilization programs were reasonable. Throughout the MENA region, inflation has fallen to acceptable levels as a result of stabilization efforts, of which a key feature was the conduct of more prudent monetary policies. Tunisia have managed to keep inflation in check during the past decade and through the onset of the century, inflation ran around 2.8% during the past four years, down from an average of 4.5% during the nineties, hitting a minimum of 2% during 2001. Egypt has also curbed inflation down from 20% at the beginning of the nineties to run around 2.5% earlier this decade. Despite of a price boom witnessed by 2003 due to the adoption of a flexible exchange rate, where inflation soared to 11% by 2004, prices began to show signs of cooling and inflation went down to 5.7% by march 2005. Similar trends were observed in Morocco as inflation glided down from 8% in early nineties to 1.5-2 in recent years; Syria and Jordan also followed suit. However, it is worth noting that commodity baskets against which consumer price index is measured in MENA countries still comprise considerable subsidies to major staples, what certainly cushions international price increases of such commodities and screens possible effects on inflation.

Progress in the monetary side was not matched with similar success in fiscal management. Fiscal deficits persist as a source of concern in almost all MENA countries. Fiscal accounts of several countries are still running in large deficits or witnessing variable performance. Government budgets of MENA countries generally comprise sizable expenditure on public sector enterprises, in the form of salaries and provisions for large public firms' losses, military expenditure and subsidies. Given that amelioration of such expenditures is subject to strategic debates, it is not expected to progress at the required pace. On the revenue side, much of the influx to government budgets is induced through privatization revenues, temporary booms in prices of major exports, or foreign borrowing. Robust fiscal management that hinges upon rationalized spending and sustainable revenues is still lacking in almost all the countries of the region.

The macroeconomic performance of the oil-surplus economies of the GCC was a function of their heavy reliance on oil as a major source of income. Inflation in GCC has been always

---

[169] Tunisia Country Profile, Economist Intelligence Unit, 2004.
[170] Richards, 2001.

maintained at reasonable levels, and the sustained inflow of foreign reserves has supported the maintenance of fixed exchange rate systems. Yet countries in that group are suffering from several deficiencies in their macroeconomic management. One is that the macroeconomic tools of these economies are in fact ineffective. Looking at the fiscal policy; these economies do not collect income taxes or corporate taxes from companies owned by GCC Nationals. Governments thereby are heavily dependent on oil revenues for their budgets. This overdependence on such volatile source of revenue leads to fiscal vulnerability that undermines the effectiveness of fiscal policy. Besides, the government is very reluctant to decrease its expenditure by cutting the huge wage bill it pays to government employees for political and social reasons. On the other hand, in case of a drop in oil revenues leading to recession, the government will suffer from a drop in its revenues and will in return be unable to revive the economy through boosting expenditure. As for monetary policy, it has also remained inactive to the fact that most GCC countries keep a fixed exchange rate or have underdeveloped financial markets.

Table 1 Oil Revenue and Non-Oil Fiscal Balance in Selected MENA Economies

Oil Revenue (Percent of Total Revenue)								
	1995	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Bahrain	56.8	62.1	59.9	46.8	56.1	73.0	68.6	69.9
Kuwait	68.9	66.6	63.8	58.7	64.0	69.6	68.2	66.4
Oman	73.5	77.3	77.4	65.3	73.7	82.9	80.3	76.7
Qatar	61.9	68.8	64.5	60.0	71.1	78.4	70.9	72.0
Saudi Arabia	72.2	76.1	77.8	56.6	70.8	83.1	80.6	78.0
UAE	55.8	56.9	58.4	41.5	43.7	55.7	58.8	63.3
Algeria	59.7	63.0	63.9	55.0	61.9	76.9	68.7	64.6
Libya	62.2	69.6	66.5	57.6	50.6	65.2	64.8	82.0
Yemen	47.9	69.9	67.4	52.1	57.1	62.3	64.3	75.6
Non-Oil Fiscal Balance (Percent of GDP)								
	1995	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Bahrain	-17.5	-16.9	-17.6	-17.6	-17.4	-16.8	-18.1	-20.6
Kuwait	-39.2	-26.8	-22.2	-28.6	-23.9	-16.4	-20.2	-25.6
Oman	-33.9	-29.1	-28.5	-28.9	-28.0	-27.8	-31.0	-29.5
Qatar	-29.3	-37.0	-30.6	-31.9	-27.7	-18.0	-23.0	-14.2
Saudi Arabia	-27.8	-26.4	-28.4	-23.6	-23.3	-27.1	-30.7	-29.5
UAE	-22.5	-26.1	-18.5	-20.1	-19.4	-15.4	-24.2	-26.3
Algeria	-23.1	-22.9	-26.3	-24.3	-25.8	-33.1	-31.5	-33.1
Libya	-25.2	-29.2	-35.3	-30.9	-16.6	-30.9	-51.0	-105.2
Yemen	-17.0	-37.4	-31.8	-24.3	-23.3	-22.8	-24.2	-26.4

Source: Okogu, Bright E., "The Middle East and North Africa in a Changing Oil Market", 2003, International Monetary Fund.

Furthermore, low diversification has put these oil-surplus economies in the risk of over depending on a depletable resource and thus not sustaining their growth.

Table 2 Time Span for Proven Oil Reserves in the GCC

Country	Proven Oil Reserves (Years)
Bahrain	15
Kuwait	134
Oman	16
Qatar	15
Saudi Arabia	85
UAE	124
GCC	83.7

Source: Fasano, Ugo and Iqbal, Zubair, "GCC Countries: From Oil Dependence to Diversification", 2003, International Monetary Fund.

Another issue is that the oil sector by default does not involve except a small segment of the population who contribute in production and reap its benefits, which in turn has income distributional effects. These effects have been corrected through the strong welfare systems installed in GCC countries, and a government that has dominantly assumed the role of a major employer of all graduating nationals, so that oil revenues triggered down to all the population. Yet, with a growing population and a budget generated mainly from a source that will soon deplete, the policies of these oil economies will not be sustained.

The oil economies of the GCC have not been desperate to adopt reform packages from IMF and World Bank in return for loans, because they had sufficient funds to spend on world class infrastructure, education, health care and welfare system, as well as guarantee a job for all local graduates. Today, these countries have realized that there is a pressing need for reform, especially when it comes to diversification and creating an efficient private sector. In light of the rising oil prices and the resulting revenues that are expected to even exceed those of the 1970s and 1980s; the oil-surplus countries are in dire need at this current moment for advice that guides how they used this cash gift and avoid the mistakes of the 1970s and 1980s. Observers are already noting concerns on how the recent boom would affect the pace of structural transformation witnessed in recent years.[171] Fiscal balances and external current account balances are greatly improving creating a strong domestic demand and yet inflation did not rise in return. Regional growth rate is estimated at 5.4% in 2005, and the regional current surplus is projected to reach 23.5 % of GDP in 2006.[172] It is evident that government expenditure during this boom is more prudent relative to previous booms, and there are also numerous efforts to diversify away from oil in the oil-dependent economies, where the UAE emerges as a success story with a vibrant services sector that certainly helped the economy cushion against oil price volatility.

The IMF's World Economic Outlook of September 2005 addressed the issue of managing booming oil exports in the Middle East. It pointed out that this cash gift is an opportunity for the oil-surplus GCC countries to accelerate reforms that would generate employment for the rapidly growing working age population. Policymakers should give the first priority to spending that affects productivity and standards of living. Another point mentioned by the IMF is that expenditure should not be increased by amounts that cannot be sustained. Given high unemployment and low inflation, there is a scope for increased government expenditure- to for example pay off its large public debt- without overheating the economy.

The outlook though remains uncertain and there is need for policy advice to advance fundamental reforms and utilize the current oil windfall to mitigate foreseen adjustment costs. This could in fact be a golden opportunity to foster structural transformation towards a more sustainable growth path. Advice is needed on how to increase the pace of diversification and directing oil-related income into productive sectors taking into consideration the specificity of each economy, and at the same time on the optimal use of the increased oil revenue to address the short-term social impact because of the adjustment process.

Weak economic growth in the region remains a forefront issue for policy makers. Though successful in introducing short run stabilizing measures, IMF and World Bank policies in the region failed to address sustainable development in MENA economies to which they have provided assistance. Economic growth falls far short of the pace required to alleviate chronic problems of the region, ahead of which is the unemployment. A key explanation of this is the negligence of a number of structural weaknesses which hamper growth. Examples of such weaknesses are low diversification, sizable public sectors, inappropriate business environment and meager investments. In spite of several successful stabilization programs, structural

[171] World Bank , 2005.
[172] IMF, 2005.

adjustment is still lagging and much remains to be done to realize the potential growth of the region.

5. Global Trade Integration

The recent wave of globalization has been markedly manifested in increasing integration among individual economies, with international trade and capital flows reaching unprecedented levels. In 1970, global trade in goods and services as percent of world GDP amounted to 27 percent. In 2001, the ratio more than doubled reaching 58 percent. These developments have had far-reaching implications for developing as well as developed economies. Changing trade and investment patterns, the rise and fall of certain industries across nations and regions, and the revolutionizing advances in information and communication technologies have added new dimensions to the ever-evolving concept of 'competitiveness'.

This process puts formidable challenges as well as inherent opportunities for countries in the region. However, the most important challenge is to emerge from growth and development patterns relying on resource-based industries, and moving into growth patterns based on higher productivity and innovation through the optimal use of knowledge, technology, and skills.[173] Given the current momentum and scope of the globalization process, this can only come about through further integration with the global economy.

The pace of integration of the Region into the global economy can be proxied by the trends of the countries' shares in world trade and FDI over the past three decades. Exports of goods and services as percent of GDP declined from 41.9% in 1970 to 34.4% in 2002. Data for comparator developing regions in table (8) indicate the increase in the same ratio for almost all world regions during the same period with remarkable developments in East Asia and the Pacific as well as South Asia where the ratio increased from 9% to 41.3% and from 5.2% to 16.9% respectively.

Empirical research has also indicated that the region is significantly under-trading with the rest of the world relative to its potential.[174] Important factors in the region such as geographical proximity, large domestic markets in some countries, relative diversification in natural resources and productive capacities, as well as cultural and historical ties have not manifested themselves in higher trade volumes among MENA economies. Throughout this period, the region's share in world exports has been negligible and witnessed a trended decline since the 1980s; in addition, its share in global FDI inflows has also been modest especially since the mid 1980s, but has been subject to less volatility as it revolved around a range of 1-2 percent of global FDI inflows as shown in figure 4.

FDI inflows to the region tend to fluctuate widely from year to year depending on oil price developments, political stability, and the privatization stance in some countries. During the 1990s, the region's share in total FDI inflows to developing countries has been below 8 percent; further, it has been fluctuating around a downward path. Similarly, the share in FDI stock in the developing world declined from 12 percent in 1985 to less than 5 percent in 2002.

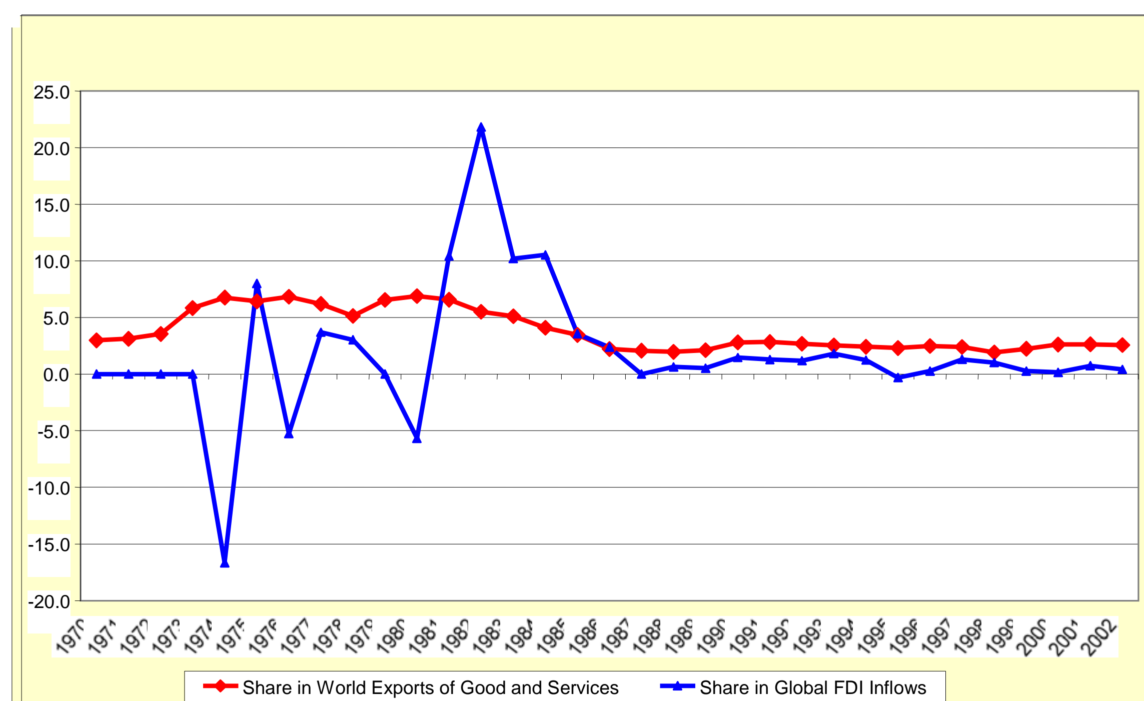
[173] ERF, 2000.
[174] IMF, 2000. This conclusion depended on the results of a "trade gravity model" which measures potential trade based on the size of the region's economies and its strategic geographical location and then comparing actual trade to this benchmark.

Table 3 Exports of Goods and Services as Percent of GDP

%	*1970*	*1980*	*1990*	*2000*	*2001*	*2002*
Middle East & North Africa	41.9	41.9	32.9	34.2	33.2	34.4
Sub-Saharan Africa	22.5	31.5	27.1	31.9	32.2	33.1
East Asia & Pacific	9.0	18.0	25.1	42.0	40.7	41.3
Europe & Central Asia	..	..	23.1	43.6	41.7	39.7
Latin America & Caribbean	9.5	12.4	41.1	17.1	17.5	21.3
South Asia	5.2	7.8	9.0	15.1	15.1	16.9

Source: World Bank - Word Development Indicators (2004).

Figure 4 Share of Middle East and North Africa in World Exports and FDI Inflows (%)



Source: World Bank, World Development Indicators (2004).

Saudi Arabia has the largest stock of FDI in the region; most of it is oil-related, reaching US$ 26 billion in 2002, with Egypt coming second with US$ 20.7 billion after a positive performance lasting for more than a decade.[175] Tunisia and Morocco are also becoming important host countries. Many countries in the region, however, remain small recipients because of their limited internal markets, as suggested by several recent studies.

[175] World Investment Report, UNCTAD, 2003.

To assess the economic impact of FDI, one has to consider the magnitude of inflows relative to the size of the host economy, in addition to its contribution in capital formation (i.e. increasing the domestic productive capital stock). The ratio of FDI inflows to GDP is one of the lowest on a global level, standing at 1 percent in 2001. The contribution of FDI inflows to gross capital formation implies an even more unfavorable performance as it recorded 4.5 percent in 2001 compared to 9 percent in East Asia, 13.8 percent in Eastern Europe, and 18.9 percent in Latin America.[176]

Furthermore, intra-regional private capital flows has been subject to fluctuations, but has been increasing since the late 1990s.[177] Compared to MENA capital investments in the U.S. and Europe, intra- regional investments remain rather modest, but this trend is being reversed as indicated in section (III) above.

The pace of reforming the legal framework and investment regulations has been notably slower than in other parts of the world.[178] In addition, the stagnation in growth of per capita income – reflecting the stagnation in growth of domestic demand – has been a discouraging factor for FDI; especially that FDI attracted to the region has been primarily of a tariff-jumping nature targeting the domestic market and not export markets. This is a direct outcome of the prevailing investment policy framework in the region that created a general anti-export bias, and created an incentive structure favoring protection and inward-oriented production.

There are differences across the region in terms of characteristics and performance; yet it can be established that trade outcomes are fairly common throughout the region. The MENA region has obviously failed to opportunize out of the expanding multilateral trading system. This failure can be attributed to two sets of factors. One is a deficiency in the design of the multilateral trading system itself and the policy advice offered to the region on how to integrate into this system. The other set of factors pertains to characteristics of the recipient itself (MENA) that hinder advancement in global trade integration.

The MENA region is constantly advised that trade liberalization and capturing a niche in the global trade system is an important engine of economic growth that cannot be surpassed. As seen above, the region does have significant attempts in achieving this global public good. One of the policy options chosen to do so was through establishing regional trade agreements and a further step was to establish the EU Association agreements that several MENA countries are ratifying.

First, with regard to regional trade agreements, the core problem in their unsuccessfulness was that the members of these agreements have similar production structures, meaning the country A's exports of interest are almost exactly what country B would be interested to export to A. This is worsened by the fact that the region as a whole has a high export concentration index, i.e. the region is still behind in diversification efforts. This ascertains the argument that MENA is limited in the range of products available to export and these are mainly primary goods and food items. Moreover MENA is missing the opportunity to engage in intra industry trade and trade in parts and components, which is the fastest growing segment of world trade. In turn, this limits the capacity of MENA countries to expand trade among themselves and with other world regions. All MENA countries- from the three groups of economies- with the exception of Tunisia and Morocco and UAE have intra industry trade ratios of less then 20%.[179] This factor can be related to the low levels of FDI, which typically

---

[176] Ibid.
[177] Fawzy, 2003.
[178] World Bank, 2003.
[179] World Bank, 2003.

leads intra industry trade. A feature inherent to the region is its limited success in attracting sufficient levels of FDI. Compared to other regions the investment climate is not that strong, partly because of the reluctance of many governments in the region to hand over control by taking further measures to develop a real independent private sector.

Box 2 The Effect of the Political Economy in shaping the reform profile of the MENA Region

Understanding the underlying reasons behind the failure or success of reforms in the region necessitates the study of the political economy of reform in the region. Research studies and researchers who have studied the region closely have often came to the conclusion that political economy factors have strong explanatory powers for the current state of reforms. In addition, attention needs to be paid to the particularity of the region in terms of its historical and cultural specificity which has often been stated as the reason for resistance to externally supported initiatives.

Institutional and Political Governance Challenges
Clientalistic relationship-based systems of political governance asserts itself strongly in developing countries. In MENA, the underdeveloped state of institutions has caused the pervasiveness of clientalistic relationships in the economic and political sphere and has caused the creation of informal networks of power. This has meant that groups that have access to informal networks of power can use their personal connections to influence the reform agenda to serve their narrow interests. The danger in this lies that reforms whether advocated by the IFI or those advocated by pro-reform domestic groups can be blocked if they conflict with these influential groups.

Transition in France and England from relationship to rule-based system of political and economic governance involved establishing a clear and effective separation of powers and responsibilities between three branches of government: the legislature, the executive and judiciary (OECD 2003). In many MENA countries, there is an overpowered executive whose unchecked powers can serve narrow interests at the expense of the collective interest. The centralized power of the executive is manifested in the constitutional right of the president to dissolve parliament and to issue legislation. More than 80 percent of legislation is issued by the executive. One finds that centralization of power in the executive has resulted in an oversized bureaucracy. In Egypt, for instance, civil servants account for almost 30 percent of the labor force.

Regarding the role of parliaments in reform, when parliaments do exist they do not have effective oversight over the role of the executive. They also lack the necessary capacity to conduct research and draft legislation. However, some parliaments are moving towards creating direct links with the public. Some parliamentary committees are conducting public hearings to solicit public opinion on certain legislations (World Bank 2003).

The exclusive nature of the policy-making process has also acted as an obstacle towards participation of stakeholders in influencing reform agenda in a manner that serves the collective interest. It is believed that the limited reliance of the state on taxation as a source of public finance has limited accountability of states to their citizens perpetuating the exclusive nature of policy-making process. In Arab countries, taxes account for a small percentage of GDP with an average of 17 percent of GDP in non-oil Arab countries and only 5 percent in oil countries (AHDR 2004). Mostly in the oil rich Arab states, governments have been able to maintain autonomy from society because of the rentier nature of these economies. Governments have relied on oil revenue to generously provide services and subsidies to their populations while at the same time preventing the formation of groups that are independent from the state. The policy of no taxation has meant no representation of citizens in the policy process thus minimizing accountability of governments to their citizens. This type of patronage system has limited pressures for reform and has reinforced authoritarian rule.

Box 2: (continued)

Another factor that impedes MENA countries from implementing needed reforms is the lack of technical and administrative capacity to do so. Although the region has a large public sector it is usually over-staffed with administrative workers that are incompetent in dealing with the needs of a modern state and citizenship. Having a competent and technically qualified executive is a pre-requisite for the successful implementation of any reform agenda.

Role of Interest Groups
The literature on the region suggests that in some countries that the state has caused a crony capitalist class to exist that uses the state to ensure its narrow private interests prevail. This phenomenon is often labeled as state capture and can range from the award of large contracts to groups connected to the state to actual changes in laws and regulations (World Bank 2003a). For decades now the private sector has been protected in domestic markets from competition through import substitution policies of the sixties and seventies. This has created an uncompetitive private sector that blocks any attempts to change the status quo which creates rent-seeking opportunities. This can be specially felt in the power of import substitution industries lobby to slow down trade liberalization process. The association between the power of import substitution industries and export oriented industries lobby in the early 1990s in influencing the level of trade protection was studied in 24 developing countries (World Bank 2003b). It was found that higher trade protection levels existed in countries with powerful import substitution industries lobby (ibid 2003b).

In MENA, the role of public sector in the economy is still large. Rent-seeking behavior of some bureaucratic elements has caused the misallocation of resources and resistance to reform. Any reforms that have attempted to downsize the public sector or threaten its dominance in certain sectors have been fraught with suspicion and resistance.

Civil society in MENA is not empowered to play its role in protecting citizen rights and to be part of the system of checks and balances on the role of the state in the region. There has been growing voices for change from civil society actors; however, the state has consciously found ways to limit the power of civil society through restrictions on freedom of association and expression. Curtailment of the freedom of expression and opinion has taken the form of officially imposed censorship and attacks on outspoken political activists (AHDR 2004). Denying civil society organizations the right to association has also been a practice that limited the powers of civil society to advocate for economic, social and political reforms.

For societies to move towards reform there needs to be a consensus among the majority of society about the benefits of reform to all. The elites of MENA societies should address past trends of polarization and fragmentation and seek to encourage dialogue among different forces in society and encourage politics of inclusion.

Regional Conflict
The MENA region is considered one of the most conflict ridden regions in the world. According to a World Bank report, over the past four decades the region has experienced some 14 years of civil conflict affecting eight major countries, and almost 15 years of intrastate conflicts affecting fourteen countries (World Bank 2003b). Major conflicts with negative spillover effects on neighboring countries include the Arab Israeli conflict which has been ongoing for over 50 years now. Other major conflicts include the conflict in Iraq, Sudan and Somalia.

Public spending has been diverted away from social development and more productive uses towards military expenditure. In six Middle Eastern countries[1] and for which information is available, military expenditure as percentage of GDP exceeded 6 percent. In addition, sanctions imposed by international institutions and developed country governments has worsened the economic situation and increased poverty.

Conflict in the region has negatively impacted the growth and development prospects in the region by impeding trade and investment. It is widely believed that modernization and reform in the region is seriously setback by the conflict situation.

The nature of the MENA political economy plays a vital role in the slow pace of reform in the region. The “rentier” element that is prevalent in most MENA economies created a legacy of governments deriving large rents from oil, strategic aid and workers’ remittances. The availability of these sources reduces the urge for reform and supports the status quo.

The MENA region therefore ends up depending on low-value finished goods for exports and importing other parts and components for an inefficient manufacturing base. This results in a negative trade balance between OECD countries and the MENA in favor of the former in trade on parts and components amounting to $14 billion with imports being 15 times the value of exports from MENA to OECD countries.[180]

Another fastest growing sector of international trade is trade in services, in which the MENA region also seems to be underperforming. Even though the region enjoys a comparative advantage in selected areas such as tourism regional conflicts might be discouraging heavy tourism. Jordan is an example where infrastructure and marketing efforts succeeded in attracting significant tourism.

The only area where MENA countries seem to be performing well in terms of integration is labor market integration and this is evident in the high net migration flows for many countries in the region. Workers remittances represent a significant share of GDP and a major source of foreign exchange to the labor surplus countries such as Egypt, Jordan, Morocco, Tunisia, Algeria, Syria, Lebanon and Yemen. Net migration rates are higher in the MENA region than in comparator groups. Yet, migration cannot be considered a long term alternative to trade and investment. Oil surplus/GCC countries being the major absorbents of migrants, falling oil prices and rising unemployment among GCC nationals are likely to limit the extent of regional integration through labor flows. Moreover, industrial countries’ restrictions on labor migration undermine the actual potential of remittances as a source of foreign exchange. Commitments under the General Agreement on Trade in Services neglect “movement of natural persons” as a mode of trade in services that is important to developing countries.[181]

Another characteristic of the region is the slow pace of tariff dismantling that is largely due to the fact that in many MENA countries trade taxes represent a significant part of government revenue. It is worth noting that in Morocco government revenue from trade tariffs account to 16%; 19% in Syria; 51% in UAE; 3% in Oman; 9% in Yemen and 35% in Sudan.[182] Trade reform in the MENA region should not be about changing trade policy alone; it will be more effective if part of a comprehensive strategy that includes building trade-related infrastructure and institutions, massive investments in physical and human capital and law enforcement.[183]

As for the EU partnership agreements, countries of geographical proximity to Europe illustrate a high degree of geographical concentration with Europe as the most important partner. The same problems inherent in the economic structures of the MENA countries such as the lack of diversification, and concentration of primary goods, act as deterrents in benefiting from EU association agreements. Another pressing issue is that of agricultural products that are common interest exports to many MENA countries who have signed EU agreements and also to the EU. The heavily subsidized agricultural sector acts as a non-tariff barrier to MENA countries who rely on agriculture and have little other products to offer.

The design of these EU Association Agreements and the World Trade Organization (WTO) as an international organization offering MENA countries subscription to the global public good

[180] Ibid.
[181] World Bank, 2005.
[182] World Development Indicators, UNDP, 2004.
[183] World Bank, 2005.

of the multilateral trade system, do not pay sufficient attention to the agricultural policy in Europe as an important element affecting trade outcomes for MENA countries. There seem to be no efforts from the part of international institutions offering policy advice, in enforcing the removal or reduction of agricultural subsidies as non-tariff barriers to trade between MENA countries and Europe. Out of the 21 MENA countries, only 13 were members of the WTO and 5 others (Algeria, Saudi Arabia, Lebanon, Syria and Libya) are pending WTO accession. Similar to regional agreements, the fact that agriculture, services and labor are missing from WTO agreements and difficult rules and procedures undermine the effectiveness of trade agreements.

In the meanwhile, MENA countries like other developing countries are pressured by the international development community to dismantle tariffs, abide by international quality standards and international property rights. All these factors emphasize that it now getting more difficult for developing countries to follow the model South East Asia had followed three decades ago. These countries were able to make use of reverse engineering to build a technological base and export competitive industrial products that were able to dominate markets all over the world. In addition, countries that are most successful engaged in the multilateral trade system today have had the chance of applying necessary protection measures to protect their potential and infant industries. Today, the multilateral trade system leaves the MENA countries with limited policy options with regards to trade.

6. Investment Climate

An essential precondition to improving performance in terms of growth and employment creation is to increase investment, and this, in turn, depends crucially on a favorable and enabling investment environment. Business regulations have a direct impact on investment decisions. Throughout the lifecycle of any business (entry, operations, and exit), regulation should aim at maximizing both economic and social welfare. The optimality of regulation stems from the reconciliation of the welfare maximization objective with the goal of creating a competitive business environment that induces investment.

A broad assessment of the optimality of regulation in MENA countries – relative to other successful examples from the developing world – suggests that there is large room for reform and performance upgrading.[184] Data for 2005 indicates that the average number of days to formally register a business imply generally lengthy procedures in most Arab countries, especially UAE, Saudi Arabia, and Yemen. Although, the average for the selected Arab economies is lower than the world average, comparison with some best practices (such as Hong Kong and Singapore) as well as examples from the developing world (Chile, Jamaica, and Malaysia) show that there is room for improvement and procedure simplification.

Underperformance of the Arab region is also evident in the regulation of market exit, i.e. bankruptcy procedures. The average time it takes a firm to exit the market and declare insolvency for the selected Arab economies (3.9 years) is higher than the world average (3.2 years). Relative to the comparator group, there is an obvious gap especially in comparison to Hong Kong, Jamaica, Singapore, and Turkey. The outcome of heavy-handed regulation is naturally a proliferation of informal activities. Data for 2001 indicate that the informal economy represents one-fifth to one-third of GDP in the Arab world; these figures are high relative to developing countries with more competitive business environment characterized by prudent regulation.

[184] The data in this section is building primarily on the most recent "Doing Business in 2006: Creating Jobs" by the World Bank.

Table 4 Business Environment Indicators ***as of January 2005***

	Time to formally register a business (days)	*Number of procedures to enforce a contract*	*Time to go through insolvency (years)*	*Number of tax payments per year*
Arab Countries				
Algeria	26	49	4	63
Egypt	34	55	4	39
Jordan	36	43	4	10
Kuwait	35	52	4	14
Lebanon	46	39	4	33
Morocco	11	17	2	28
Oman	34	41	7	13
Saudi Arabia	64	44	3	13
Syria	47	47	4	22
Tunisia	14	14	1	31
UAE	54	53	5	15
Yemen	63	37	3	32
Comparator Group				
Chile	27	28	6	8
China	48	25	2	34
Czech Republic	40	21	9	14
Hong Kong	11	16	1	1
Jamaica	9	18	1	72
Malaysia	30	31	2	28
Singapore	6	23	1	16
South Africa	38	26	2	32
Turkey	9	14	1	31
Minimum	2	11	0.4	1
Maximum	203	69	10	118

Source: "Doing Business in 2006: Creating Jobs", The World Bank, Washington.

The Washington consensus confirms that leaving the private sector to lead economic growth and confining the role of the government to an enforcer of law and regulator is the key to economic development.[185] The MENA region is faced with the challenge of transitioning the structure of its economies from public sector managed to private sector-led economies, and from oil-dependent and volatile to diversified economies. There is progress across the region of liberalizing markets, opening up to foreign investment and privatization. The public sector still remains very large in most countries in the region, accounting for as much as 40-60% of output and employment.[186] GCC countries have undertaken significant efforts in freeing their markets and attracting foreign investment, and were able to develop key service industries. Several GCC countries have demonstrated will to attract even more investment through steps like allowing foreign freehold ownership of property. As a result of these efforts some GCC countries like UAE and Bahrain have managed to diversify away from oil into several service industries.[187] These two countries have successfully attracted investors particularly in services. Structural adjustment was not painful in these countries because of the availability of effective social welfare systems.

Outside the GCC, there are successful reforms in Morocco and Tunisia. Industrial modernization programs in both countries have shown positive results in terms of creating a

[185] Richards, 2001.
[186] Nabli, 2000.
[187] World Bank, 2005.

more favorable investment environment. Jordan is also progressing with its privatization program and its private sector development indicators seem to be improving, expect for access to credit and business enforcement. Egypt on the other hand to date has been less successful. Lately, the government showed seriousness in carrying out reforms beginning in 2003 with the floating of the Egyptian pound and then even more comprehensive tax and tariff reforms, reviving the privatization program and long awaited banking sector reforms.[188] In these types of diversified economies structural adjustment and other policies are accompanied by adverse effects on unemployment and poverty, in the absence of efficient social insurance schemes.

7. Human Resource Development and Poverty Alleviation

One of the criticisms taken against the reform packages advised by the World Bank and IMF is that they do not directly address development of human capital and employment. The mechanism of these reform packages as they worked in countries outside MENA was pushed by the existence of a solid human capital base that lead to economic growth and progress. This is not the case in the MENA region.

The MENA region has a young population, what this tremendous human power needs is the building of human capacities that allow for access to an advanced level of human well-being. Youth unemployment in specific is a common problem across the region that is resultant of a population growth rate that is among the highest in the world reaching 3.3% per annum and consequently a young population that is growing at the same rate. This 'time bomb' has different implications across the MENA region, taking into consideration three broad types: diversified economies, oil-surplus economies; and marginalized poor economies. Unemployment reflects itself on poverty rates that are quite high in the region, with poverty incidence higher in some countries than others. The region's youth suffer from a lack of educational qualifications and skills that make them less vulnerable to unemployment and poverty. Among other developing regions, MENA's youth unemployment is the highest of about 26% percent[189]. Youth unemployment ranges from 37 percent of total unemployment in Morocco to 73 percent in Syria, with a simple average of 53 percent for all countries for which data are available. Except in Jordan and Lebanon, first-time job seekers make up more than 50 percent of the unemployed in all countries for which data are available, further confirming that unemployment in MENA is essentially a labor market insertion phenomenon for youth (Figure 5).[190]

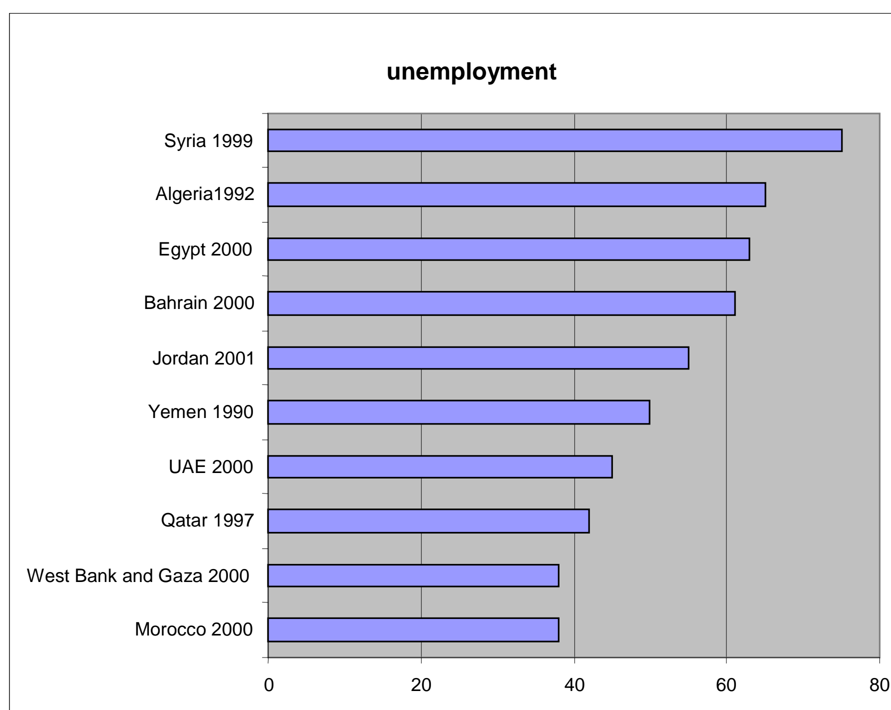
The share of young adults in the unemployed population in the MENA region is on the rise; their share was not less than 47% of total unemployment throughout the past half-century. In diversified economies, unemployment is highly concentrated among youth with intermediate education and low skills. This type of labor is unlikely to be on demand due to low level of skills. Such youth will resort to the low-productivity informal economy. These type of economies need to give priority to employment generating sectors.

As for GCC economies, the problem does not lie in the lack of demand for labor but for the overdependence on expatriate labor, which is more skilled compared to the national labor force. GCC governments have been adopting the strategy of absorbing their young national graduates into the government jobs. Yet, as the population grows and fiscal pressure increase this policy cannot be sustained. The policy option for the GCC is to intensify their efforts in improving the skills of their labor force starting with the upper end of the job market where competition from expatriates does not present a serious challenge. The problem of the

[188] Ibid.
[189] ERF, 2004.
[190] ERF, 2004.

unemployed young in marginalized poor economies is that of the whole economy with the underperformance of the growth process, continued conflict and absence of the rule of law.[191]

Figure 5 Youth unemployment in MENA countries (as percentage of total)



Source: Background paper on "Economic Reform in the Arab Region" prepared by the Economic Research Forum for Conference on Arab Reform, Alexandria Library, 12-14 March 2004.

On a regional level, with regard to *primary and secondary* education, from Figure (6 and 6a) it can be seen that MENA states in general performed modestly by the end of the 20th century with respect to other regions in the world. The gross enrollment ratio in Arab countries on average stood at 91.1% and 60.3 % in primary and secondary education respectively. Those records, though close, still fall short of world averages and other developing regions. Nevertheless, comparing the figures with the corresponding ones at the beginning of the 1990s, it can be deduced that the Arab countries have been able to make sizeable strides in expanding the quantity of education provided as a result of the increased attention drawn to education by the government policies.

As for higher education, the Arab Human Development Report 2002 shows key deficiencies relevant to economic development and knowledge production: for example, fewer than one in 20 Arab university students are pursuing scientific disciplines, while in Republic of Korea the figure is one in four.

It is true that higher education has expanded steadily in Arab countries. However Increases in enrolment haven't been matched by corresponding increases in expenditure nor in quality. Also, graduates of higher education suffer significant levels of open unemployment in most Arab countries.[192]

---

[191] ERF, 2004.
[192] Fergany, 2001.

Figure 6 Gross enrollment ratio in primary education

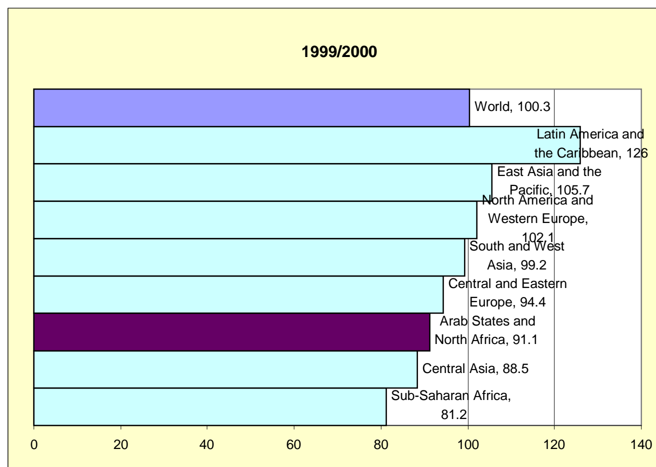
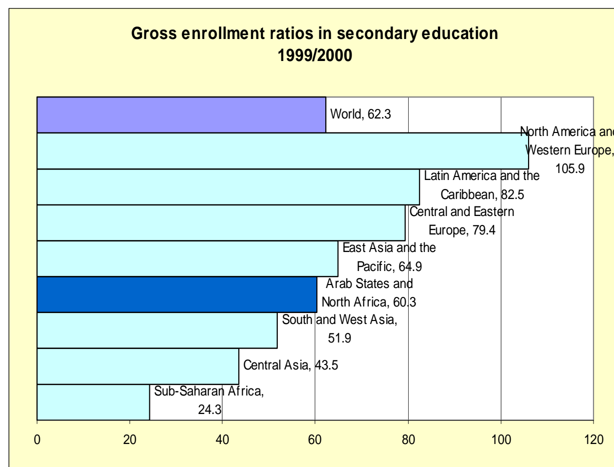


Figure 6a Gross enrollment ratio in secondary education



Source: UNESCO online Database, 2002.

The average ratio of science branches among higher education graduates in all Arab countries combined was 37% while the rate in the case of these three countries was 58%, 56% and 54% respectively. Among the Arab countries whose share of science graduates fell below the Arab average, we find Egypt and Saudi Arabia.[193]

Another vital common challenge facing job creation in all MENA countries is the quality of the labor force and in particular the low level of *productivity* which is limiting the growth prospects in the region (Table 5) Estimates show a negative total factor productivity (TFP) growth in MENA countries during the 19980s and a nil TFP growth in the 1990s. Other indicators such as the growth of GDP and of physical capital per laborer show poor levels compared to other regions.

[193] Ibid.

Table 5 Labor productivity in MENA

	Growth of GDP per laborer		*Growth of physical capital per laborer*		*Growth of human capital per laborer*		*TFP growth*	
	1980s	1990s	1980s	1990s	1980s	1990s	1980s	1990s
East Asia and the Pacific	5.6	7.5	6.7	7.8	1.0	0.6	2.3	4.0
Latin America & Caribbean	-1.7	0.6	0.2	0.6	0.9	0.8	-2.4	-0.1
High Income/OECD	1.8	1.3	2.3	2.2	0.3	0.5	0.7	0.1
South Asia	3.6	2.9	2.7	2.1	0.9	0.8	2	1.6
MENA	0.4	0.7	2.1	-0.3	1.4	1.2	-1.3	0.0
World	3.2	4.0	3.8	4.1	0.8	0.7	1.2	2.0

Source: Keller and Nabli, 2002.

It is a fact that knowledge is an essential factor of production and a principal determinant of productivity. Which means that there exists a strong correlation between knowledge acquisition and the productive power of society.[194] The "knowledge gap", and not the "income gap", is now considered by the World Bank as the main determinant of the fate of countries in today's world.

The challenge of human resource development in the MENA region has always been an issue of concern, and one of the main reasons attributed to the rise of unemployment and the mismatch between labor supply and labor market demand, but as it is a supply problem in the labor-importing oil economies, it is a demand problem in the diversified labor exporting economies.

Taking each group of economies separately we find that the first group of countries, comprising the GCC countries, faces important policy challenges and opportunities in view of their dependency on an uncertain and volatile oil market, and the growing number of nationals entering the labor markets and their rising unemployment rates.

Another feature of the GCC economies is that expatriate workers represent almost three quarters of the labor force. While unemployment pressures among nationals have been contained until recently because most GCC governments have been acting as the major employer for nationals, nationals currently constitute most of the workforce in the public sector. This strategy, however, has practically reached its limits because the wage bill has become too large. The wage bill now represents more than 10 percent of GDP in most GCC countries.[195] With an estimated 480,000 unemployed nationals in the GCC, policymakers have tried to nationalize the labor force through enforcing firms to hire nationals according to certain quotas, and through increased restrictions on work permits for expatriates, as well as the use of subsidies for the hiring of nationals.[196]

However, the task is not easy taking into account that the GCC national workforce is characterized by low productivity (Table 6). During the 1970s through the 1990s, total factor productivity (TFP) growth has been negative. The estimates for GCC TFP growth were -4.34, -2.62, -1.66 in the 70s, 80s and the 90s respectively[197] (Dasgupta, Keller and Srinivasan,

[194] Fergany, 2001.
[195] IMF, 2004.
[196] Youssef, 2005.
[197] Dasgupta et al, 2001.

2001). Some studies go as far as attributing the largest share of the decline in productivity in the MENA region all together to the oil producing economies and particularly the GCC.

Table 6 Comparing TFP growth

	1970s	*1980s*	*1990s*
GCC	-4.34	-2.61	-1.66
Kuwait	-5.35	-5.34	-3.17
Oman	-4.21	2.6	-0.48
Saudi Arabia	-3.45	-5.11	-1.33
World	0	1.2	2
East Asia and the pacific	0.7	2.3	4
South Asia	-0.7	2	1.6

Source: Keller and Nabli, 2002.
For regional GCC TFP: Dasgupta, Keller and Srinivasan, 2001.

Another challenge is the education and formation of the labor force. Although education is free for nationals at all levels, the courses offered often do not reflect the requirements of the market. The majority of university graduates in GCC countries pursued studies related to social or religious studies rather than technical fields and business administration, where private sector requirements are the greatest.[198] According to the Arab Human Development Report 2002, 38 percent of graduates from universities in the GCC countries completed studies related to social or Islamic studies, 34 percent in education, but only 11 and 18 percent in business administration and technical fields respectively. This has had an impeding effect and has hindered the substitution of expatriate workers particularly in skilled positions with nationals.

Ultimately, the challenge facing the GCC is how to increase the nationals' employability and consequently raise the quality of nationals` labor supply. This calls for a sustained increase in non-oil growth, investment in human capital, and linking the outputs of the education and training systems with labor market requirements.

The second group of economies is the diversified labor surplus economies (e.g. Egypt, Tunisia, Morocco, Jordan). This group faces problems related to the economy's failure to generate the sufficient growth rates needed for creating the adequate demand to absorb new entrants to labor markets. In other words, the growth rates are not consistent with the desired employment creation rates. As a result, while labor force grew in the diversified economies by almost 3 per cent on average during the period from 1995 to 2001 in the diversified economies (Table 7), unemployment has risen by an average of 14 per cent as well.

The employment problem in the diversified economies is tied to many structural and microeconomic problems equally important, most importantly is the acquisition of skills, productivity and human resources development. Despite the fact that the average years of schooling in the diversified economies have improved, still, it is below the averages of other developing regions such as East Asia and Latin America (Table 8).

[198] Arab Human Development Report, 2003.

Table 7 Labor force and unemployment in the diversified economies

Country	*Average labor force growth (%) 1990-2003*	*Labor force in millions 2003*	*Unemployment (%) of labor force 2000-2002*
Algeria	3.8*	9.60**	27.3*
Egypt	2.9	26.7	9.0
Jordan	6.0	1.7	13.2
Lebanon	3.0	1.7	-
Morocco	2.4	12.2	11.6
Syria	4.1	5.8	11.7
Tunisia	2.9	4.2	15.6

Source: Arab Unified Economic report 2004 & The World Bank World Development Indicators online Database 2005.
*data for the period 1995-2002.
**data for the period 1995-2001.

Table 8 Average Years of Schooling

Country	*1985*	*1990*	*1995*	*2001*
Algeria	3.50	4.30	4.80	5.40
Egypt	3.60	4.30	5.00	5.50
Jordan	5.20	5.90	6.50	6.90
Syria	4.50	5.10	5.50	5.80
MENA				5.30
Middle Income Countries				6.30
East Asia and Pacific				6.20
Latin America & Caribbean				6.00
South Asia				4.70

Source: The World Bank World Development Indicators, 2003.

The evolution of labor productivity provides another insight into the relationship between GDP and employment. Labor productivity (measured as GDP per person employed) grew relatively slowly for Algeria, Egypt, Jordan, Morocco, and Tunisia (1 percent a year on average) compared with other regions.[199]

Also, the continued strength of government job creation, where measured productivity gains tend to be lower, may have been a reason for the slow growth of overall labor productivity. Indeed, the three countries in the diversified economies group with the lowest rates of labor productivity growth (Algeria, Egypt, and Jordan) are also the ones with the largest share of government employment.[200]

[199] Gardner, 2003.
[200] Ibid.

The solution to the employment problem, the low level of skills and weak human resource development is tied to the education and training programs reforms. This entails modernizing schools and universities curricular and to tie the vocational and technical training outcomes with the labor market requirements.

Regarding the third group of economies, the marginalized and poor economies group includes countries like Sudan, Somalia, Djibouti and Yemen. These countries suffer from a collapse of the growth process, the predominance of informal economy and self-employment in the subsistence economy. There is a dire need of reconstruction, institution building, resumption of growth and an effective poverty eradication plan.

As for the labor and human resources situation in these countries the picture is no more flattering. Taking Yemen as example, the World Bank estimated in 2002 that adult illiteracy in Yemen was a striking 54%. This compares with an average for low-income countries as a whole of fewer than 40%. The statistics are even starker when broken down by sex, with 73% of Yemeni women being judged illiterate compared with 21% of men. This compares with around 45% and 20% for women and men respectively in low-income countries as a whole, and around 35% and 20% for Middle Eastern countries.

Another important issue is the low level of access to basic education, particularly for girls. In 2002 67% of Yemen's children in the relevant age groups were enrolled in primary schools and only 35% in secondary schools, while the figure for female enrolment drops to 49% and 21% respectively. This compares with an average of over 95% and 40% for all children and around 45% and 35% for girls in low-income countries. Supported by donor agencies, the government is now seeking to address these disparities, with the emphasis to be placed on access to basic education. Change is likely to be slow, as resources are limited.[201]

Although Yemen's universities do have science, engineering and medical faculties, a substantial proportion of graduates are arts students. Yemeni and foreign businessmen therefore find it extremely difficult to find bilingual, literate and IT-proficient local workers. The World Bank and European donor countries have made technical, vocational training a priority in their aid programs, with Germany taking the lead in skills transfer initiatives.[202]

Even though each group of economies preserves certain specificities, the low quality of human resources cuts across all three types. Hence, educational systems should be reformed so as to be able to dispense the type of education and knowledge that is more in line with the requirements of modern market economies and that increases the competitiveness of the Arab labor force.

The poverty menace still remains a challenge in some parts of the region, putting decision makers in a dilemma always having to consider the effect of their policies on the already widespread poverty. The proportion of the population living under the poverty line was 16.7% in Egypt (1999/2000 survey), 17.8% in Morocco (2000/2001), 17.6% in Yemen (1998).[203]

The GCC countries as a group of economies in general do not suffer from the poverty phenomenon; as their populations are protected by a generous welfare system, education and health services are available and accessible to all segments of the population. However, this cannot be sustained as population pressures have been increasing in those countries, while the labor markets will not be able to absorb the growing numbers of job-seekers, especially when the job-seeking immigrants are also increasing in labor-sending countries. Furthermore, many of these countries, with Saudi Arabia as the best example started facing fiscal pressures and a

---

[201] See Economist Intelligence Unit, Yemen country Profile, 2004 main report.
[202] Ibid.
[203] ERF, 2005.

decline in the share of nationals in the labor force. This has compelled nearly all oil-surplus countries in MENA to restrict the employment of non-nationals and adopting policies of 'nationalizing' their labor forces.[204]

There are some general characteristics of poverty throughout the region. Structural Adjustment Programs in several programs such as Morocco and Egypt have been accompanied with unemployment and resulting poverty. Non-income indicators of poverty such as access to water and sanitation have been improving but with existing rural-urban disparities; with poverty highly concentrated in rural areas. Most of the region's poor have the common feature of not attaining a sufficient level of education. Public expenditures on the social sectors were protected from cut offs under Structural Adjustment Programs, as it became unquestionable that targeted social expenditure policies are crucial poverty-reduction tools. Current efforts to improve Poverty Reduction Strategies in the region call for donor assistance directed towards budget support in order to be able to improve poverty-targeting social polices. Budget support rather than intervention in specific projects gives the recipient country authority to rely on its own planning and expertise. This has been recently the trend of aid assistance in Egypt.[205] Strategies to address poverty have gained a renewed attention toward revising subsidy policy to target the poor, developing small and medium enterprises (SMEs), and microfinance for farmers, employment-generating public works, and enhancing the capabilities of the poor through education.

Table 9 Progress on Social Indicators, Middle East and North Africa, 1980-2000

	1980	*1985*	*1990*	*1995*	*2000*
Headcount Poverty rate, %	-	16.9	17.2	15.9	-
Life expectancy, %	59	64	67	69	70
Infant mortality rate, %	83	-	42	36	32
Adult literacy rate, %	42	49	57	64	72
Secondary school enrollment, % gross	33	45	49	59	69
Literate female to literate male ratio, ages 15-24	62	69	79	86	92

Note: Table shows medians of the regional social indicators. Headcount poverty rate is a simple arithmetic average, because the sample size is small: long enough series are available for only five countries: Egypt(1981-82, 1990-96, 1997, 1999-2000); Jordan (1986-87, 1992, 1997); Morocco (1984-85, 1990-91, 1998-99); Tunisia (1984-85, 1990-91, 1998-99); and the Islamic Republic of Iran (1986, 1990, 1994, 1998). Though not reflected in the table, in 2000 poverty rates continued to decline in the countries for which data are available (Egypt and the Islamic Republic of Iran), and rose only in Morocco. Data shown on adult literacy rate and literate female- to – male ratio do not include Djibouti and Lebanon, for which no data are available; - : Not available.
Source: World Bank data cited in "Economic Growth in the 1990s: Learning from a decade of reform" World Bank, 2005.

[204] Youssef, 2004.
[205] ERF, 2005.

Box 3 The Social Development Fund in Yemen

42% of Yemen's poor are estimated to be living in poverty. Public expenditures do not address gender and rural-urban disparities. Per capita income is just about $450; life expectancy at birth is 56 years; infant mortality rate is 76 per 1,000 live births. The Social Fund for Development (SFD) has been established in Yemen in 1997 as an action against macroeconomic difficulties the country was facing. The SFD's approach to poverty reduction relied on 3 basic points:

- Community Development Projects for small labor-intensive infrastructure works. Local governments and NGOs were to assist communities implanting projects according to priority areas defined by those poor communities.
- Micro-enterprise development through access to credit, technical assistance and training.
- Capacity building to assist local communities and NGOs and the private sector in identifying priority areas and operating SFD projects. Strengthening the capacity of these local stakeholders helps in poverty monitoring.

The SFD's work has had some positive impact in terms of income generation through employment created by community works projects, as well as micro enterprise development activities channeled through NGOs. Community built infrastructure was provided cheaper and quicker than that of similar works of line agencies.

The SFD in Yemen had a critical role in increasing the involvement of women and thus addressing a major social problem in the country; and moreover has used NGO's and other intermediaries in improving on community infrastructure based on a demand-driven approach.

Source: "Reducing Poverty, Sustaining Growth: Case Study Summaries" World Bank, 2004. Scaling Up Poverty Reduction: A Global Learning Process, and Conference in Shanghai, May 25-27, 2004.

During the last decade, the World Bank and IMF and the donor community as a whole have undergone an evolution in development thinking and practice as there is more understanding and concern about distribution, governance and institutions and education that directly affect employment and poverty. It is true that there are accomplishments in the MENA developing countries in terms of stabilization and growth performance, more work is to be done to fight poverty and corruption, to improve investment climate, and to effectively deliver social services.[206]

8. Conclusion

The slow pace at which the fruits of reform policies in MENA are materializing should not be attributed only to the design of these policies. Governments, as well as elites in the region have clearly conveyed a preference for mild and gradual reform policies; for several reasons discussed above. It can be well argued that the Washington Consensus policy blueprints can have devastating social and political effects if applied abruptly. However, regional governments did not acknowledge or adopt alternative home-grown plans.[207]

It might as well be argued that economic reform in such countries is being slowed down by the lack of political reform that has to go in parallel with economic reform. Yet, most countries are reluctant to carry out any rigorous reforms that might threaten political or social instability. It has been argued that most MENA countries are aware that they are not well-positioned to initiate radical reforms, and so play on national sentiments to prolong the political reform process under the excuse of not accepting reform from abroad, and not risking political freedom that might bring to power radical groups.[208] The indigenous

[206] James and Francios, 2004.
[207] Richards, 2001.
[208] Jerche, 2003.

development effort has to come from inside the concerned country itself. Even if MENA governments adopt advice from international institutions, only committed leadership and policy makers will translate this advice into tangible economic progress.

While there are some general characteristics among the sub-groups of countries in the region, each country has its own specifity and development requirements which make uniform policy advice in a uniform manner across different countries self defeating to the cause of providing assistance to these countries. With globalization there is need for policy coherence. In the international development field, there exists many contradictions in policies such as assistance or advice provided in one area by a certain multilateral organization might contradict that provided by another. There is certainly a need to make international policy advice more coherent and integrated; and as mentioned earlier, international policy advice needs to be more case-specific and tailored to the needs of each individual country, and not one-size fits all recipes.

References:

Arab Human Development Report 2003, Building a Knowledge Society, UNDP 2003.

Arab Human Development Report 2004, Towards Freedom in the Arab World, UNDP, New York, 2004.

Arab Unified Economic Report, published by Arab Fund for Economic and Social Development (AFESD), Arab Monetary Fund (AMF), Arab League, Organization for Arab Petroleum Exporting Countries (OAPEC), 2004.

Background paper on "Economic Reform in the Arab Region" prepared by the Economic Research Forum (ERF) for Conference on Arab Reform, Alexandria Library, 12-14 March 2004.

"Better Governance for Development in the Middle East and North Africa", MENA Development Report. Washington D.C.: World Bank, 2003.

"Challenges of Growth and Globalization in the Middle East and North Africa" International Monetary Fund (IMF), 2003.

"Corporate Governance in Development: The Experiences of Brazil, Chile, India and South Africa", OECD/CIPE, Paris, 2003.

Dasgupta, Dipak, Keller, Jennifer and Srinivasanl,T.G., 2001." Reform and Elusive Growth in the Middle-East---What Has Happened in the 1990s." Paper for MEEA Conference on Global Change and Regional Integration: The Redrawing of the Economic Boundaries in the Middle East and North Africa, London, 20-22 July 2001.

"Doing Business in 2006: Creating Jobs", The World Bank, Washington, 2005.

"Economic Growth in the 1990s" Learning from a Decade of Reform, World Bank, Washington, 2005.

Fasano, Ugo and Iqbal, Zubair, "GCC Countries: From Oil Dependence to Diversification, International Monetary Fund, 2003.

Fawzy, Samiha "The Economics and Politics of Arab Economic Integration", in A. Galal and B. Hoekman (eds), Arab Economic Integration: Between Hope and Reality, Cairo: Egyptian Center for Economic Studies, 2003.

Fergany, Nader "Higher Education in Arab Countries; Human Development and Labor Market Requirements", Al Mishkat Centre for Research, Egypt, 2001.

Gardner, Edward , "Creating Employment in the Middle East and North Africa", International Monetary Fund, 2003.

"Global Employment Trends", International Labor Organization, Geneva, 2002.

Jerche, Martin "Reforming Mediterranean and Middle Eastern countries: Wider Europe, Greater Middle East or the Alexandria Statement? A Critical Assessment" www.fscpo.unict.it/EuroMed/EDRC5/euusamed03.pdf.

Kaul, Inge and Mendoza, Ronald, "Providing Global Public Goods: Managing Globalization" edited by Kaul et al, published by UNDP and Oxford University Press, 2003.

Keller, Jennifer and Nabli, Mustapha K."The Macroeconomics Of Labor Market Outcomes In MENA Over The 1990s: How Growth Has Failed To Keep Pace With A Burgeoning Labor Market.", The World Bank, Washington, 2002.

"MENA Economic Developments and Prospects", The World Bank, Washington, 2005.

Nabli, Mustapha, "How will Current Economic Trends Influence the Developing Markets in the Middle East?", MEED 2000 Middle East Summit, 2000.

Okogu, Bright E., "The Middle East and North Africa in a Changing Oil Market", International Monetary Fund, 2003.

"Progress for All: Visions for the Future." Proceedings of the Fourth Mediterranean Development Forum, The World Bank, 2003.

Reducing Poverty, Sustaining Growth: Case Study Summaries" World Bank, 2004. Scaling Up Poverty Reduction: A Global Learning Process, and Conference in Shanghai, May 25-27, 2004.

Richards, Alan "The Political Economy of Economic Reform in the Middle East: The Challenge to Governance" prepared for RAND Project "The Future of Middle East Security", 2001.

Sadik, A. and Bolbol, A.A. "Mobilizing Capital for Arab Economic development, With Special Reference to the Role of FDI", Paper presented at the ESCWA Regional Meeting on Finance for Development. Beirut, 23-24 November 2000.

"The Competitive Potential of the Arab Industrial Structure", in S. Makdisi (ed), The Role of the Private Sector in Arab Economies (in Arabic), Economic Research Forum (ERF) and Arab Fund for Economic and Social Development, Kuwait, 2000.

"Trade, Investment and Development in the Middle East and North Africa", Engaging with the World, MENA Development Report , The World Bank, 2003.

Tunisia Country Profile, Economic Intelligence Unit, 2004.

World Development Indicators, The World Bank, online Database 2005.

"World Economic Outlook: Building Institutions" Chapter I: Economic Prospects and Policy Issues, Middle East: Managing Booming Oil Exports, International Monetary Fund, 2005.

World Development Indicators CD-ROM, UNDP, 2004.

World Investment Report, United Nations Conference on Trade and Development (UNCTAD), 2003 www.wto.org.

UNESCO online Database, 2002.

Wolfensohn, James and Bourguignon, Francios "Development and Poverty Reduction: Looking Back, Looking Ahead", The World Bank, October 2004.

Youssef, Tarek, 2005 "The Changing Role of Labor Migration in Arab Economic Integration", Paper presented to the Arab Economic Integration, challenges and Prospects, Abu Dhabi, February 2005.

Yemen country Profile, Economist Intelligence Unit, 2004.

Global Public Goods: A Role for China and India

Richard N. Cooper

1. Introduction and Background

China and India are the two most populous countries in the world, with India expected to pass China as the world's most populous country by 2035 on current demographic trends. Both countries have grown rapidly over the past two decades, especially China, and barring serious setbacks can be expected to grow rapidly during the coming two decades, largely because both countries still have much scope for transferring poor people from agricultural to more productive non-agricultural activities. For concreteness in discussion, I will focus on the year 2025 – two decades hence – to sketch the key characteristics of each country and of the world. This time frame is also relevant for a discussion of global public goods, three of which will be taken up in this paper: the world trading system, the world financial system, and global climate change.

Concretely, I will draw on the projections made by the US Department of Energy. They have the merit of being well known, easily accessible, thoughtful, and internally consistent. That does not mean that they will be correct, and indeed DoE itself does high and low variants around its base case, which will be used here, along with population projections of the US Census Bureau. The DoE projections assume that China and India will both grow robustly, by 6.1 and 5.2 percent a year, respectively, over the period 2000-2025. They will still be poor countries by world standards in 2025, but they will be much richer than they are now.

Table 1 provides data on GDP and population for China and India in 2000 and projections to 2025, along with the USA and Japan for comparison with the world's two largest national economies. GDP is recorded in US dollars at constant 1997 prices and exchange rates; that is, future inflation is neglected. However, we need to allow for a likely real appreciation of the Chinese and Indian currencies against the US dollar over this period. I arbitrarily but reasonably set such appreciation at one percent a year, 28 percent over the entire 25 year period (Japan's yen appreciated 0.8 percent a year during its period of high growth 1950-1975). After allowance for such appreciation, China's GDP becomes \$6.4 trillion, almost that of Japan in 2025. India's GDP becomes \$2.25 trillion, making India about half the size of Japan in 2000, or about the size of Germany, the world's third largest national economy in 2000. In short, both countries will become very large economies by today's standards, although they will remain small relative to the United States, which is assumed to grow at 3.0 percent during this period. Their share of gross world product will become 7.6 percent (up from 3.5) and 2.7 percent (up from 1.5), respectively, even before allowing for real appreciation. Per capita income will have grown in China from \$880 in 2000 to \$3445 in 2025, and in India from \$485 to \$1285. That is, Chinese will be nearly four times richer, and Indians nearly three times richer than in 2000, before allowing for real appreciation. (Per capita output in the USA will have grown to \$54,250 by 2025.) All Chinese and Indians under the age of fifty will have grown up in a period of rapid economic growth and increasing prosperity. The middle class of both countries, in particular, will have grown enormously, even while some of the rural population remains in traditional agriculture. China will have had at least two sets of new leaders by 2025. If the leaders of that year are around 60 years in age, China's current policy, they will have been born around 1965 and reached college age in

the radically changed environment of 1985. Their parents will have been the victims, or in a few cases the perpetrators, of the Cultural Revolution.

Table 1 Projections of GDP and Population

	GDP ($1997 tril.)	*GDP ($1997 tril.)*	*Population (mil.)*	*Population (mil.)*
	2000	2025	2000	2025
China	1.12	4.98	1275	1445
India	0.492	1.757	1017	1369
USA	9.37	18.88	276	348
Japan	4.39	6.56	127	123
World	31.94	65.57	6061	7841

Source: US Department of Energy, International Energy Outlook, 2004.

Of course, comparative living standards in China and India are higher than these per capita output figures suggest, since labor-intensive services and local foods are cheap in poor countries compared with rich countries such as the USA and Japan. Thus in 2002, according to the World Bank, per capita income in China was $4390 on a purchasing power basis, four times higher than the per capita income at market exchange rates, and $2570 in India, compared with $35,060 in the USA and $26,070 in Japan.

Noteworthy demographic changes are assumed to take place over this period. Japan's population will decline. China's will continue to grow at the modest rate of 0.5 percent a year, low by comparison with most developing countries. India's population growth will slow to 1.2 percent a year, modestly higher than the world average, and only fifty percent higher than population growth in the USA, to which immigration contributes significantly. Of special interest is the demography of young adults, aged 20-24. These include the people at university, and represent the most flexible, most mobile, and best educated members of the labor force. In China the 20-24 age cohort will be 80 million in 2025 (16 million new 20-year-olds per year), compared with 96 million in 2000 – a decline of 0.3 percent a year from 2000, accelerating to a decline of 3.0 percent a year in 2020-2025 (Table 2). The same age group in India grows from 93 million in 2000 to 110 million in 2025, 0.7 percent a year, but reaches a peak around 2020 and by 2025 is declining at a modest 0.1 percent a year. For comparison, the 20-24 age cohort in the United States grows from 19 million to 22 million over the period, while Japan's declines from 8.6 to 6.1 million. Also noteworthy is that Chinese males in this age cohort will outnumber females by five million, a ratio of 1.13, compared with 1.04 in USA and Japan and 1.06 in India. This unnaturally high ratio reflects increasing discretion in choice of gender of children, and a marked preference in China for males, particularly if as now each couple is limited to a single child.

Table 2 Age cohort 20-24, 2000 and 2025

	2000 Male (mil.)	*2000 Female (mil)*	*2025 Male (mil.)*	*2025 Female (mil)*	*2000 total*	*2025 total*
China	49.2	46.5	42.7	37.7	95.7	80.4
India	49.4	43.2	56.6	53.5	92.6	110.1
USA	9.8	9.4	11.3	10.8	19.2	22.1
Japan	4.4	4.2	3.09	2.96	8.6	6.05

Source: US Census Bureau.

These numbers indicate roughly the number of new jobs that need to be created for young people, and a possible problem for the Chinese authorities in socializing a large (but declining) number of young males who will have difficulty finding female partners.

The declining birth rates in both China and India will result in a "demographic dividend" in terms of economic growth, in that with fewer children the participation of females in the labor force can rise, relative to the total population, thus giving a temporary stimulus to overall growth.

Rapid growth and increased GDP imply increasing demand for energy, especially electricity. China and India are both well endowed with coal, which is especially relevant for climate change, to be discussed further below. But both are short of oil relative to prospective needs, with important implications for their import demand and for their need to increase their exports in order to pay for growing oil import bills. Table 3 presents demand for total primary energy and for oil in 2000 and 2025, again with the USA and Japan for comparison.

By 2025 China's demand for oil will be more than twice Japan's demand, and India's demand for oil will approach that of Japan in 2000; India's total demand for energy will exceed that of Japan in 2000. Of course, these projections make assumptions about the growth of the automotive sector in both countries. Demand for oil is assumed to grow by 4.0 percent a year in China and 3.9 percent a year in India, compared with 1.5 percent in the USA and 0.3 percent in Japan.

Table 3 Demand for Primary Energy and for Oil, 2000 and 2025

	Primary Energy (quads)	*Primary Energy (quads)*	*Oil (million barrels per day)*	*Oil (million barrels per day)*
	2000	*2025*	*2000*	*2025*
China	37.0	91.0	4.8	12.8
India	12.7	27.1	2.1	5.3
USA	99.3	136.5	19.7	28.3
Japan	21.8	26.3	5.5	5.8
World	398.9	622.9	76.9	120.9

Source: US Department of Energy, International Energy Outlook, 2004.

The key characteristic of public goods is that they can be experienced by all at nearly zero marginal cost. That is, once available, they can be made available to all. But they are typically costly to provide, which means they require collective action, and are often under-supplied. Transactions with externalities are characterized by a discrepancy between marginal (social) benefit and marginal (social) cost. Thus polluters do not incur the cost, imposed on others, of putting their waste products into the atmosphere or rivers, leading to over-supply. Beekeepers do not typically reap the full benefits of pollination by bees, leading to under-supply. In both cases there is a "market failure," compared with an efficient competitive market economy, where marginal benefit always equals marginal cost. Some public goods can be financed by requiring payment for their use, e.g. a toll bridge, even though that would lead to under-utilization of the bridge from a socially optimal point of view (provided the bridge could have been financed with taxes with fewer distortionary effects than the bridge toll). Other public goods, particularly institutional public goods (social capital) such as the nature of the trading system, usually cannot engage in such selective exclusion of individuals, although nations may be excluded from enjoying some of their benefits.

Where exclusion is difficult or impossible, we are likely to observe "free riders," i.e. those who partake of the benefits without incurring their appropriate share of the costs. If the "free rider" problem is sufficiently severe, it will inhibit provision of the public good. In game theoretic terms, non-cooperative outcomes among the several players are inferior to cooperative outcomes. But leadership, and sometimes side-payments, must be provided to achieve the superior cooperative solution. This general reasoning applies to global public goods, including the three to be discussed here.

2. International Trade Liberalization

We are now in the midst of the Doha Round of multilateral trade negotiations, started in November 2001, the ninth round of multilateral trade liberalization since 1947, sometimes called the Development Round with the intention that developing countries should especially benefit from its successful conclusion. Its main focus has been on reducing further the trade barriers of rich countries on the import of goods (and services) from poor countries, especially but not only agricultural goods. It also hopes to make some adjustments to the regime for protection of intellectual property adopted in the Uruguay Round, concluded in 1994, especially with respect to pharmaceuticals. Without detracting from those worthy objectives, I want to emphasize another aspect of the trading system, namely the import barriers in poor countries to products from other poor countries, both agricultural and non-agricultural, especially labor-intensive manufactured products.

We need to keep in mind the time dimension of the Doha Round, assuming it is concluded successfully (which cannot be taken for granted at this time). Conclusion is not likely to occur before late 2006 or even 2007 (after US congressional elections). If it follows the pattern of previous agreements, it will allow a ten-year transition period for the new commitments to be implemented, so the full results of the Round will not be in effect until 2016 or 2017. Maybe a tenth round of negotiations will have been inaugurated before then, but on recent patterns that will take at least five years to negotiate and it too will have a ten-year transition period, reaching 2030 or later. Thus the Doha Round will essentially determine the nature of the international trade regime during the period 2015-2025 or even later. To assess the impact of the Round, we need to think not of trade levels and patterns today, but those that are likely to prevail in two decades (which of course will be influenced by the success and content of the Doha Round).

Given the rapid growth of China, India, and some other developing countries, their share of the world economy, and of world trade, will be much higher two decades than they are now. We can build on the DoE projections above to get some idea of the relative importance of China and India in the world trading system. As noted, GDP of the USA is projected to rise at 3.0 percent a year, and Japan at 1.7 percent a year. The other major market today is Western Europe, which is expected to grow at 2.0 percent a year. World trade has grown more rapidly than GDP over the past five decades, reflecting in part the multiple rounds of trade liberalization, in part improvements in international transportation (air freight, large bulk carriers), and in part a broadening of tastes everywhere – all components of what is loosely called “globalization.” As incomes reach higher levels and continue to rise, an increasing share is spent on housing and “services,” a declining share on goods, both agricultural and manufactured goods. While international trade in services is also growing rapidly, many services necessarily have a high local content, e.g. health care, restaurants, and retail trade. Thus I assume that in the coming decades imports into rich countries grow as rapidly as GDP, whereas into relatively poor countries imports grow fifty percent more rapidly than GDP, the pattern observed in the world during the past half century, as consumers are increasingly able to buy more sophisticated manufactured goods, and to move from subsistence agriculture to purchased food products. On these assumptions, imports into the United States are assumed to grow at 3.0 percent and into Europe at 2.0 percent, while imports into China will grow by 9 percent and those into India will grow by 7.8 percent.

Table 4 shows the level of imports into China, India, and the three rich markets in 2000 and projected to 2025. Note that China will far exceed Japan as an import market in 2025, and India will almost have achieved the level of Japan in 2000. Nonetheless, India’s imports remain remarkably low, as Japan’s were in 2000, much lower than China’s, both absolutely and relative to GDP. More to the point, China’s imports will have grown by $1.6 trillion, larger than the $1.4 trillion growth into the USA and much more than the $0.6 trillion growth

into the European Union over the same period of time. The growth of imports into India will exceed the growth into Japan.

The key point for our discussion here is that while the rich countries remain large markets for imports in 2025, China will also be a major market, and the growth of imports into developing countries are likely to exceed the growth of imports into rich country markets. Thus the trade policies of developing countries, including China and India, will be of great interest to other developing countries. Of course their trade policies will influence the actual level of imports; the figures used here are notional. In fact, India today is one of the most protectionist countries in the world, whose import tariff levels, averaging 31.4 percent in 2002, are exceeded only by a few African countries. China, in contrast, has a relatively liberal trading policy for a poor country, although with an average tariff of 12.4 percent it remains notably more protectionist that the rich countries, except selectively for agricultural products. If India's ratio of imports to GDP in 2025 were to reach China's in 2000, India's imports would be $414 billion, 25 percent higher than the $330 billion shown in the table. If India's ratio of imports to GDP were to reach China's 27.5 percent in 2025, India's imports in that year would be $648 billion, nearly double what is shown, and the growth of imports into India will be comparable to the growth into the European Union.

Table 4 Imports (cif, $2000 billion) by major market, 2000 and 2025

	2000	*2025*
China	206	1839
India	50	330
USA	1258	2633
European Union	996	1634
Japan	380	578
Other developing countries		

Source: IMF, International Financial Statistics, and author's calculations.

These alternative possibilities should be of great interest to other developing countries. India's high import restrictions hurt India, but they also hurt other poor countries. Many developing countries, and especially India, have been "free riders" in past multilateral trade negotiations, in that they benefited under "most favored nation" treatment from the tariff reductions made by other countries without making significant reductions themselves. India was a founding signatory of the General Agreement on Tariffs and Trade (GATT, now absorbed by the World Trade Organization), but did not really accept the underlying principles of the GATT and insisted on "special and differential" treatment, i.e. exemption, from its disciplines and from successive reductions in import restrictions -- mainly to its own detriment, in a world in which special (protectionist) interests dominate domestic policy-making in many countries, including India, and international trade negotiations provide an occasion to overcome them in the interests of reciprocity. It is true that India engaged in significant unilateral trade liberalization since its balance-of-payments crisis in the early 1990s, but despite that liberalization it maintains high protection against most imports.

The main point here is that if India continues to be a free rider, which its recalcitrant positions so far in the Doha Round suggest it may be doing, it will in future also hurt significantly other developing countries, by denying them a growing market and opportunities for specialization and the productivity increases that normally attend specialization. India is in the process of reaching an economic scale that it should start attending to system-maintenance to global public goods, in this case the trading system.

The same argument applies to China, which as we have seen is likely to be much larger than India in 2025 and still growing, but with much lower initial protection, due in part to the accession conditions for its WTO membership in 2001, which in effect required China to

simulate participation in the previous multilateral trade liberalizations, whereas India, an insider, effectively absented itself from those liberalizations. Nonetheless, China maintains considerable protection in some sectors, so further liberalization is both possible and desirable. It has reached agreement on a Free Trade Area with the ASEAN, with movement to duty-free treatment of about 7000 tariff items in 2005 and the full (but not yet comprehensive) FTA to be implemented by 2010; sensitve products such as rice and automobiles have been deferred.

Trade liberalization is always controversial, since those protected interests likely to be hurt by it can mobilize focussed opposition, while the gains from liberalization are typically diffuse. As a general rule, however, trade liberalization is beneficial overall, so in principle a mechanism can be found for the gainers to compensate the losers. For instance, Bradford, Grieco, and Hufbauer (2005), using four quite different methodologies, estimate that the cumulative effect of the trade liberalizations since 1947 has been to add about $1 trillion to US GDP annually, or a little under ten percent. They estimate, conservatively, that the unrealized gains from a future move to free trade would be $450-600 billion, i.e., about half of the gains reaped so far. Of course, changes in policy, including trade policy, create dislocations. Bradford et al. estimate the lifetime losses of the US workers displaced in 2003 due to import competition to be about $54 billion (p. 109). This represents only about ten percent of the prospective gains, and five percent of the past gains.

Cline (2004) provides a detailed review of the extensive literature on the gains from trade liberalization and their influence on poverty. He finds (p.151-2) that the gains to developing countries as a group from a move to free trade by industrialized countries amounts to about 2 percent of GDP if "dynamic" effects (i.e., impact on productivity) are included; a global move to free trade would raise these gains to about 5 percent of GDP. In other words, the gains from liberalization by other developing countries are even greater that those arising from liberalization by rich countries even at world economic scales of 2005-2015. The discrepancy would undoubtedly be greater when scaled to 2025, as suggested here. Cline qualifies these results (p.194) with a different calculation, indicating the sensitivity of such estimates to precise estimating assumptions, but even then nearly half the gains come from liberalization among developing countries. Cline estimates that a move to global free trade would reduce poverty (defined as income below $2 a day) in India by a startling 212 million, and in China (where poverty was already much lower) by 72 million (p.283).

To sum up, an appropriately forward look at the world trading system, with China and India both playing a larger economic role in the world economy, suggests that their role in providing international public goods in the form of a liberal trading system will also rise, and other developing countries have a growing stake in the openness of their economies. Since the trading regime in 2025 will be heavily influenced by the outcome of the Doha Round, the time to start playing this role is now, not in the distant future.

3. International Financial Stability

Many developing countries have experienced financial crises during the past quarter century. The international community -- largely through the International Monetary Fund but also including the World Bank, the regional development banks, the Bank for International Settlements, and many national central banks or finance ministries -- has participated in financial support packages for countries experiencing the crises, starting with Mexico in 1982. The widespread impression has grown that the international financial system is highly imperfect in ways conducive to precipitating such crises, and that therefore the system should be reformed in ways to eliminate or at least reduce both the number and the severity of financial crises.

I dissent from this general perception. I do believe that the international monetary system can be reformed in a number of ways, and have made proposals for such reform over the past forty years, many modest and technical in nature, a few much more sweeping, one of which will be discussed below. But none of them addresses directly the number and severity of financial crises, for the simple reason that I believe these are overwhelmingly domestic in origin, and there is little the international community can do about them other than to publicize the lessons of past unhappy experiences and current best practices in financial regulation and exchange rate management, to provide warning of possible trouble ahead, and to help mitigate potential contagion to other countries and the economic damage caused by national financial crises. All of these constructive activities are under way today, and have been for some years. No doubt they can be improved, and will be over time. However, the international community does not have, and should not have, the ability to coerce countries that are deemed to be following unwise financial policies or practices.

Financial crises seem to be an inevitable concomitant of economic development, a kind of adolescent growing pain. As countries evolve from low-income, agricultural economies to modern high-income economies a severe tension develops sooner or later between the real economy and the financial superstructure that is necessary to sustain it. A key feature of development is to socialize private savings, drawing them away from jewelry and other private stores of value into financial institutions so that the saving can be mobilized for productive investment. This is the social role of banks. A key problem with this desirable process is that bankers (or their backers) now have more money at their disposal than they ever dreamed of. All kinds of attractive projects become financially possible. Some bankers do not seem troubled by the fact that they are dealing with other people's money. They start to invest on a large scale, which may create a real boom, and an associated euphoria. Production, profits, employment, and capital gains all rise. Things are going so well that any initial caution is soon forgotten. But unless productivity is rising synchronously, such booms have an element of a Ponzi scheme, unsustainable in the long run. Central banks are supposed to restrain such credit booms, but that requires a prudent, independent, non-partisan central bank with its eye on the long run – something most developing countries quite deliberately do not have – at least until they have been through a few serious financial crises.

Every country experiencing a financial crisis during the 1990s had an unsustainable domestic situation, a mis-match between growing financial claims and the performance of the real economy. The details differed significantly. Sometimes private banks were involved, sometimes governments, often both. Several governments discovered the wonders of the financial market, domestic as well as foreign, wherein bonds can be floated to finance government expenditures without the need, in the short run, to impose unpopular taxes. Thus did Russia, Brazil, and Argentina all avoid difficult choices, for awhile.

Americans have no reason to be smug. The United States had almost one serious financial crisis a decade from the 1810s, culminating in the catastrophic Great Depression of the 1930s. Even the lessons learned then and a host of regulatory legislation did not save the United States from the savings and loan crisis of the 1980s, brought on through legislation aimed to help important constituents of key congressmen. It was sometimes fashionable to blame these crises on foreigners, and indeed there were occasionally international aspects; but they were overwhelmingly domestic in origin. Britain, France, and other developing European countries had similar experiences during the 19th century.

Theoretically, these crises might have been avoided. But doing so would have required monetary guardians who were detached, disinterested, and farsighted – the antithesis of the modern politician. In practice, the capitalist system works by harnessing greed, not charitable inclination, to achieve economic progress. It has been smashingly successful, especially during the past half century, and its success is now spreading from Europe and North America around the world. But progress has not been smooth. Instead, it has been a process of trial and

error, punctuated by financial and economic crises that eventually provoke improvements in the institutional structure and the legal incentives that channel greed in socially constructive directions. Each new generation of financial wizards and their lawyers will try to find lucrative loopholes in the rules put in place by the previous generation, in response to their own acknowledged mistakes. This on-going process is not likely to be aborted by anything that can be done with international financial architecture.

China and India so far have been spared serious domestic financial crises, perhaps because they are still quite poor and financially under-developed. China's financial system is highly vulnerable, technically insolvent by western accounting standards; but the public assumes the government is behind the leading banks, all state-owned enterprises, and has not lost confidence in it. Both countries maintain stringent controls on both inward and outward movement of capital; international transactions are subject to official approval.

There is however a structural feature of current international financial arrangements that is troubling to many developing countries and that is the presence of floating exchange rates among the leading currencies of the world – the US dollar, the euro, the Japanese yen, the British pound. Floating rates per se are a minor inconvenience; the problem has arisen from wide swings in the values of these currencies, for example a Japanese yen whose value against the US dollar has swung from 85 to 150 within a few years, or a euro that has swung in value between $.85 and $1.35 during the first five years of its existence, with no obvious reason for such large swings, since during this period all three economic regions had low inflation and moderate growth. These are large swings when one considers that the profit margin on many manufactured goods in international trade is on the order of ten percent. They greatly complicate locational decisions for manufacturing facilities.

A solution pressed by many economists is that developing countries should simply float their currencies too, and if their economies are well managed (it is argued) their currencies will simply float among the majors, ironing out some of the big swings among them. But there are good reasons many developing countries do not want to float their currencies (see Cooper, 1999, and Frankel, 1999). They may want to fix their currency to another major currency, de facto if not formally, and even when they float their currency they will want to manage its market movements through intervention, possibly heavy intervention. Choice of exchange rate policy is a key decision for any developing country, possibly the most important single economic policy decision it can make, and it should not be made lightly.

Floating among the major currencies complicates this decision, particularly when the movements among these currencies, as we have seen, can be very substantial. China chose to fix its currency, the yuan, against the US dollar at around 8.3 in 1994, and kept it there for over a decade. China has come under criticism for this policy, even though it seems to have served China very well, and in July 2005 China announced that it would henceforth use a basket of currencies, including especially the euro, the Japanese yen, and the Korean won as well as the US dollar, as a reference point, but by mid-August the exchange rate against the US dollar had moved by only two percent. India in principle has a managed floating exchange rate, but in fact when corrected for differences in inflation it moved little against the dollar until 2003, when it was allowed to appreciate slightly even in the presence of a massive build-up of reserves. India has been shielded from criticism only by the much more dramatic build-up of reserves by China.

Some part of the difficulty of this important choice of an exchange rate system would be avoided if the rich core of the world economy – USA, Europe, Japan – had a common currency. Then developing countries could frame their choice against a solid base. A common currency among the industrialized democracies will not be established with the aim of making choices easier for developing countries and emerging markets. There must be reasons that are compelling for the countries adopting such a currency, and those reasons are admittedly not

compelling at the moment. Flexible exchange rates have served as useful shock absorbers during the three decades they have been in place, especially given large oil price shocks, several recessions, and the unification of Germany, a huge fiscal shock in Europe's largest economy. The shock-absorber role will no doubt be welcome in the years to come. But this useful role may be overwhelmed by the influence of capital movements on exchange rates, capital movements that are influenced not just by developments in the real economy, but by real and imagined developments in the financial economy, including expected future movements in exchange rates.

Financial factors already play a major, perhaps the major, role in determination of exchange rates. This role is likely to increase in the future, and exchange rates may move in ways that are mysterious in terms of real economic developments, as indeed they have on some past occasions. Thus while flexible exchange rates can provide a useful shock absorber, they can also provide a means to transmit financial disturbances to the real economy that would not take place within a monetary area. It is this development, the growing role of financial shocks transmitted to real economies through movements in exchange rates, that may become so troublesome that the major economies will contemplate moving toward and eventually to a common currency. Here is not the place to spell out either how it would work or how best to get there; both issues are addressed in Cooper (2000).

China and India would remain free under this arrangement to choose what exchange rate regime best suited them – and the answer to that question would undoubtedly change over time, as their economies, and especially their financial markets, developed. Some degree of fixity, or heavily managed floating, might suit them best at present, but as their financial markets develop they might find greater flexibility more suitable. The choice would be up to them; but their choice would be made easier by stability at the core of the international financial system. In other words, the exchange rate policies of the leading countries affect other countries as well.

4. Global Climate Change

Emissions of greenhouse gases (GHGs) are thought to be a serious threat to the future well being of mankind (and other species). The principal culprit is carbon dioxide (CO_2), generated largely by the extensive use of fossil fuels (coal, oil, and natural gas, in that order). CO_2 concentrations in the atmosphere have risen from 285 ppm at the beginning of the industrial revolution to around 370 ppm today, and are still rising. Methane and various industrial gases also contribute to climate change. The concern is that the average surface temperature of the earth will rise, by perhaps 2.5 degrees centigrade, during the 21st century, with a concomitant rise in sea levels by perhaps half a meter due to thermal expansion and glacial melting.

The Framework Convention on Climate Change (FCCC) of 1992 and its Kyoto Protocol of 1997 addressed these issues, in a limited way, by acknowledging the problem, committing all signatory countries to deal with it, and obliging the rich countries (including Russia and Ukraine) to limit by 2008-2012 their emissions of six specified GHGs to a stipulated fraction of their emissions of 1990, all in agreed CO_2 equivalents.

The Kyoto Protocol finally came into effect in 2005, after Russian ratification. The Kyoto Protocol will have a limited impact on GHGs emissions, not only because Australia and the USA declined to ratify, but also because it does not include and cannot easily be extended to developing countries, including such important emitters as China, India, and others whose fossil fuel consumption is growing rapidly.

While forecasts of long-term energy use have been notoriously off the mark (Abt, 2002; Smil, 2003), the subject at hand is inherently quantitative and future-oriented, so a quantitative

baseline is necessary to frame serious discussion. The Intergovernmental Panel on Climate Change has put forward six different main scenarios to specific "business as usual" trajectories of GHG emissions over the course of the next century. This paper will focus on CO2, largely ignoring the other GHGs, which although important account for less than a third of the warming potential. The US Department of Energy does 25-year forecasts of energy use, by region and by major fuel. Table 5 sets out the DoE forecast of the use of coal (the main source of CO2) and CO2 emissions for 2000 and forecasts for 2025 for China and India, along with the USA, Japan, and the world as a whole. China is already the largest consumer of coal, a quarter of the world's total, and its use is expected to grow rapidly despite vigorous programs for introducing nuclear and hydro power and for importing liquefied natural gas. India accounts for about seven percent of world coal consumption, and its use of coal is also expected to grow significantly, although less dramatically than is the case for China.

World CO2 emissions are projected to increase at 1.9 percent a year to 2025 (on the assumption of world economic growth of 3.0 percent a year). China's CO2 emissions are projected to grow by 3.3 percent a year, the highest rate in the world among large countries or regions, with Brazil (3.1 percent) and India (2.9 percent) not far behind. China's share of world CO2 emissions increases from an already significant 12 percent in 2000 to 18 percent in 2025, exceeding those of Western Europe by 2010 and rapidly approaching the US share of 22 percent in 2025. India's share will reach five percent, the fourth largest national emitter after Russia, and well ahead of Japan. The projected growth in emissions in China, at 3.8 billion metric tons, far exceeds the projected 2.4 billion ton growth for the United States, and India's projected growth in emissions far exceeds that of Japan. In view of these trends, the problem of GHG emissions cannot be seriously addressed without engaging China, India, Brazil, and other rapidly growing countries.

Table 5 Coal Consumption and CO2 Emissions, 2000 and 2025

	Coal (mil. Short tons) 2000	*Coal (mil. Short tons) 2025*	*CO2 emissions (mil. metric tons) 2000*	*CO2 emissions (mil. Metric tons) 2025*
China	1282	2757	2861	6666
India	359	611	914	1834
USA	1084	1567	5787	8142
Japan	160	202	1138	1356
World	5115	7574	23536	37124

Source: US Department of Energy, International Energy Outlook, 2004.

Worldwide agreement on national GHG emission targets that have enough bite to limit growth in atmospheric CO2 concentrations is likely to prove impossible, at least for several decades. It is hard to imagine an effective formula for national targets that will be acceptable both to rich countries such as the USA and to poor countries with aspirations for rapid growth, such as China and India (Cooper, 2001). The targets of the Kyoto Protocol are keyed to a base year, 1990, an approach that is unappealing to countries that desire and expect to grow rapidly.

Another approach is needed if human sources of climate change are to be addressed seriously. A leading alternative approach is to focus on concrete national commitments to action rather than on emission targets. One such action, favored by many economists to deal with negative externalities from human action, is to tax the offending activity, here atmospheric emissions of CO2, and eventually other GHGs. The central idea is to levy a tax on CO2 emissions from major sources around the world, and in particular on the burning of coal, oil, and natural gas and the making of cement, unless the CO2 released from such processes is prevented from entering the atmosphere through sequestration. The eventual rate of the tax would be calibrated to the desired reduction in CO2 emissions.

China has not evinced major concern about the possibility of global climate change, although it officially accepts that it is a potential problem, and it is a signatory to the FCCC and the Kyoto Protocol. It has many higher priorities, among which are to maintain rapid economic growth (the official aspiration is to quadruple its GDP between 2000 and 2020, implying average annual growth of 7.2 percent); to provide employment for large numbers of people leaving agriculture and those released from over-manned state-owned enterprises, to assure political stability; and, in the environmental arena, to reduce floods and water and air pollution, while preserving energy security.

In reality, China represents the cutting edge when it comes to controlling CO2 emissions. China is expected to install nearly 200 GW in new electricity generating capacity between 2000 and 2020, two-thirds of it coal-fired – more than the USA and the European Union put together. Once installed, plants will last 40-50 years. They should be designed both for maximum efficiency in energy use – Chinese plants are much less efficient than new plants in the rich countries – and to handle sequestration of CO2 once that becomes economically feasible. It is much more expensive to retrofit plants than to design them purposefully from the start. The world has a great interest in the character of China's expansion of electricity production in the next two decades.

India has been more aggressive on the question of climate change, holding that the increase in atmospheric CO2 concentrations over the past two centuries is due overwhelmingly to emissions from the rich countries, and that therefore they should be held responsible for any climate change, and should pay for mitigating climate change.

The attraction of a CO2 tax to China and India would not, therefore, rest mainly on its contribution to avoiding climate change, but rather its contribution to reducing air pollution, which derives heavily from burning coal and increasingly from automotive emissions in the larger cities; and, above all, as a source of revenue, badly needed by the central governments of both countries. They are unlikely to impose stiff carbon taxes alone, because of concerns about loss of international competitiveness in energy-intensive industries such as steel making. But this effect would be neutralized if the tax were imposed as part of a broad international agreement to introduce such taxes, as proposed in Cooper (1998).

The proposal involves international agreement on a regime for a common tax to be levied on the major sources of emissions of CO2, and on the selection of the common tax rate, both initially and subsequently. The tax would be incremental to existing taxes (and subsidies), including those on fossil fuels, on the grounds that whatever taxes exist were introduced for reasons unrelated to global climate change, that global climate change is a newly recognized problem for purposes of collective action, and that all parties should add new incentives for the reduction of emissions.

A uniform incremental CO2 tax would introduce an incentive, worldwide, to reduce carbon emissions. The response to the tax would of course differ from country to country. Where emissions can be reduced at a cost lower than the tax, such reductions can in time be expected to take place. Where the cost of reducing emissions exceeds the tax, the tax will be paid. In either case the cost of fossil fuels will be raised everywhere, in proportion to their carbon content, as they must be directly or indirectly if emissions are to be reduced. A uniform tax thus is economically efficient, in that reductions will be greatest where the cost of such reductions is least. The universal presence of the tax will also avoid geographic relocation of industries to avoid the tax – a potentially serious weakness of the Kyoto Protocol, with its limited geographic coverage.

The introduction of such a tax raises a number of issues: the level of the tax, and procedures for changing it; compliance; enforcement; macroeconomic effects; possible differential

treatment; use of revenues; and how to treat sequestration – activities that deliberately withdraw atmospheric sequestration.

One objection sometimes raised to a tax is that we will not know initially what the quantitative impact will be. Entirely true. But the Kyoto Protocol targets also bear little direct relationship to the underlying problem, viz. The growing concentration of GHGs in the atmosphere. It is, as its advocates insist, only a first step. The tax similarly would be a first step, with a much clearer path to what the second and subsequent steps might look like.

The initially agreed tax should be at a level sufficient to attract serious attention to tax-avoiding emission reduction, say $50 a ton of carbon, which would amount to roughly a 100 percent tax on coal, with lower tax rates per useful energy for oil and still lower for natural gas.

The world would gain experience over time with the impact of this tax on emissions, while it is also learning more about the climate system and refining its estimates on its preferences concerning the prospects for climate change and its impacts. Provision would be made for a review of the rate of tax after, say, the first ten years, and quinquennially thereafter, taking into account both greater knowledge about the impact of the tax and about the evolution of climate in response to continuing emissions.

Compliance would be easy to assess. Every country has a known mechanism for promulgating new tax rates and regulations. We would know whether a country had responded to the international agreement by changing its tax regulations in accordance with it. Administratively, the tax would best be levied at the main choke points for fossil fuels: main gas and oil pipelines, or refineries, and main coal shipments by rail or barge, plus allowance for pithead power production. But this practical detail could be left to each country.

Promulgating new taxes and actually collecting them are two different things, for any tax. Enforcement of tax collection raises complicated questions, as indeed would enforcement of emission ceilings. Almost all countries are now members of the International Monetary Fund, and as such their economic policies, including fiscal policies, are subject to detailed annual scrutiny by the IMF staff. Under a carbon tax agreement, the IMF could be asked to pay special attention during these reviews to sources of revenue, and in particular to carbon tax revenues. Each country's revenue books would be open to inspection, and its tax officials available for questioning. Of course any country that desired to cheat could do so, but that is a problem with any regime to limit emissions, and many officials would have to be brought into the conspiracy. Furthermore, physical readings of the largest sources of emissions, such as power plants, could be taken, either by satellite or on-site inspection, as part of the compliance regime.

What about the erosion of impact of the carbon taxes through other tax relief or subsidies to the emitters? Again, the IMF could be asked to scrutinize any major tax change for consistency with the carbon tax regime. The process would be a consultative one, initially bilateral between each country and the IMF. Presumptive cases of violation could be referred to special panels, WTO-style, for further investigation and scrutiny. Publicity would be given to significant violations. Exports from countries with egregious and quantitatively significant violations could, by panel finding, be made subject to counter-veiling duties by importing countries, even under existing legislation, once the tax on CO2 emissions was judged internationally to be a cost of business, subsidization of which would be treated as a conventional export subsidy.

Any significant change in taxation can have disruptive macroeconomic and micro-economic effects. Provision should be made in all countries for phasing in the tax, starting low and gradually rising to the full agreed and pre-announced rate. Macroeconomic effects could be

minimized by making the tax fiscally neutral (which would involve making a guess in each country what its initial impact on emissions would be), either by increasing expenditures or by reducing other taxes. Many governments would welcome the additional revenue. Where revenue is not needed, or where an increase in tax burden is politically unsupportable, the new revenues could be used to reduce other taxes.

The revenues are likely to be substantial, but not overwhelming. The US Council of Economic Advisers calculated in 1998 that if the Kyoto Protocol were to be extended to China, India, Mexico, and South Korea (each of which was given a notional target equal to an assumed business-as-usual trajectory of emissions), the trading price that would achieve the Kyoto targets would be $23 a ton of carbon, equivalent to a tax of that rate, about half the rate suggested above. With estimated worldwide emissions in 2010 under effective Kyoto targets of 7 billion tons of carbon, the tax would yield worldwide revenues of $160 billion, about 0.4 percent of gross world product in that year. Cooper (2004) has estimated that such a tax would reduce China's emissions about 19 percent and would yield revenue of $15.7 billion in 2010, about 0.5 percent of China's GDP in that year.

Developing countries, as noted above, must be fully embraced by the carbon tax regime if there is any hope of limiting growth in CO2 concentrations. However, developing countries could be granted a longer period of time to introduce the tax, so long as the period is not so long as to induce uneconomic relocation of economic activity to countries that had not yet introduced the tax. Five years might be an appropriate delay, to be followed by the phase-in period.

Reduction of emissions may not always be the most efficient way to limit growing atmospheric GHG concentrations. Sequestration of CO2 from the atmosphere should be included in the menu of permissible actions. Subsidies (at the agreed CO2 tax rate) could be given for sequestration, or tax rebates where the sequester is also the emitter. Again, this process would be up to each country to implement, subject to international surveillance.

Even though the carbon tax would increase the price of fossil fuels, growth need not be seriously affected, since the revenues could be used for expenditures or tax-reductions that contribute to growth. Decisions about the use of the carbon tax revenues would be left entirely to each country, so long as they were not used to undermine the purpose of the tax, which is to reduce CO2 emissions. The tax would also lead to improvements in notoriously low energy efficiency in both China and India.

To sum up, mitigating climate change will require the active participation of rapidly-growing, energy-using countries such as China and India. A target-based regime such as the Kyoto Protocol will not appeal to them. A regime based on common action, such as imposition of a carbon tax, could appeal to them mainly for the revenue it would produce without any loss of international competitiveness, since the tax would be worldwide in scope, to deal with a worldwide negative externality from human activity, such as climate change.

References

Abt, Clark C., "The Future of Energy from the Perspective of Social Science, " in Richard N. Cooper and Richard Layard, eds., What the Future Holds, Cambridge, MA: MIT Press, 2002.

Bradford, Scott C., Paul L. E. Grieco, and Gary Clyde Hufbauer, " The Payoff to America from Global Integration," in C. Fred Bergsten, ed., The United States and the World Economy, Washington: Institute for International Economics, 2005.

Cline, William R., Trade Policy and Global Poverty, Washington: Institute for International Economics, 2004.

Cooper, Richard N., "Towards a Real Global Warming Treaty," Foreign Affairs, 77 (March/April 1998), 66-79.
Cooper, Richard N., "Exchange Rate Choices," in J.S. Little and G.P. Olivei, eds., Rethinking the International Monetary System, Boston: Federal Reserve Bank of Boston, 1999, pp. 99-123.
Cooper, Richard N., "Toward a Common Currency?" International Finance 3 (July 2000). 287-308.
Cooper, Richard N., "The Kyoto Protocol: A Flawed Concept," The Environmental Law Reporter: News and Analysis, 31 (December 2001), 11484-11492.
Cooper, Richard N., "A Carbon Tax for China?", processed, 2004.
Frankel, Jeffrey A., "No Single Currency Regime is Right for All Countries or at All Times," Princeton Essays in International Finance No. xx, Princeton: Princeton International Finance Section, 1999.
Smil, Vaclav, Energy at the Crossroads, Cambridge, MA: MIT Press, 2003.
U.S. Department of Energy, Energy Information Agency, International Energy Outlook, 2004.

International and Regional Public Goods and the Economic Development of East Asia

Siow Yue Chia
Singapore Institute of International Affairs

1. Introduction

East Asia comprises a highly diverse group of economies in terms of population size, natural resource abundance, initial income level and relative factor endowment, as well as economic systems and institutions. Studies on East Asia tend to focus on China, the Asian newly industrialized economies (NIEs of Hong Kong, South Korea, Taiwan and Singapore), and the ASEAN-4 economies (Indonesia, Malaysia, Philippines, Thailand), with more recent focus on the transitional economies of Cambodia, Laos, Myanmar and Vietnam (CLMV) as well. For the rest of this paper, East Asia refers to these 13 economies, unless otherwise specified.

East Asia has achieved historically high growth rates of GDP and per capita GDP, and raised its share of world GDP from 11% in 1950 to 27 % by 2001. Starting from Japan in the 1950s and 1960s, the region's high economic growth performance extended in the 1970s and 1980s to the Asian NIEs, followed by ASEAN-4, and most recently by China and Vietnam. Table 1 shows the growth performance of East Asian economies over the period 1965-96 before the outbreak of the regional financial crisis in 1997. China and the Asian NIEs have been enjoying aggregate growth rates that averaged at least 7.5% a year, and the ASEAN-4 (except the Philippines) over 6.5% a year. Notwithstanding the regional financial crisis, most East Asian economies still achieved average annual growth rates of at least 3.5% in the 1990-2003 period, with China emerging as the best growth performer with 9.5%. In contrast, Japan achieved less than 2% average annual growth in the past decade, after achieving double-digit growth in the 1955-75 period.

Sustained GDP growth and the demographic transition have resulted in rapidly rising per capita GNP. Japan, Hong Kong, Singapore and South Korea have joined the league of high-income countries, with Japan and South Korea being OECD members. Middle-income countries are Malaysia and Thailand. Low-income countries are China, Philippines, Indonesia, Vietnam, while the UN has classified Cambodia, Laos and Myanmar as least developed countries. Eichengreen (2002) shows that poverty in East Asia declined sharply between 1975 and 1995, whether measured in absolute numbers below the international poverty line (headcount index) or as proportion of the population below the international poverty line of US$1 per day (poverty gap, see Table 2).

A "sequential" or "flying geese" pattern of economic development has been observed in East Asia. Japan was the first country to become developed, followed by the Asian NIEs, in turn followed by the ASEAN-4 economies, and most recently by China and Vietnam. Two transmission mechanisms have been at work. First is the transfer of development experiences and lessons from one tier to the next. This regional public good has influenced development strategies and policies in East Asian developing economies, alongside advice and assistance from international institutions such as the World Bank, the IMF, and the Asian Development Bank. Japan showed the way as the first Asian country to achieve developed and industrial country status. The natural-resource-poor Asian NIEs adapted the Japanese model, focusing

on high savings and investment, human resource development, promotion of export-oriented industrialization and (except for South Korea) on foreign direct investment. The natural-resource-rich ASEAN-4 economies (Indonesia, Malaysia, Philippines and Thailand) made further adaptations to the "East Asian development model" with greater emphasis on natural resource development and the role of foreign direct investment, and less emphasis on industrial policy and industrial targeting. China and the CLMV countries are also pursuing promotion of FDI and export-oriented industrialization.

The second transmission mechanism is the flow of investment resources from Japan to the Asian NIEs and ASEAN, particularly following the Plaza Accord of exchange rate realignments in 1987, and from Asian NIEs to ASEAN and, more recently, from the more advanced to the less advanced ASEAN economies. Such investment flows, together with unilateral trade and investment liberalization of East Asian countries, have resulted in the integration of national economies into global and regional production networks and supply chains.

This paper is structured as follows. Section II outlines the factors in East Asia's miraculous economic performance. Section III discusses East Asia's dependence on international trade and investment and the WTO accession of China, Cambodia, Laos and Vietnam, as well as the surge in preferential regional and bilateral trading arrangements. Section IV discusses the risks of financial globalisation as manifested in the East Asian financial crisis of 1997-98 and the national, regional and global measures undertaken since to solve the crisis and prevent a future recurrence. Section V discusses the issues of knowledge creation and protection in East Asia. Section VI concludes.

2. Domestic and external factors in the East Asian miracle

2.1 Public Goods and the East Asian Miracle

A key feature of East Asian economic development is the role of national governments in providing public goods. However, in many core areas of economic development, national governments cannot ensure domestic policy outcomes entirely on their own, as traditional national issues increasingly spill across borders and are global and regional in reach and impact, and need to depend on global and regional public goods as well. Regional public goods are provided and consumed alongside global public goods.

Public goods and public bads impacting on East Asian economic development are:

Peace and security: For much of the post World War II period, East Asian pre-occupation has been with inter-state conflicts created by the Cold War and with intra-state communist, ethnic and religious conflicts. The Association of Southeast Asian Nations (ASEAN) was established in 1967 to foster political and security cooperation among its member states. This has helped overcome historical territorial conflicts, ideological conflicts, as well as more recent concerns of transnational terrorism.[209] The peace and security in Southeast Asia underpins the subregion's economic development. The end of the Cold War led to peaceful relations in the 1990s between non-communist and communist states in East Asia, and for the latter, the transition from Marxist planned economies to market economies. The US provides the security umbrella for much of East Asia. The ASEAN Regional Forum was established in 1994 between ASEAN and its major dialogue partners and plays an increasingly important

---

[209] Intra-state conflicts remain a serious problem in Indonesia, Philippines and Thailand. The domestic conflicts have taken on regional and global dimensions with the rise of transnational terrorism and its association with Islamic activists. The existence of ASEAN and the ASEAN Regional Forum have prevented territorial disputes from flaring up in the border areas of ASEAN countries and in the seas off East Asia.

role in fostering constructive dialogue and confidence building on regional political and security issues of common interest and concern.

International trade and market access: The East Asian region has a high trade/GDP ratio. It is a major beneficiary of the trade liberalization under GATT's successive rounds of multilateral trade negotiations. International trade and investment flows into and within the region have grown by leaps and bounds as freer trade, deregulation and regulatory harmonization provide opportunities for the region's exports. Unilateral open-market and investment policies have enabled individual East Asian economies to benefit from this global public good. In recent years, this has been complemented by the growing pursuit of regional and bilateral preferential arrangements. This public good is discussed further in Section III below.

Financial stability: International and regional financial instability is a global public bad. Prior to the Asian financial crisis in 1997-98, the East Asian region has withstood well various external shocks and benefited from periods of global macroeconomic and financial stability. The outbreak of the Asian financial crisis in 1997 represents the first major brush with a global and regional public bad since World War II.[210] Major efforts have been launched at the national, regional and global levels to re-establish financial stability and to ensure that financial crises do not recur. Financial instability is discussed further in Section IV below.

Knowledge creation and diffusion: Knowledge creation takes place mainly in developed countries but is a public good available to the international community. In the 1950s to the 1970s the East Asian region (excluding Japan) were mainly users of this global public good, as it had limited capacity to conduct its own R&D. Through the provision of national public goods, however, it had developed the institutional and human resources to absorb and adapt foreign knowledge and technology. In the 1990s, several East Asian countries have graduated to become creators and innovators themselves. The advanced developing economies have embraced the knowledge-based economy with emphasis on the creation and use of science and technology, including information and communications technology and the bio-sciences. Knowledge creation and diffusion is discussed further in Section V below.

Health and communicable diseases: Global health interdependence has deepened in recent decades due to increased international travel, and spread of numerous global consumption habits with negative consequences for health. HIV/AIDS is a global pandemic and several countries in East Asia have developed a high incidence rate. The Asian Development Bank is supporting actions to prevent and control HIV/AIDS at regional and country levels and regional groupings such as ASEAN have also developed common measures. Communicable diseases such as SARS [211] is a recent phenomenon in East Asia and has triggered action at the national and regional levels in East Asia as well as in the global community, with the World Health Organization (WHO) playing a major role. The 2005 spread of avian flu across several East Asian countries have led to dire warnings by WHO of a global pandemic and has also occasioned cooperative action among East Asian countries to share information, control the spread, and find pharmaceutical cures.

---

[210] The stock market crash of 1929 and the ensuing global depression impacted heavily on the demand and prices of primary commodities, which were then the main exports of the developing economies of East Asia. The 1987 stock market crash, known as Black Monday, did not have a devastating effect on the developing economies of East Asia, as their stock markets were not well developed and corporate financing was more heavily dependent on bank loans. The 1987 exchange rate realignment under the Plaza Accord had a greater impact on the region.

[211] The outbreak of SARS (Severe Acute Respiratory Syndrome) in Guangdong province of China in November 2002 spread rapidly across East Asia and beyond to cover 3 regions and 29 countries. A number of academic papers on the effects of SARS on Asian economies have been published in *Asian Economic Papers,* volume 3, number 1.

Environment: Global warming is a global public bad requiring action and support of the international community. Some developing countries in East Asia see little direct benefits from their action to curb greenhouse gases but large abatement costs and reduced economic growth. More immediate environmental concerns in East Asia are the hazes caused by forest fires in Southeast Asia. The smoke haze from Indonesia's forest fires affected several neighbouring countries in ASEAN. In 1999, after much protests by neighbouring countries, Indonesia outlawed the use of fire in clearing land, and in November 2003 the ASEAN Agreement on Transnational Haze Pollution Control was adopted, allowing member countries to jointly combat the haze problem. However, Indonesia has yet to ratify the agreement and domestic efforts to outlaw use of fire in clearing land has been ineffective. The tsunami that started off the Indonesian island of Sumatra on 26 December 2004 to engulf the littoral states of the Indian Ocean led to a tremendous outpouring of regional and global aid relief as well as actions to provide early warning systems on emerging tsunamis in the Indian Ocean. At the national level, it has also triggered action to protect the coastal environment.

2.2 Interplay of National and Regional and Global Public Goods

The economic success of East Asia has been well documented, particularly in the 1993 World Bank study "*The East Asian Miracle",*[212] generating an active debate on the patterns and determinants of East Asian development. Much emphasis in the World Bank study is on the provision of national public goods ---- political stability, security, and law and order; macroeconomic stability; an environment conducive to high savings and high physical and human capital investment rates; and open trade and investment policies. The study noted that macroeconomic stability was achieved by orthodox policy prescriptions of keeping budget deficits manageable, maintaining low-moderate inflation, keeping external debt under control, and avoidance of exchange rate overvaluation. Macroeconomic stability and prompt responses to macroeconomic shocks created a basis from which policies intended to affect the supply side could be launched in an environment of stable real interest and exchange rates. Many East Asian economies strengthened productive and trade capacity so as to respond effectively to the opening of global markets under the GATT multilateral trade rounds.[213] The region's high savings and investment rates reflect rapid economic growth and demographic transition as well as government policies to increase savings rates, including maintaining positive real interest rates and emphasis on educational expenditures by governments and households.

The literature on East Asia highlights 2 development debates. The first concerns the relative importance of factor accumulation and total factor productivity growth. Growth accounting studies, (see for example, Young 1992), found that East Asian growth was due largely to factor accumulation and total factor productivity growth played a relatively small role. Methodological and data reliability problems cast some doubt on the results. Also, why TFP growth may have been low in the 1970s and 1980s, the shift towards the knowledge-based economy in the 1990s has given a new importance to innovation and productivity as growth drivers. The second concerns the role of government in East Asia, more particularly industrial policy. Some studies argue that government interventions have played a vital role in the industrial development of the region, more specifically in South Korea, Taiwan, Singapore and Malaysia. However, critics contend that East Asian countries succeeded in spite of misguided and costly government interventions. After the financial crisis, East Asian governments, particularly South Korea, have shifted away from the industrial policies that involved non-market tinkering with allocation of financial resources. The emphasis is now on more pro-market policies and human resource development and science and technology development.

---

[212] The study covers Japan, the four Asian NIEs (Hong Kong, Republic of Korea, Singapore, and Taiwan), and Indonesia, Malaysia and Thailand. An obvious omission is China.

[213] While East Asia has benefited from trade globalisation it suffered the negative externalities of financial globalisation in the 1997-98 regional financial crisis.

A study by Fukasaku (2004) highlights the interaction of appropriate growth-promoting domestic policies and institutions in an enabling international economic environment, that is, the ability to access and utilise global public goods. The East Asian developing economies (except China) simultaneously experienced major economic turnarounds in the early 1970s and again in the mid-1980s, "due to significant changes in the international economic environment and less as the consequence of any particular domestic economic policies". International developments that impacted positively on East Asia include favourable external macroeconomic environment, multilateral trade and investment liberalization, and role of international aid.

External macroeconomic environment
The 1970s saw the emergence of strong inflationary expectations in major OECD countries, a breakdown in the Bretton Woods fixed-exchange rate system, and the first OPEC oil shock. Easy monetary policy among OECD countries led to low real interest rates, and the Asian NIEs financed their strong investment demand by borrowing petrodollars recycled through banks in London and New York [214]. A significant tightening of labour market conditions, together with a successive round of the yen's real appreciation in the 1970s, the second oil shock in the early 1980s and the sharp yen appreciation with the Plaza Accord of September 1985, propelled Japanese firms to relocate labour-intensive manufacturing to other East Asian economies and import more goods from them. The Plaza Accord in September 1985 and rising costs in the Asian NIEs also led to outward investments to Southeast Asia. In the early 1990s real interest rates in OECD countries were once again low, leading to capital flows to East Asia (and other emerging economies) because of yield differentials.[215]

External trade and investment environment
Fukasaku argues that multilateral trade liberalization under GATT/WTO can be regarded as an institutional foundation underlying East Asia's development, with China representing one of the most successful episodes to date.

A key feature of East Asian economic success is the export-led industrialization and accompanying FDI and technology inflows. Table 3 shows the trade and FDI openness of East Asian economies. The trade/GDP ratios were exceptionally high for the city-states and entrepots of Hong Kong and Singapore, but also exceeded 100% for Malaysia and Thailand. Even China's continental-sized economy registered a high ratio of 44%. The share of manufactures in total merchandise exports reached over 80% for most countries as export structures shifted away from traditional primary products. In the 1990s, the volumes of FDI inflows were largest in China, followed by the Asian NIEs and Malaysia and were lowest in the CLMV (Cambodia, Laos, Myanmar, Vietnam) countries.

The era since the early 1970s has witnessed the rapid growth in global trade and investment flows following the decline in global trade barriers and increase in global sourcing by western MNCs. Up to the mid-1960s, developing East Asia was largely dependent on resource-based production and exports, and the region was integrated into the global economy as exporters of agricultural and mineral primary products, and importers of manufactures and capital goods, and suffered from low and volatile export growth and declining terms of trade. Since then, the East Asian economies embarked on first import substitution and then export-oriented industrialization. The trend started with the Asian NIEs (Hong Kong, South Korea, Taiwan, Singapore) in the 1960s exporting labour intensive manufactures to markets in Europe, US and Japan, creating strategic industries, protecting existing industries and nurturing domestic entrepreneurship. With few exceptions, import substitution was moderated by the emphasis on

---

[214] Ki Fukasaku (2004).
[215] Ki Fukasaku (2004).

exporting as well.[216] For the ASEAN-4 (Indonesia, Malaysia, Philippines, Thailand) export-oriented industrialization came in the mid-1980s, after the collapse of international oil and commodity prices that had hitherto provided the foreign exchange to underpin the import substitution drive. The ASEAN-4 also widely encouraged inflows of FDI, capitalizing on the emerging trend of FDI outflows from Japan and the Asian NIEs following the Plaza Accord. For the transition economies, China embarked on wide-ranging economic reforms from the end-1970s, including rapidly opening-up to international trade and FDI, while Cambodia, Laos and Vietnam did likewise in the 1980s. These transition economies embarked on unilateral reforms before the collapse of the Soviet bloc and COMECON.

The initial manufactured exports were in processed agricultural and mineral products and labour intensive products, but increasingly it shifted towards higher value added, skill-, capital- and technology-intensive manufactures. East Asia took advantage of the global microelectronics revolution, the trend of western and Japanese MNCs seeking offshore low cost production centres, advances in telecommunications and transportation technologies, and falling trade barriers in GATT/WTO, to develop the export-oriented electronic, computer and other high-tech industries. East Asia became increasingly linked to global production networks and supply chains and participated in the dynamic growth of global intra-industry and intra-firm trade. The Philippines has also developed a sizeable call centre industry.

A trade-FDI nexus is a key feature of East Asia's outward oriented industrialization, as MNC affiliates in East Asian developing economies export an increasing share of their production to home and third countries. Trade liberalization encouraged inward FDI and the inward FDI contributed to export performance. Dependence on FDI has been quite diverse. The Southeast Asian countries, and Hong Kong, and more recently China as well, depends more on FDI. Inward FDI is a more recent phenomenon in South Korea and Taiwan, which traditionally depended more on technology licensing agreements and liberalized their FDI regimes only after the Asian financial crisis.

International aid and advice

Foreign aid, particularly from the US, played a key role in the early phases of post World War II development in Japan, South Korea and Taiwan. In Southeast Asia, concessional loans from Japan have been used for economic and social infrastructure and human and institutional capacity building. Economic infrastructure and human resource development have been crucial in promoting private sector development in East Asia. As the East Asian countries became more developed and attracted large sources of foreign private capital and technology, dependence on foreign aid has correspondingly declined and some have become aid donors themselves. However, aid remains important for the less developed economies of Indonesia, Philippines, Cambodia, Laos and Vietnam.[217]

An important form of international aid is not financial and technical assistance but development advice and knowledge of best practices. Much of this is available from international institutions such as the World Bank and the IMF and the Asian Development Bank. In addition, the geographical effect is a strong regional public good in East Asia, as the more advanced economies transfer their successful development lessons, experiences and best practices to the less developed neighbouring economies.[218]

---

[216] In South Korea, firms granted protection from import competition were also required to export aggressively. In Hong Kong and Singapore the domestic markets were too small to sustain import substitution. Moreover, these were major entrepots pursuing free trade policies. Singapore embarked on industrialization in 1960 with tariff protection but quickly abandoned this strategy on gaining political independence in 1965.

[217] Myanmar's access to international aid has been restricted because of its poor human rights record under its military regime.

[218] As the front-runner, Japan provided many development lessons. However, even the city-state of

3. International trade liberalization and integration

The World Trade Organization (WTO) is the institution responsible for delivering global public goods in trade.[219] It provides a forum for multilateral negotiations to liberalize trade in goods and services; sets and administers the rules governing international trade and trade related issues; provides the mechanism for the settlement of disputes between members regarding rules adherence and implementation; and provides a review of members' trade policies.

Staiger (2004) argues that while the creation and maintenance of the WTO has important global public good features, its utilization by member governments need not exhibit the features of global public goods. Member governments can use the WTO to ensure that negotiations to expand market access entail minimum spillovers to other governments. Under GATT**,** tariff cuts were negotiated in a reciprocal way, with smaller countries having less to offer than developed ones. When generalized cuts were introduced, developed countries managed to obtain exceptions or extensions in sectors where developing countries had comparative advantages, such as agriculture, textiles, and footwear. Poorer countries were marginalized in the GATT trade negotiations. WTO rules are seen by developing countries as an international code of conduct imposed by the rich countries to serve their own self-serving interests (Cattani *et al.*, 2005).

3.1 Trade liberalization and East Asia

In many East Asian countries, unilateral trade liberalization in recent decades has been more important than multilateral trade liberalization under GATT/WTO. Nonetheless, the latter which led to the gradual opening of OECD markets provided crucial market access for East Asia's outward oriented industrialization. However, GATT failed to liberalize trade in agriculture or services, while it legitimised developed country protection in textile and clothing through non-tariff barriers. Table 4 shows the export composition of ASEAN-6 countries.

Trade in agriculture: Agriculture is the main livelihood for poor households, with more than 90% in Cambodia and Vietnam, more than 75% in Indonesia, and roughly 70% in Thailand and the Philippines (Bora, 2003)**.** Agricultural exports, including prepared foodstuffs, (HS1-24) account for 7.6% of the exports of ASEAN-6 countries in 2003 and higher for the CLMV countries. The key markets are within East Asia including Japan, and EU and US.

Reduction of trade barriers in agriculture is of particular importance to low income countries and poverty reduction. Key issues in global agricultural trade are developed countries' domestic support and export subsidies and restricted market access for agricultural products of low income countries. Domestic subsidy payments by developed countries are concentrated on meat, dairy products, and cereals and East Asian exports affected are mainly rice and sugar. On restricted market access, more than 94% of East Asian agricultural exports to Japan are subject to import tariffs, while corresponding figures for exports to EU and US are 74% and 47%. Tariff escalation in developed country markets also discourages agro-processing for export by East Asian developing countries. Furthermore, trade barriers increasingly take the form of non-tariff barriers, including health and safety standards and regulations.[220]

East Asia has no common position in the WTO on agriculture. Japan and South Korea are highly protective of their inefficient agricultural sectors, while China is more prepared for

---

Singapore provided best practices in industrial parks, low cost urban public housing, control of urban traffic, and public sector governance.

[219] See Michalopolous 2004.

[220] For example, exports of marine products from Thailand and Vietnam have been subjected to anti-dumping duties and not meeting SPS requirements in the US and EU.

agricultural reforms and opening up its agricultural sector to import competition. Thailand, Cambodia, Laos and Vietnam would benefit much from agricultural trade liberalization. The ASEAN group made a submission to WTO in November 2000, arguing for special and differential treatment for developing countries in world agricultural trade. It is argued that the sheer underdevelopment of agriculture in developing countries limits their ability to implement reforms at the same level and pace as developed countries. At the Hong Kong Ministerial Meeting (13-18 December 2005), this position is best exemplified by the speech of Indonesian Trade Minister "it is imperative that for sectors which are critical for food security, rural livelihood and development, that is Special Products, to be treated differently. It is also important for us to have recourse to Special Safeguard Mechanisms when we face import price and volume shocks which can have an adverse effect on a large part of our population."

Non-Agriculture Market Access (NAMA): As East Asian developing economies switch towards production and export of manufactures, restricted market access for these products are of increasing concern, particularly tariff peaks and tariff escalation. The key issue in the negotiations on NAMA is on reducing trade protection by the developed and the more advanced developing countries in the form high tariffs, tariff peaks, and tariff escalation. Low income developing countries argue that they need continuing protection for their development, as MFN liberalization will reduce their existing low market shares. The Indonesian Trade Minister argues at the Hong Kong Ministerial Meeting that "developing countries still need a longer time frame to maintain a certain level of tariffs for policy space until such time their program of trade policy reforms combined with other complementary policies and institutional changes have been able to work…the idea mooted by developed members to drastically cut tariff levels is therefore not acceptable."

Trade in textiles and clothing: Textile and clothing is a major export of developing countries. Growth in developing country exports have been constrained for two decades (1974-94) by country-specific quotas imposed by importing developed countries through bilateral agreements under the Multi-fibre Agreement. In 1995 this was replaced by the WTO Agreement on Textiles and Clothing, which provided for a 10-year transition period to phase out all bilateral quotas by 1 January 2005. The textiles and clothing sector poses a special challenge for East Asia. Many countries have a large clothing export industry employing female low skilled workers. It accounted for 5.1% of the total exports of ASEAN-6 in 2003 and ranged from 87% for Cambodia, 48% for Laos, 20.5% for Vietnam and 11.6% for Indonesia to only 1.8% for Singapore. It also accounted for 16.7% of China's total exports. With the lifting of quotas, there are concerns that developed countries would increasingly apply contingent protective measures on textile and clothing imports. Also, the removal of quotas exposed high cost developing countries to competition from new low-cost suppliers, more specifically competition from China. China has already emerged as the world's leading textile and clothing supplier even before the quota dismantling. China exports to the US and EU surged after the lifting of quotas.[221]

Trade in services: GATS covers all services with few exceptions. It commits WTO members to undertake negotiations on specific issues and to enter into successive rounds of negotiations to liberalize services trade. Efficient services are crucial for competitiveness in

[221] This triggered the US to impose new quotas restricting import of 7 types of textiles from China in May 2005 and the US administration is considering imposing quotas on another 6 categories of textiles. American importers faced with re-imposition of quotas on textiles from China, began transferring their orders from China to other developing countries unaffected by the quotas. Plant relocations away from China to Indonesia have also been reported, in response to quota uncertainties, and a yuan revaluation that would increased costs in China. In June 2005, the EU negotiated a comprehensive arrangement with China that covered 10 categories and allowed growth in shipments of 8.5% to 12.5% annually through 2007. American and European retailers are unhappy at the quota restrictions and uncertainty of textile and clothing supplies from China while consumers face prospects of shortages and higher prices.

goods, and the services sector development is important for income and employment growth. East Asia lags behind other developing regions in liberalizing trade in services.[222] Services liberalization would benefit East Asia countries from greater openness at home and improved access to markets abroad, the latter particularly in data processing and other IT-enabled services and financial services. As several East Asia countries have large numbers of construction workers and professionals working abroad, it would also benefit from temporary labour mobility under mode 4 of GATS. However, harmonization and mutual recognition of domestic regulations in a wide range of professional services may be more feasible in a regional context than under the WTO, and services liberalization have been incorporated in various regional trade agreements. At the WTO Hong Kong Ministerial Meeting, it was agreed that negotiations should consider the size of economies and particular economic difficulties of the least developed economies.[223]

3.2 WTO Accession

The lack of WTO membership has excluded some countries from access to the global public goods provided under the WTO. Among the East Asian economies, China and Taiwan were admitted into the WTO membership only in December 2001, Cambodia in October 2004, while Laos and Vietnam are still negotiating their accession. In addition to MFN market access, WTO accession is an opportunity for countries to liberalize and rationalize their policies and institutions and improve efficiency.

Case of China

For 1979-2002, the average annual growth rate of China's real GDP reached 9.4%, and that of the real GDP per capita 8.1%. It reflects interactions between political and economic and domestic and external factors. Since 1979 China has been undergoing economic reforms and trade and investment liberalization. Major external factors identified by Lin (2004) include international aid, FDI and China's WTO entry. China's trade and FDI indicators are rising rapidly: the trade/GDP ratio rose from 9.7% in 1978 to 50.2% in 2002, while inward FDI rose from US$57 million to US$53 billion during this period.[224]

When China sought WTO membership in 1986 it had to accelerate its economic and institutional transition from a planned economy to a market economy. Accession was finally achieved in December 2001, after 15 long years of reforms and negotiations. China is also designated a non-market economy, which makes it potentially vulnerable for up to 15 years to non-market economy provisions and increased the probability of dumping and antidumping measures. China's trade in services was also subjected to one of the most radical services reforms ever negotiated in the WTO. At the same time, WTO accession improves China's economic security, as it had been undergoing the uncertain annual process of seeking US

---

[222] Kathie Krumm and Homi Kharas (2003).

[223] The Indonesian Trade Minister argues that a services agreement "should not erode developing countries flexibilities or negate the policy space as carefully negotiated in the Uruguay Round. The framework on services should allow developing countries to open up the sector at the pace that address their levels of development… Services liberalisation must be undertaken in the context of requisite changes in domestic institutions and regulations.

[224] See Justin Yifu Lin (2004). First, the administration system reform lags behind the economic system reform, making it difficult to completely abandoned the strategy of accelerating the development of capital-intensive industries, the government still needs to protect the existing state-owned enterprises (SOEs) and set up new ones to implement its development goals. Second, the administrative decentralization gives local governments powers to influence local economic performance. Competition among local governments contributes to the development of the market, but as a result of the depression of raw materials' prices, the poor western provinces, which supply most of the raw materials, are in fact subsidizing the rich, industrialized eastern provinces. Under such a situation it is no surprise to see the prevalence of regional protectionism. In China, the state owned sectors, especially the large SOEs, which have benefited much from the lower factor prices, are the potential opponents of price reform.

Congressional approval for the MFN status that the US accorded all WTO members. WTO accession also obliges China to carry out administration reforms, to improve the efficiency and transparency of decision-making according to WTO principles. It also requires accelerating reforms on macroeconomic management, industrial policy, trade policy, fiscal system, and legal system and eliminate obstacles for the development of the market economy. It entails the reduced role of the government, including state-owned enterprises, and increased role of private enterprise. MFN treatment and a more transparent and rationalized legal and administrative framework have encouraged FDI inflows.

Martin *et al.* (2003) examine the sectoral impacts of China's WTO accession. China is committed to a low-protection agricultural regime. Agricultural trade liberalization is the expected source of about half of the efficiency gains from the WTO accession package. Import increases are expected in a wide range of products, including oilseeds, sugar, dairy products, cotton, wood and energy products. On manufactures, the Accession agreement builds on the substantial liberalization already undertaken. Average tariffs have fallen by 33 percentage points and a further 6 percentage point reduction remains. The number of import licenses has already fallen from about two thirds of tariff lines to less than 5%.

A major impact of Chinese accession will be on the textile and clothing sector, which is geared for strong expansion with the abolition of MFA bilateral quotas and imposition of MFN tariffs. One feature of the Accession agreement is the Product-specific Transitional Safeguard Provisions, lasting over a 12-year period (up to December 2013), which may be applied to China by any WTO member and may then trigger actions against the diversion of Chinese exports to other markets, with special textile safeguards for 3 years.[225]

The Cases of Cambodia, Vietnam and Laos

For decades Cambodia, Laos and Vietnam (CLV for short) have experienced the negative impacts of adopting wrong economic ideologies and policies. Since the mid-1980s, they have been undergoing economic transition, from central planning to market economy, from inward-looking to outward looking economic development strategies and policies, and from close economic relations with the Soviet-bloc to closer economic relations with market economies. Initially the policy and institutional reforms have been undertaken unilaterally. Then the CLV economies sought regional integration into ASEAN, with Vietnam acceding in 1995, Laos (and Myanmar) in 1997, and Cambodia in 1999. These countries were accorded special and differential treatment by the older ASEAN members.

WTO accession is expected to bring substantial benefits to the CLV countries. First, it is forcing the countries to improve their legal framework and transparency of rules, regulations and practices governing administration, trade and investment and state-owned enterprises. These measures would lead to lower business transaction costs, improve productivity, and encourage FDI inflows.[226] Second, lack of MFN market access has subjected them to discriminatory treatment of their exports in various markets.[227] Third, accession means the countries can turn to the WTO dispute settlement mechanism to defend their trade interests. With falling tariffs and quantitative restrictions in the WTO, importing countries increasingly

---

[225] The textile safeguard negotiated during the accession process is available to all WTO members until 31 December 2008, and applicable on textiles and clothing products.

[226] Exports of tropical agriculture are not seriously affected by the agricultural subsidies imposed by developed countries, except perhaps for exports of rice and sugar. Marine products have become key exports of Cambodia and Vietnam, and improved market access being negotiated under the Doha Round should improve agricultural export prospects.

[227] For example, Vietnam's exports to the US have been severely penalized until the lifting of the US trade embargo in 1994 and the implementation of the US-Vietnam Bilateral Trade Agreement in December 2001. US tariffs on Vietnamese goods fell from an average of 40 percent to only 3 percent, boosting Vietnamese exports to the US. However, Vietnamese exports to the US are still subjected to the disadvantage of a non-market economy, as in the case of China.

resort to the use of technical barriers to trade (particularly SPS standards) and antidumping measures.[228] Fourth, as low-income developing and least developed countries, the CLV countries are beneficiaries and potential beneficiaries of the WTO's special and differential treatment, which include imposition of fewer obligations on them; granting of longer adjustment and transitional time frames for implementing WTO agreements and commitments; and provision of technical assistance for WTO compliance and disputes.[229] Fifth, access to the Generalised System of Preferences (GSP), the main non-reciprocal trade preference scheme for developing countries from developed countries. Currently there are 16 national GSP schemes available.[230] Sixth, with the dismantling of the textiles and clothing quotas on 1 January 2005, Cambodia will benefit as a new WTO member, but Laos and Vietnam will be penalized by non-membership.

WTO accession will also entail heavy obligations to abide by WTO disciplines and rules and open up the domestic markets to international competition. There are painful economic and social adjustments. As low income and least developed economies, they require an enabling regional and global environment to provide open and preferential access to markets, and access to investments, technology and know-how, and development and technical assistance.

Cambodia acceded to the WTO as a least developed country in October 2004, while Laos and Vietnam are still negotiating their accessions. As they seek membership in ASEAN and the WTO, they are pressured to sustain and undertake further economic policy and institutional and legal reforms. As Cambodia applied for WTO accession in October 1994, it embarked on further fundamental economic reforms. In an August 2003 statement, the Cambodian government reported that implementation of WTO requirements was a "lengthy and difficult process" and asked for flexibility in negotiations on WTO commitments and for special and differential treatment as a least developed country. In a subsequent September 2003 statement, the government stated that "We managed to secure a package of commitments and concessions we feel was the most affordable and possible deal for Cambodia's accession, bearing in mind Cambodia's little political and economic weight and its current reliance on external assistance from the major donor countries who are also WTO members**."** The accession process had taken a long 10 years. Cambodia is committed to adopt about 47 laws and regulations during the 5-

---

[228] For example, Vietnamese exporters are increasingly facing these new trade barriers in their exports of shrimps to EU, and frozen fish fillets to the US. Because Vietnam is a non-member it has no access to the WTO's dispute settlement mechanism and must use separate bilateral legal measures to resolve such disputes, which could be very costly.

[229] The WTO High Level Meeting on *Integrated Initiatives for Least Developed Countries' Trade Development i*n October 1997 adopted initiatives to improve market access for the least developed countries ----developed countries should, as soon as possible, provide tariff-free and quota-free market access on industrial products, including textiles and clothing, and should consider further market access measures on agricultural products. Developing countries should also provide preferential tariffs for the least developed countries. The initiative also gives products from these countries flexibility with regard to origin criteria. Developed countries could consider exemptions from origin requirements on a case-by-case basis, or introduce full cumulation of origin for these products.

[230] Japan's GSP scheme grants duty-free entry for most industrial products and reduced tariffs rates for selected industrial products and agricultural and fishery products, with an additional list of duty-free and quota-free products for the least developed countries included in April 2000. The EU GSP scheme covers most processed and semi-processed industrial products and many agricultural products and the beneficiary list was extended in January 1998 from Lome countries to all developing countries. Rules of origin were simplified, by allowing derogations and by promoting cumulation. For example, the derogation from normal rules of origin allow Cambodia and Laos (among others) to use neighbouring countries' raw materials. Further, the EU "Everything but Arms" (EBA) amendment grants unrestricted duty-free access to all products (except arms) originating in least developed countries. The US GSP scheme offers duty-free market access on nearly half of the products listed in the US HTS, with an additional list for the least developed beneficiary countries. However, lack of "normal trade relations" (NTR) for many years penalises CLV exports to the US market.

year transition period; enhance governance and transparency; speed-up administrative and judicial reforms; harmonize fiscal policies; and improve the trade environment.

Vietnam applied for WTO accession in January 1995. The WTO Working Party has held several meetings and a Draft Working Party Report was ready in November 2004, but bilateral negotiations have not been completed.[231] Laos applied to join the WTO in July 1997 and the Working Party was established in February 1998 and held its first meeting only in October 2004. The Laos government has been implementing a reform programme towards a market economy and adapting to WTO rules and disciplines. It urged WTO members not to press Laos to make commitments "beyond the levels applicable to current WTO members with similar economic backgrounds".[232] As a least developed economy it asked for a transitional period and flexibility to comply with relevant WTO agreements.

3.3 Regional Trading Arrangements (RTAs)

Free trade areas and customs unions are permitted under GATT Article XXIV under certain conditions, particularly with regard to sectoral comprehensiveness and not raising barriers against non-members. The regional trading arrangements (RTAs) are to be notified to the WTO and the WTO Committee is supposed to review these agreements and determine whether they are consistent with WTO provisions. However, many agreements have not been notified and the WTO Committee has failed to reach agreement as to whether the notified agreements meet GATT conditions.

The RTA is a regional public good, but is increasingly perceived as a global public bad in some quarters.[233] GATT Article XXIV is vague on the requirement that RTAs cover 'substantially all trade', creating a loophole for exclusion of sectors from liberalisation. There is also the issue whether RTAs among developing countries be given special and differential treatment under the 1979 "enabling clause" and not be subject to the more restrictive conditions of Article XXIV.

Emergent Regionalism and RTAs in East Asia

Since the early 1990s, the East Asian region has shown growing interest in formal regional and bilateral economic cooperation and FTA agreements. RTAs are increasingly perceived to be regional public goods, as they help achieve the objectives of regional political stability and security, as well as better market access and economic competitiveness for the products and services of the region.[234]

The following are the rationale for formation of East Asian RTAs:

- RTAs are motivated by political-security and economic objectives. Formation of ASEAN in 1967 was to foster regional peace and security in a Southeast Asia divided by communism and territorial conflicts. The founding members of Indonesia, Malaysia, Philippines, Singapore and Thailand were joined by Brunei in 1986 and by Cambodia, Laos, Myanmar and Vietnam in 1995-99. Increasingly, regional cooperation and integration help individual economies gain market access and market security as well as economic competitiveness through exploitation of scale economies and comparative advantage. In Northeast Asia, political and economic relations are normalising between China and its immediate

[231] WTO website reported that several developing countries said WTO members should not ask Vietnam to make commitments that go beyond WTO agreements, such as on core labour standards; also that Vietnam should enjoy rights under the special and differential treatment provisions, since Vietnam is a highly indebted low income developing country.

[232] See WTO website.

[233] The 2005 report on the WTO by an expert group has been highly critical of RTAs.

[234] See Chia (2004).

neighbours. However, relations between China and Taiwan are strained while Japan-China and Japan-South Korea relations are still bedevilled by historical baggage.[235]

- East Asian RTAs are also a defensive response to regionalism elsewhere. Continental economic blocs have emerged in the Americas and Europe, especially NAFTA in 1994, and the European Single Market in 1992 and EU membership enlargement in 2004, and the ongoing negotiations for the Free Trade Area of the Americas. Hence East Asian exporters face discrimination in these markets.
- Some East Asian economies found trade and investment liberalization under the WTO and APEC processes too slow and uncertain. The Uruguay Round took 7 years to complete and the Doha Round was launched with difficulty in December 2001 and is still facing tremendous problems. The WTO has also failed to prevent the proliferation of RTAs around the world. APEC has been ineffective in liberalizing trade and investment among its members, and the creation of APEC has not stopped the FTA momentum among its American members.
- The 1997-98 financial crisis proved a trigger point for the region. It demonstrated the close economic and financial interdependence of East Asian economies as well as unhappiness and resentment over the actions of the "Washington consensus", that is, the US and Washington-based international financial institutions. This led to the ASEAN+3 initiative for regional monetary and financial cooperation for regional macroeconomic stability and resilience. As the region's economies struggled to recover and restructure, regionalism proved less daunting than globalisation and multilateralism.
- Key East Asian economies, particularly Japan, China and South Korea changed their mindsets and embraced regionalism in addition to their traditional advocacy of multilateralism. With Japan's loss of economic dynamism since 1990 and its exports facing discrimination in major markets in the Americas and Europe, Japanese businessmen have been lobbying their government to secure better market access. China completed its WTO accession in December 2001 and began to show greater political and economic interest in its neighbours, particularly Hong Kong and Southeast Asia. South Korea, not to be isolated by ongoing regionalism in Southeast Asia and Japanese initiatives, also began to pursue RTAs aggressively. Singapore has been frustrated by limited progress in ASEAN trade and investment liberalization and sought bilateral FTAs with a growing number of regional and extra-regional countries so as to improve market access for its exporters and to reinforce Singapore as investment and services hubs. In turn, East Asian front-runners in RTA formation are creating a bandwagon effect on other East Asian economies.
- There is also a growing realization in East Asia that the region could form a large and dynamic economic bloc with the rise of China, able to harness regional resources to resolve regional problems, as well as to seek a more effective voice in the global arena. After all, East Asia has one third of the world's population, over two-fifths of the world's foreign reserves, and nearly one quarter of the world's GNP. East Asia's GNP size would be close to that of the EU-15 (26% of world GNP), although still considerably below that of NAFTA (35% of world GNP).

Table 5 lists the RTAs in East Asia, some already completed and implemented, but many still in the negotiation and study stage. The ASEAN Free Trade Area (AFTA) was established in 1992 and remains the only regional and sub-regional FTA in operation in East Asia. There are several ASEAN Plus economic partnerships in the pipeline. At the bilateral level, Singapore and Thailand are leading with bilateral FTAs with a growing number of economies around the world and several have already been signed and implemented. East Asia's RTA initiatives are characterized by the following:

---

[235] Japan invaded parts of China and occupied South Korea for many years. The Japanese have failed to atone for their aggression to the satisfaction of China and South Korea and relations have soured in the past two years over the issues of Japanese history textbooks and Japanese Prime Minister's annual visits to the Yasukuni shrine.

- Diverse geographical coverage: The RTAs are not restricted to neighbouring countries or strictly "regional". With the revolution in transportation and telecommunications, geographic distance is no longer a trade barrier it used to be. RTA partners include not only economies within East Asia, but span all geographic regions.
- Diverse economic partners: They straddle the developed economies of Japan and the US at one extreme, and the least developed economies of Cambodia, Laos and Myanmar at the other. There are groupings of developing countries (ASEAN, ASEAN+China, ASEAN+India, ASEAN+South Korea) as well as between developing and developed countries (ASEAN+Japan, ASEAN+Australia+New Zealand and individual ASEAN countries+US). Agreements between developed and developing economies facilitates transfer of investment and technology resources, and inter-industry trade between high tech manufactures and primary commodities. Agreements among developing countries build on intra-industry trade based on new division of labour in manufacturing and services. FTAs among developing countries are notified to the WTO under the GATT's 1979 "enabling clause" which provides special and differential treatment (AFTA, ASEAN+China). FTAs between developed and developing countries (such as ASEAN+Japan) have to be notified under GATT/WTO Article XXIV and satisfy the requirement of sectoral comprehensiveness.
- Broad agenda beyond free trade areas and beyond WTO: The RTA initiatives are packaged as comprehensive economic partnerships, and include wider, deeper, and faster liberalization schedules, and extend beyond the present WTO mandate. The RTAs have given rise to "competitive liberalization" in East Asia. The agenda includes trade in services, trade facilitation, investment liberalization and facilitation, e-commerce, competition policy. For trade in goods, the ASEAN+China and ASEAN+India FTAs incorporate an "early harvest" programme of trade liberalization in goods. There are also provisions for special and differential treatment and technical and development assistance for the less developed members. The East Asian initiatives and experiences on sensitive issues and products and services could pave the way for their later acceptance in the multilateral agenda. There are also strong elements of functional cooperation and capacity building in areas such as human resource development, small and medium enterprise development, infrastructure development, and technology (including ICT) development.

ASEAN and ASEAN Plus agreements [236]

AFTA was created as an outward-looking bloc to enhance the competitiveness of individual member states as a production base and investment location. It has a combined market size of over 500 million people, but its aggregate GDP size is only less than 10% of either NAFTA or EU. The sub-region is also heavily dependent on external sources for investment capital and technology. Trade liberalization in goods under the 1992 AFTA is complemented by the 1995 ASEAN Framework Agreement on Services to liberalize intra-regional trade in services, and by the 1998 ASEAN Investment Area to liberalize and facilitate FDI from within the region and beyond.

Over the years ASEAN has achieved considerable success in maintaining regional peace and security, but has been severely criticized for the slow pace of economic integration and slow implementation of agreements.[237] Tariffs for the ASEAN-6 were reduced to less than 5% by January 2003 and will be reduced to zero level by 2010. The less developed Cambodia, Laos, Myanmar and Vietnam (CLMV) have been given later deadlines. Significantly, only a very small percentage of intra-ASEAN trade utilized the AFTA tariff preferences, reflecting exclusion of sensitive sectors, and products, the low margin of preferences, and difficulties with rules of origin and non-tariff barriers.

---

[236] For a more extensive coverage, see Chia (2004).
[237] See for example, Simon Tay, Jesus Estanislao and Hadi Soesastro (eds) (2001).

In October 2003, ASEAN governments agreed to push towards an ASEAN Economic Community (AEC) by 2020, in recognition of the urgent need to effectively implement existing agreements and to deepen economic integration to respond to the challenges of globalisation and the rise of China and India. The AEC will be a single production base and market, with free movement of goods, services, investment, capital and skilled labour. It remains to be seen whether ASEAN has the political will to implement its AEC agreements. The AEC action plan has 4 components.

- Build on current initiatives, clear time lines are specified for removal of non-tariff barriers to trade, and harmonization of product standards and technical regulations, including completion of mutual recognition arrangements for priority sectors. Reflecting that not all 10 member states are willing and able to move at the same pace, a pragmatic "2+X" approach is adopted to enable any two or more countries to move ahead first and cooperate on specific sectors.
- "Fast track" integration in priority sectors through a vertical approach, by coordinating all the necessary measures for integration such as zero tariffs, rapid customs clearance, and harmonization of product standards and technical regulations. The 11 priority sectors identified on the basis of comparative advantage in natural resource endowments, labour skills, and cost competitiveness and value added contribution are electronics, e-ASEAN, healthcare, wood-based products, automotives, rubber-based products, textiles and apparel, agro-based products, fisheries, air travel and tourism.
- Strengthen ASEAN institutions, streamline decision-making and ensure effective implementation of its commitments. Institutional changes include the setting up of a legally-binding dispute settlement mechanism, the setting up of the ASEAN Consultation to Solve Trade and Investment Issues to help companies operating across ASEAN cut red tape and resolve their problems, and designating a Minister in each country with overall responsibility for ASEAN economic cooperation.
- Older ASEAN members (ASEAN-6) to continue to help the newer CLMV members in capacity building and narrow the development gap.

The ASEAN+China FTA creates a huge economic area of 1.7 billion people, GNP of over US$2 trillion and external trade of over US$1.2 trillion. The trade in goods agreement has been signed, with tariff reductions on goods started in January 2005 and will be completed by 2010 for ASEAN-6 and China, and by 2015 for the less developed CLMV countries. Negotiations on trade in services are ongoing. Significant features of the ASEAN+China agreement is the "early harvest programme" covering trade liberalization in agricultural products; extension by China of MFN status to low income non-WTO Laos and Cambodia; and offer by China of development and technical assistance to the less developed ASEAN economies.

The ASEAN+Japan Framework Agreement was signed in October 2003 and negotiations on trade in goods and in services are ongoing. Significant features include special and differential treatment accorded by Japan, flexibility for sensitive sectors of ASEAN and Japan, technical assistance and capacity building for the less developed ASEAN members. Liberalization of agricultural trade is proving a major stumbling block. Japan has already signed and implemented a bilateral agreement with Singapore and is currently negotiating bilateral agreements with a number of other ASEAN countries.

There is growing political and economic interest in an East Asian FTA or East Asian economic community. An East Asia FTA comprising of ASEAN+3 (China, Japan, South Korea) will have a population of nearly 2 billion, the largest regional grouping in the world. However, the aggregate GNP of East Asia (US$6.7 trillion in 2001) would still be substantially below that of NAFTA or an expanded EU. Realization of an East Asian FTA or economic community faces a number of political and economic challenges.

- Political challenges: East Asian states jealously guard their national sovereignty. Mistrusts arising from history and from emerging economic and political rivalry in the region have to be overcome. For countries that see a continuing strong need for the US security umbrella, there would be hesitation in forming an East Asian bloc that erodes relations with the US.
- Economic challenges: Not all countries in the region perceive an East Asian FTA or economic community as absolutely necessary for national economic growth and prosperity, notwithstanding the growing intra-regional economic ties. There are still strong linkages to North America, Europe and Australia-New Zealand for trade, investments, finance and technology. The wide differences in development levels and economic competencies pose obstacles to liberalization of intra-regional movement of goods, services, investments and people. Countries would want to open up at different paces and exclude different sensitive sectors and products.

4. Financial stability

4.1 International Financial Instability as a "public bad"

Financial stability is a global public good because of the tendency for financial turbulence to spill across borders. As with all public goods, there is a free-rider problem and a danger of under-provision. This is manifested in the series of contagious financial crises in the 1990s, including the East Asian financial crisis of 1997-98. In many cases the costs have been high. The result has been a major effort on the part of national governments and multilateral organizations to better organize and coordinate efforts to resolve and prevent future financial crises. Eichengreen (2004) distinguished four categories of explanation of financial instability around the world.

- ***Unsustainable macroeconomic policies:*** In this view, macroeconomic imbalances are the fundamental cause of crises, although the proximate triggers may be contagion effects or imprudently low levels of foreign reserves. Countries experience currency crises because they run inconsistent and unsustainable public policies. Expansionary monetary and fiscal policies are inconsistent with currency pegs. Banking crises erupt because governments treat banks as a captive market for the public debs they issue to finance budget deficits. The central bank may lack a clear mandate and adequate independence. Instability of the political system may encourage leaders to spend and borrow freely without worrying about the inter-temporal consistency of their fiscal plans. Eichengreen points to the need for stronger national policy-making processes as a fundamental prerequisite for financial stability.
- ***Fragile financial systems:*** Some financial crises in the 1990s were not obviously rooted in macroeconomic imbalances. In the East Asian crisis, financial weaknesses seemed to play a larger role. Balance-sheet vulnerabilities put banks and non-bank financial institutions at risk when confidence ebbed and capital flight takes place. Currency mismatches is a key source of vulnerability, when banks have assets in local currency but liabilities in dollars. Even if banks lend in dollars, their clients, who have incomes in local currency but debts in dollars, will be thrust into bankruptcy if the local currency declines. Eichengreen emphasizes vigorous prudential regulation and supervision to prevent financial instability. Governments should resist using banks as instruments of development policy and an independent central bank or regulatory agency should be responsible for supervision and regulation. Special attention should be paid to limiting currency mismatches on bank and corporate balance sheets.
- ***Institutional weaknesses***: The root cause is weak corporate and public sector governance leading to excessive private-sector risk-taking. Bank and corporate executives lack accountability to shareholders. Governments may be reluctant to distance themselves from financial institutions and may deny regulatory agencies the autonomy needed for their effective operation. Macro policies limiting exchange rate flexibility reduce the

incentive for businesses to hedge currency exposures. Eichengreen emphasizes strengthening shareholder and creditor rights, improve corporate governance and financial transparency, and place clear and credible limits on the official safety net protecting financial institutions and markets.

- ***Flaws in the structure of international financial markets:*** This view links financial instability to the structure and operation of the international financial system. It emphasizes the pervasiveness of asymmetric information, which encourages herding by investors and gives rise to sudden capital flow stops and reversals independent of conditions in the crisis- economies. A related interpretation suggests that developing countries are vulnerable to crises because of the reluctance of international investors to hold debt securities denominated in emerging-market currencies, leading to currency mismatches on their balance sheets. Eichengreen suggests that limiting financial instability requires an international initiative to enhance the ability of emerging markets to borrow in their own currency or to eliminate the currency-mismatch problem in other ways.

4.2 The East Asian Financial Crisis

The Crisis started in Thailand in July 1997. A trigger came when the Thai government yielded to the repeated attacks against the Thai baht and abandoned the currency peg on 2 July. Contagion spread quickly from Thailand to Indonesia, Malaysia, Philippines, South Korea (Crisis-5 economies), causing a sudden, huge outflow of capital and a simultaneous fall in asset prices. Contagion effects on other East Asian economies were less. The Crisis affected all countries in the region, but more particularly there were sharp economic contractions in several countries in 1998 --- with the Indonesian economy plunging 13.2%, followed by Thailand (-10.8%), Malaysia (-7.4%), South Korea (-5.3%), Hong Kong (-5.3%) and the Philippines (-0.6%). Governments were faced with the heavy burden of fiscal bail-outs and reconstructing the financial and corporate sectors, as well as with pump-priming the economies. There was marked reduction of urban wealth due to huge losses incurred by plunging real estate and stock markets, banking collapses and corporate failures. There were sharp retrenchments and rising unemployment and falling wages of workers. In both urban and rural sectors, poverty incidence increased and exposed the inadequacy of social safety nets in East Asia.[238]

The Crisis has generated a voluminous literature on the causes, implications, lessons and cures. Initial views were deeply divided on the primary causes (whether domestic or international), the appropriate policy responses (whether the financial orthodoxy of the IMF or others), the lessons learnt, and ways to prevent a recurrence (domestic reform versus reform of the global financial architecture). A consensus of views has since emerged. Overall, there was a deterioration of macroeconomic fundamentals, while massive short term capital flows, pegged exchange rates, and weak domestic financial systems rendered these economies vulnerable to financial panics. Poor policy prescriptions and poor public sector and corporate governance aggravated and delayed the recovery.

- ***Weakening macroeconomic fundamentals***: From the early 1990s macroeconomic fundamentals were eroding, with slowdown in exports, rising current account deficits and ratios, large capital inflows with rising proportion of volatile short term loans and portfolio investment rather than FDI, appreciating real exchange rates, rising external debts, and rising non-performing loans of financial institutions. Large capital inflows became a critical policy issue for macroeconomic management. There were also specific factors at play --- in South Korea, Singapore, Malaysia and Thailand, industrial production and exports were affected by the cyclical downturn in the global electronics industry, while in Indonesia and the Philippines, food production was affected by the El Nino drought. There were also asset bubbles in real estate and the stock market, and serious excess capacity in several industries.

---

[238] For a more extensive discussion on the social consequences, see Chia (2005).

- ***Volatile short-term capital flows***: From the early 1990s, there were massive short-term capital inflows, in the form of private sector commercial bank borrowings and portfolio investments, followed by sharp reversals which triggered the Crisis in 1997.[239] The inward surge was in response to the region's rapid economic growth, capital account liberalization, exchange rate pegs, and domestic financial market liberalization. Table 6 shows major trends in total capital inflows and reserves of the Crisis-5 countries and China for 1994-2002. The Crisis-5 countries had become increasingly dependent on portfolio investment and other short-term capital inflows. These funds exceeded the levels of official foreign reserves and were largely unhedged against exchange rate risks. The pegged exchange rate had provided an implicit government guarantee against an exchange rate risk, and spurred domestic borrowers to access cheaper international funds. The huge capital inflows contributed to overvalued real exchange rates, asset bubbles in real estate and stock market, over-investment in productive capacity, and falling quality of investment projects. Short-term debt was used to finance longer-term investments, resulting in risky maturity mismatch. Government efforts to defend the exchange rate in the wake of funds outflows proved costly and futile. The depletion of reserves and currency devaluation triggered a financial panic among creditors and investors. The sharp capital outflow resulted in macroeconomic collapse, with soaring interest rates and inflation, plunging stock market and real estate prices, and sharp economic downturns. China did not succumb to the financial crisis as the predominant type of capital inflow into China has been direct investment; it retained capital controls and hence was not deeply integrated into global financial markets; and its large foreign reserves also provided a sizeable war chest to defend its currency against speculators.
- ***Domestic financial systems*****:** The Crisis highlighted flaws in the financial systems of many East Asian economies, with inadequate prudential regulations and supervision, poor reporting and accounting standards, lack of reliable and timely financial data, poor corporate governance, and high exposure to real estates and stock markets. Banking systems were unable to absorb the capital inflows and direct them to efficient users. Non-performing loans escalated and insolvency became a serious problem.
- ***Inappropriate policy responses****:* The Crisis was prolonged and aggravated by inappropriate and inadequate responses on the part of both national governments and regional and international financial institutions. On hindsight, governments should have been more careful in opening their capital accounts and managing their financial market liberalizations. With massive volatile short term capital movements, maintaining the currency peg proved misguided, draining foreign reserves and contributing to financial panic. Malaysia undertook unilateral reforms and capital controls, while the other Crisis-5 countries accepted the IMF rescue packages. Critics argued that IMF conditionalities were misguided and ignorant of local conditions.[240] Initially, the IMF applied its standard prescription of fiscal and monetary restraint, making no distinction between the East Asian Crisis caused by external borrowings of the private sector and the more orthodox financial crises elsewhere caused by profligate public sectors. IMF conditionalities also included many structural and institutional reforms which delayed the political willingness of governments to accept the rescue packages and led to public protests in South Korea, Thailand and Indonesia.[241] And as the real economy deteriorated alarmingly, the IMF had to loosen its stringent monetary and fiscal targets.

4.3 Post-Crisis Financial Developments

[239] In the 6 quarters to the onset of the Crisis in July 1997, capital inflows into South Korea, Indonesia, Philippines and Thailand (Crisis-4) totalled US$86.8 billion, while in the subsequent 6 quarters, there was a huge outflow of US$77.9 billion.

[240] See for example, Woo 1999, and Stiglitz 2002.

[241] Critics have argued that these programs, particularly those constructed during the Asian crisis, have carried too many detailed conditions and have focused disproportionately on structural objectives rather than on the macroeconomic issues that are the IMF's core mandate.

An immediate lesson from the Crisis for East Asian economies was to question the benefits of portfolio capital flows, and the risks posed by rapid capital account and financial market liberalization without having put in place adequate regulatory regimes. For the countries that have not fully opened up their capital accounts and liberalized their financial markets, namely the transition economies of China and CLMV, policymakers adopted a more cautious liberalization approach. At the height of the Crisis, Malaysia acted to impose capital controls on short-term outflows and pegged the Malaysian ringgit to the US dollar. The Malaysian action appeared effective in stabilizing its financial market. It generated an active academic and policy debate on the role and efficacy of capital controls.

A voluminous literature grew on future crisis prevention. Eichengreen (2004) emphasizes the need to strengthen institutional procedures for formulating fiscal and monetary policies; encourage emerging markets to pursue alternatives to formal and covert exchange rate pegs; develop better methodologies for determining the optimal level of reserves; strengthen multilateral surveillance; improve prudential supervision and regulation; enhance shareholder and creditor rights and the transparency of financial markets as a way of improving the governance of corporate financial affairs; strengthen financial market infrastructure; and amend the Basel capital standards to allow capital requirements to fall in periods when there is a flight to quality and rise in periods when international financial markets are unusually liquid as a way of limiting the pro-cyclical nature of financial flows to emerging markets. These involve measures and actions at the national, global, and regional levels.

National initiatives have focused on establishing sound domestic policies and robust domestic financial institutions. Financial sector reform was a key component of the IMF rescue programmes. Across the region, non-performing loans (NPLs) have been on a down-trend; banking systems have been strengthened through re-capitalization and transfer of their NPLs to asset management companies; capital adequacy has risen above the Basle guidelines; prudential regulations have been tightened and supervision standards improved.

At the global level, at the height of the Crisis, much hope was pinned on reforms in the international financial architecture to reduce the systemic risks generated by globalized financial markets. The June 1999 Report of G7 Finance Ministers made a 6-point comprehensive set of recommendations to promote global financial stability, including strengthening and reforming the international financial institutions (notably the IMF) and arrangements; and strengthening financial regulation in industrial countries, particularly for operation of highly leveraged institutions and offshore financial centres. Adequacy of financing facilities for East Asia has been greatly improved with the enhanced IMF facilities, including the Supplemental Reserve Facility (SRF), Contingency Credit Line (CCL), and increased IMF quotas. The IMF has also moved to improve its ability to assess the economic and financial vulnerabilities of member countries, as part of a broader initiative to strengthen its surveillance efforts. The role of conditionality in IMF programmes has been the subject of ongoing debate ---the IMF has said it is moving to streamline and focus conditionality, particularly with respect to structural measures, and to provide greater clarity as to why conditions in certain areas are included in or excluded from the programmes.

There have also been several initiatives at the East Asian regional level to reinforce global efforts and promote regional monetary and financial cooperation. These include the EMEAP (the Executives' Meeting of East Asia Pacific Central Banks), which has established a working group on payment systems and focused its discussions on the development of financial market infrastructure; the ASEAN+3 has established a Study Group on Capital Market Development and Cooperation; and the Asia Cooperation Dialogue has set up a Working Group on Financial Cooperation to establish guidelines for the development of Asian bond markets. Regional initiatives are mainly in the areas of enhancing information exchange and surveillance and improving resource provision, the latter including promoting the Asian bond market.

Enhancing information exchange and surveillance: The Manila Framework Group established in November 1997 brings together finance ministries and central bankers of 14 countries[242] together with the IMF, World Bank, ADB and BIS. To build capacity of member countries in undertaking surveillance-related matters, ADB conducted training programmes on regional monitoring for ASEAN finance and central bank officials. The ASEAN+3 grouping adopted the two-pronged Chiang Mai Initiative (CMI) in 2000, aimed at fostering regional financial stability and resilience and building on the earlier 1996-97 agreements among ASEAN economies. One prong of the CMI is the regional monitoring and surveillance of macroeconomic and financial fundamentals and policies of member economies. Critics argue that given the ASEAN tradition of "non-interference in domestic affairs", this peer pressure surveillance mechanism may not work effectively and cannot replace the IMF surveillance mechanisms.

Improving resource allocation: The second prong of the CMI comprises a network of bilateral swap and repurchase agreement facilities to assist beleaguered central banks facing liquidity crunches. Since August 2003, 16 bilateral swap arrangements involving US$36.5 billion have been concluded. A review of the CMI was initiated in May 2004 and in May 2005 it was agreed to double the size of the CMI and to multilateralize its control.[243]

Promoting the Asian bond market: In the post-Crisis period, there is less reliance on bank-centered financing that had contributed to the currency and maturity mismatches during the Crisis.[244] Efforts intensified to develop regional bond markets, to further strengthen the financial systems by better utilizing the aggregate savings in the region and minimizing the risk of maturity and currency mismatches.

- The EMEAP[245] announced the launch of the Asian Bond Fund (ABF) in June 2003 to perform a catalytic role by initially making investments in both Asian sovereign and quasi-sovereign bonds issued by EMEAP member countries (other than Japan, Australia, New Zealand). The ABFI has an initial size of about $1 billion. Following on the successful launch of the first fund, a second ABF was launched in December 2004 and will invest in local currency denominated Asian bonds.
- The ASEAN+3 Asian Bond Market Initiative (ABMI) has the objective to develop efficient bond markets in Asia which would enable the private and public sectors to raise and invest long term capital without currency and maturity risks. ABMI emphasizes need for joint and comprehensive set of actions by ASEAN+3 countries in facilitating access to the market by a wide variety of issuers, and creating an environment conducive to developing bond markets. Concrete achievements since then --- issuance of ringgit denominated bonds by the ADB and IFC in Malaysia in November/December 2004; issuance of cross-country primary collateralized bond obligations (CBOs, named Pan-Asia Bond) by Korea and Japan in December 2004; provision of credit guarantees by JBIC for bond issued by an Asian multinational company in Thailand in June 2004; launch of the Asian Bonds Online Website in May 2004. In addition, various studies, research projects and capacity building programmes for the development and

---

[242] The 14 economies are China, Japan, South Korea, Hong Kong, the ASEAN-6, Australia, New Zealand, Canada and the United States.

[243] The Asian Monetary Fund initiative was proposed by Japan in August/September 1997, after the Thai financial crisis outbreak. It proposed pooling foreign reserves for balance of payments support of crisis countries. The initiative never took off as it faced opposition from the US, IMF and China because it would duplicate the efforts of the IMF and would create a moral hazard.

[244] The maturity mismatch was the consequence of short-term borrowings financing long-term investments. The practice involved a serious currency mismatch without a proper currency hedging arrangement. The currency mismatch was implicitly protected by overvalued exchange rates, which were the result of foreign exchange misalignments.

[245] The EMEAP is a forum of 11 central banks and monetary authorities in East Asia and Pacific region set up to strengthen cooperation among members (ASEAN+3, Australia, New Zealand.

harmonization of bond markets in the region have been concurrently undertaken in each of the 6 working groups. Driven by the ABMI and continued demand in the market, East Asian local currency bond markets have been growing rapidly.

- The Asian Cooperation Dialogue (ACD)[246] established in 2002 with a membership of 17 countries in the Asian region, is to perform technical work undertaken by other forums and echoing it out to secure political support as well as to carry forward momentum at the level of political leaders.

5. International knowledge and technology transfer

5.1 Knowledge and Technology Acquisition and Diffusion in East Asia

Knowledge creation and dissemination have attributes of global public goods. The main policy issues are under-provision and unequal and inadequate access by developing countries. The developed countries have both the financial and technical capabilities to generate new knowledge, but there is a marked tendency for them to pursue knowledge that primarily furthers their own interests and targets their concerns. Some advanced developing countries, including those in East Asia, are also increasingly engaged in knowledge creation. Most developing economies, however, have limited financial and technical capacity to conduct research. For them, the challenge is the adaptation of modern technologies available elsewhere. To take advantage of the global knowledge created, they must first acquire complementary national public goods, including improving educational attainment. A key challenge for both developed and developing economies is to ensure knowledge is disseminated to the latter at an affordable price, while protecting the intellectual property rights of the former.

Development and management and organizational knowhow

Perhaps more crucial than technical knowhow, developing countries have to be equipped with development and managerial and organizational knowhow. These are more readily available from international and regional development institutions such as the World Bank, IMF, OECD, and Asian Development Bank. The role of these institutions in the supply of development advice and assistance are well documented in the publications of these organizations. Whether they have delivered sound and effective advice, according to conditions and circumstances of individual countries, is a matter of debate.

Another source of development "advice" is learning from the lessons and best practices of the more advanced economies in East Asia itself. There is a regional demonstration effect of economic success. Successful ideas and measures adopted by one country are often copied by neighbouring countries. The East Asian development model, as initially practiced by Japan and the Asian NIEs, have been closely observed and adapted by Southeast Asian economies. Japan through its ODA and MNC investments have contributed much to the development of Southeast Asia through policy advice and capacity building in the areas of macroeconomic and financial management, human resource and infrastructure development, and development of small and medium enterprises. The ASEAN countries have also developed a close network of cooperation among its various government agencies and government officials. The Asian Development Bank has been leading with development advice and development assistance for the Mekong Basin countries (which include Cambodia, Laos, and Vietnam).

Role of foreign direct investment (FDI) and technology transfer

While knowledge is a global public good, its creation and dissemination in East Asia are largely through private market-oriented channels. FDI inflows and capital goods imports are major mechanisms for technology transfer in East Asia.

---

[246] China, Japan, South Korea, ASEAN-9 (that is, excluding Myanmar), Bahrain, Qatar, Bangladesh, India, and Pakistan.

Foreign technologies are used effectively when combined with high domestic technological capability, in which high educational attainment plays an important role. FDI involves an internalized mode of intra-firm technology transfer between MNCs and their overseas affiliates. FDI reduces the need for building domestic technological capabilities, as it often provides access to state-of-the-art proprietary technologies along with established brand names, entry into global markets, and training. FDI is thus a very effective way to transfer and operationalize new technologies for export competitiveness. An alternative to FDI is the externalized mode of technology transfer through licensing, subcontracting, and OEM arrangements between foreign MNCs and local firms. Here the emphasis is on domestic technological effort that is building R&D capabilities and adaptation and copying of the new technology. Externalized transfers require considerable local investment in capability development; may not allow access to valuable proprietory technologies, and need separate build-up of export marketing capabilities. While it requires greater domestic effort, it also yields greater learning benefits. With industrial deepening, countries have to undertake more advanced technological functions such as design, development, and research. Internalized modes may not lead to the same pace of upgrading, as MNCs tend to keep advanced technology effort centralized in a few developed countries.

FDI by MNCs link developing economies and enterprises to global and regional value chains and production networks. The microelectronics revolution, advances in telecommunications and transportation technologies, together with falling trade and investment barriers have substantially reduced the trade costs and increased the mobility of capital and technology. This has led to fragmentation of production processes and value chains across national borders. It has contributed to the rapid growth of intra-industry and intra-product specialization as manifested in the rising share of trade in parts and components in total world trade. However, gaining access to production networks has not been widespread across the developing world. Countries have to succeed in attracting MNC investments and have the technical capabilities to participate in the value chain.

With the large presence of foreign MNCs in most East Asian economies, their management practices and business cultures have been emulated by the local private sectors.

East Asian technology strategies

The more advanced economies of East Asia have well articulated technology policies, including technology creation, while the less advanced economies focus mainly on technology transfers from abroad. In South Korea, Taiwan and Hong Kong, domestic firms have been the main agents of technology development and transfer, whereas in China, Singapore, Malaysia, Thailand, and Indonesia, foreign MNCs have been the main agents. Four variants in technology policies among the East Asian countries can be discerned.[247]

- First, a strategy of restricting FDI entry and building-up of domestic enterprises, including their technological capabilities, and investing heavily in development of domestic skills and capabilities. This strategy is typified by South Korea. Technology inflows are mainly via licensing, capital goods imports and OEM contracts. Domestic capabilities were essential in assimilating foreign technology in these externalized forms and were carefully nurtured through an industrial policy that protected the domestic market and favoured the creation and growth of large firms (chaebols) and their export-orientation, and human resource development. The government channelled bank funds to target industries and emphasized education and training and domestic R& D efforts. Korea has been highly successful in patenting in the past decade.[248] The number of Korean patents registered in the US grew quickly in late 1990s, propelling Korea to 6th in the US patent ranking. Korea's strengthened IPR regime played a role, but so did industrial upgrading, a big push in R&D from chaebols, and government's selective

[247] See Lall (2003).

[248] See for example, Luthria and Maskus (2003) and Linsu Kim (2003).

targeting of the semiconductor/electronics industry, where Korea has emerged as a leading innovator worldwide. The Korean experience shows the importance of creating a competitive domestic environment and export orientation of domestic enterprises to become efficient and competitive. The protective aspects of Korean trade and industrial policy are not readily replicable by late-comers because of changes in international rules and disciplines governing trade, foreign investment and intellectual property. Also, since the Asian financial crisis, as part of financial and corporate restructuring, South Korea has liberalized its FDI policy.

- Second, a strategy of heavy FDI dependence, with policies to induce the foreign MNCs to upgrade and deepen into advanced activities and functions. This approach is exemplified by Singapore. The city-state embarked on export-oriented industrialization in the 1960s with heavy dependence on FDI. In the initial years, technology spillovers by MNCs were limited, as most FDI were in wholly-foreign-owned enterprises. More technology transfer took place when the Singapore Economic Development Board promoted a local supplying industry to produce parts, components, supplies and services for the MNC affiliates. Through various measures, MNCs were incentivized to upgrade their operations in Singapore, including undertaking R&D. Incentives include providing an enabling infrastructure, fiscal incentives, joint ventures with government-funded research institutes and universities, provision of scientific and technological manpower through the polytechnics and universities, and strong protection of intellectual property rights. In the past two decades the Singapore government has increasingly invested in R&D facilities and trained R&D manpower, with the establishment of a National Science and Technology Board (NSTB)[249] and launching of five-year National Technology Plans. Local companies are beginning to invest more in innovation, while an increasing number of MNCs are investing in R&D activities and upgrading manufacturing technologies in Singapore. The Singapore national innovation system is being transformed from one emphasizing assimilation and diffusion of foreign technology through MNCs to one promoting indigenous innovation capabilities and local high-tech start-ups. In 2003, total R &D expenditures reached 2.15% of GDP, with the private sector accounting for 60.8% and the public sector (government, higher education, and public research institutes) accounting for the remaining 39.2%.[250] The Singapore experience highlights the alternative path for small and open economies and the important role of the government in fostering technology development.
- Third, a strategy of heavy FDI dependence without a complementary industrial policy to deepen the technology structure. This is exemplified by the Philippines and Thailand**.** These economies rely heavily on technology imports and have invested relatively little in domestic R&D effort or in training of scientific and technological manpower. Although their export structures have become technologically sophisticated, with the dominance of electrical, electronics and automotive exports, the lack of an indigenous technological base makes sequential industrial upgrading an issue.
- Fourth, the large economy of China is pursuing a strategy with both significant domestic R&D efforts as well as sizeable inflows of FDI. Yang Yao (2003) argues however, that in China, R&D by public research institutes has no significant impact on enterprise technological levels and private enterprises (both domestic and foreign) are more efficient than state enterprises. China has moved from dependence on technology licensing to FDI dependence in the 1990s. Foreign MNCs are producing an ever-widening range of technology-intensive products for the world market. Yang reports that foreign firms seem to be reluctant to transfer state-of-the-art technology but they have beneficial spillover effects by training personnel and stimulating competition. However, the reluctance to transfer technology could be associated with China's laxed implementation of intellectual property protection.

---

[249] Renamed the Agency for Science, Technology and Research.
[250] Agency for Science, Technology and Research (2004).

There has been considerable policy convergence among East Asian economies since the Asian financial crisis, leading towards a "middle path" approach. Countries with strong indigenous technological bases are realizing that innovation is becoming expensive and specialized and production is being increasingly organized in internalized MNC systems spanning several countries. It becomes necessary to form alliances with technology leaders and participate more fully in global production systems. At the same time, countries relying heavily on internalized modes are seeing the need for greater domestic capability development, deepening local content, skills and technology activity to sustain growth and competitiveness.

The more advanced East Asian economies (including parts of China) are pushing towards a knowledge-based economy, in which innovation and technology becomes the dominant source of economic growth. Hence R&D spending is high and rising and tertiary education institutions are churning out growing numbers of engineers, technologists and scientists. Countries such as South Korea, Taiwan and China are also benefiting from the reverse brain drain, as an increasing number of their nationals trained as scientists, technologists and managers abroad return home to exploit new economic opportunities. Countries are also investing heavily in ICT infrastructure and expertise. ICT also offers the less developed economies the chance to leapfrog technologies. They can access the ICT already produced by the advanced countries. It also enables developing countries' skilled but low-wage labour to participate in MNC outsourcing. However, to narrow the digital divide, the less developed countries have to invest in ICT infrastructure and human skills.

5.2 Intellectual Property Protection and TRIPS

There are several international organizations and conventions concerned with various categories of intellectual property and their protection. This paper focuses only on the WTO's Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), as it is the most comprehensive agreement and the issue of intellectual property rights (IPR) has entered into the mainstream of global trade discussions.

The TRIPS Agreement

The TRIPS Agreement came into force in January 1995 and attempts to bring IPR under common international rules in the WTO, and set minimum levels of protection to which each member country has to commit. The Agreement provides for norms and standards covering the following areas of intellectual property --- copyrights and related rights, trade marks, geographic indications, industrial designs, layout designs of integrated circuits, and protection of undisclosed information (trade secrets), patents, and plant varieties.

The Agreement has special provisions for compliance of developing and least developed countries and economies in transition. Developing countries and economies in transition were given 5 years, from 1995 until 2000, whereas least-developed countries were allowed 11 years, until 2006, to conform to TRIPS. Developed countries complied with their 1996 deadline and developing countries did the same by January 2000. The Doha Ministerial Conference in November 2001 extended exemptions on pharmaceutical patent protection for least developed countries until 2016, while in August 2003, WTO agreed to allow the least developed countries to import generic drugs to treat diseases that are public health hazards.

Innovators versus users

The TRIPS Agreement has led to a contentious debate between developed countries as producers of innovations and developing countries as users.

Strengthened IPR regimes play a role in technology generation, by compensating inventors and creators. Inadequate protection undermines support for local innovation and product introduction, but excessive protection limits access to new technologies by consumers and rivals. In the more advanced Asian NIEs, there is growing interest in stronger IPR regimes as

these countries are increasingly knowledge and technology producers. For the middle income and lower income countries in East Asia, the prime interest is that of users of technology created elsewhere. For lower income countries, there is also strong interest in protecting traditional knowledge and genetic resources and promoting efficient innovation in agriculture and biosciences. Patents are usually of relevance for countries importing or creating cutting-edge technologies and innovations, and are becoming relevant more broadly because the TRIPS agreement mandates stronger patent protection**.** Copyrights have generated great interest in recent years, in areas such as software, publishing, film and music industries. The World Bank[251] notes that in Indonesia, there is potential for expansion in copyright-sensitive industries as rights are improved and successfully enforced, particularly for the software industry, small film industry, and investment in artist development by music recording companies.

The main issue is whether TRIPS can foster the transfer of technology to developing countries. In the Uruguay Round negotiations, industrial countries argued that broader and stronger IPR would foster creativity and innovation on a global scale as well as increase the flow of technology and investment to developing countries. The TRIPS Agreement requires developed country governments to provide incentives for their companies to transfer technology to least developed countries, but the least developed countries want this requirement to be made more effective. However, developing countries claim that far from stimulating knowledge sharing, it is increasingly difficult to get access to technology.

Stiglitz (2005) argues that intellectual property protection is important, but the appropriate IP regime for a developing country is different from that for an advanced industrial country and the TRIPS Agreement failed to recognize this. An IP regime rewards innovators by creating a temporary monopoly power, allowing them to charge far higher prices than they could if there were competition. The monopoly position means that ideas are disseminated and used less than they would be otherwise. The economic rationale for IP is that faster innovation offsets the enormous costs of such inefficiencies, but excessively strong IP rights may actually impede innovation. Stiglitz argues that IP should never have been included in a trade agreement in the first place, as the World Intellectual Property Organization (WIPO) already exists. In October 2004 WIPO agreed to adopt a proposal for the establishment of a development agenda for WIPO. It acknowledges that the current global rules on intellectual property reflect more the interests of the advanced industrial countries rather than the interests of the developing world.

TRIPS and public health: The public goods nature of pharmaceuticals for communicable diseases is obvious. Low income countries in East Asia are particularly concerned over the access and affordability of patented medicines to contain and cure diseases such as HIV/AIDS, malaria, tuberculosis, which are public health hazards. The TRIPS issue is to ensure that patent protection for pharmaceutical products provide incentives for R&D into new medicines and at the same time enabling poor countries to have access to these medicines. The Doha Declaration underscored flexibilities for compulsory licensing and parallel importing, and also agreed to extend the exemptions on pharmaceutical patent protection for least developed countries until 2016. Many believe that the solution lies not in liberalizing IPR on pharmaceuticals but in subsidizing the cost of these pharmaceuticals for poor countries who cannot afford them.

TRIPS and traditional knowledge: The TRIPS agreement is essentially silent on the issues of traditional knowledge. It requires adoption of IPR system for improved plant varieties, but not for resources emanating from essentially biologically processes. More and more innovations in agriculture and pharmaceuticals draw on indigenous traditional knowledge. As some developed countries attempt to patent the products they have developed based on traditional

---

[251] Kathie Krumm and Homi Kharas (2003).

knowledge, developing countries perceive themselves as doubly disadvantaged --- with their indigenous resources being used without compensation and the resulting products coming to them at a higher price as a result of associated patents (Krumm and Kharas 2003). Pharmaceutical companies argue that they should be entitled to a full patent, paying nothing to the developing country from which the traditional knowledge was taken, even though the country preserves the biodiversity without which the drug would never have come to market. Also, some developed countries oppose additional requirements to disclose source of genetic material or traditional knowledge and information on prior informed consent and benefit sharing. Given that about 90% of the world's genetic and traditional knowledge is held in developing countries and roughly an equal percentage of world R&D activity takes place in developed countries, there is obvious scope for a mutually beneficial partnership.

Counterfeiting and IP infringements: While users worry about lack of access to intellectual property, the innovators and owners worry about infringements of IPR. Under the TRIPS Agreement, WTO members are obliged to adopt legislation and to protect creators and inventors of intellectual property, and also to provide adequate administrative and judicial procedures for enforcement. The key problem is that in many countries these laws are not effectively enforced in practice.[252] Lack of effective enforcement could disadvantage developing countries, as it would discourage FDI and transfer of technology,[253] and discourage local IP production.

7. Summary and conclusions

The East Asian region is highly integrated into the global economy through trade, financial flows and technology transfer. This paper has focused on the provision and consumption of international and regional public goods in the areas of trade, finance, and knowledge. Among the world's developing regions, East Asia has the greatest capacity for the provision of national and regional public goods. However, it has limited ability to determine and influence decisions and measures undertaken by global institutions such as the World Bank, IMF, BIS and WTO, and plurilateral institutions such as OECD and G8.

Trade liberalisation and integration

Global trade liberalization through successive rounds of trade negotiations under GATT/WTO and FDI inflows have enabled East Asian economies to successfully pursue national development strategies of export-oriented industrialization and industrial upgrading. Most exports of East Asia were conducted under MFN tariffs. However, even MFN market access was denied China and Cambodia until they became WTO members, and Laos and Vietnam are still suffering from exclusion. Export competitiveness has been achieved in spite of discrimination in the markets of Europe and North America and the lack of preferential treatment akin to those accorded to ACP countries. The only preferential market access was the GSPs; these were important for the Asian NIEs during their early phases of development and are now important only for some less developed East Asian economies. Trade in

[252] Many countries are involved in the chain of counterfeited goods. First, there are the "source countries" in which counterfeits are produced for domestic consumption and for export. Digital piracy takes place through the Internet. Second, there are the "transit countries', which serve as conduits for counterfeits moving across borders. Third, there are "destination countries" where the counterfeits are retailed and consumed.

[253] McKinsey (2005) reports that many MNCs in China are losing the battle to protect their IP. It argues that litigation is not enough. The best companies reduce the chance that competitors will steal their IP, by carefully selecting which products and technologies to sell and manufacture in China. Some companies rushed into the Chinese marrket and share technological and business secrets too readily with partners, which subsequently use the information to become competitors. While most companies implement the necessary security measures such as the use of surveillance equipment or firewalls, to prevent large file transfers, the best companies go further and screen all job candidates for high ethical standards.

agriculture has been hindered by the failure to liberalize agricultural trade in the GATT while trade in textiles and clothing has been constrained by bilateral quotas under the Multi-Fibre Agreement.

With the establishment of the WTO in 1995, there has been a levelling of the field between developed and developing countries. In the years leading up to the Doha Declaration in 2001 there was extensive discussions on developed country proposals to expand the WTO mandate into a number of other areas, including labour standards and the environment.[254] The WTO Ministerial Meeting in Singapore in 1996 introduced the issues of trade and investment, trade and competition, transparency and government procurement, and trade facilitation. Developing countries regarded the Singapore issues as disguised forms of protectionism by developed countries. They did not want a repeat of the problems they encountered in the implementation of the Uruguay Round agreements in 'new' areas, such as customs valuation, TRIPS, SPS and TBT, where they had taken on commitments which were both costly to implement and low in development priority. In the end, only trade facilitation was included in the Doha Round negotiations. The WTO should focus on trade liberalisation and facilitation and other trade-related issues so as not to overburden the agenda and add to conflicts of interest.

With the large and growing membership (150 by 18 December 2005) the WTO has become an unwieldy negotiating forum. The Ministerial Meetings in Seattle, Cancun and Hong Kong highlight the difficulty of the WTO being an institution for the provision of global public goods for all. Many NGOs regard WTO as providing an international public bad and demonstrated violently, often on opposite sides of the fence.[255] The Hong Kong meeting (13-18 December 2005) ended in near failure, with conditional agreements to end export subsidies in agriculture by 2013, cotton subsidies by end-2006, and the package for least developed countries. Trade negotiators face an uphill task to complete the Doha Round in 2006. Developing countries are insistent that this round should deliver on its development promise. This would require more "concessions" from the developed and advanced developing countries in agriculture and non-agricultural market access. However, low income economies also need to open up and undertake necessary economic reforms. Also, trade liberalization in the WTO must be accompanied by capacity building measures to enable low income countries to benefit from better market access. A better coordination with international and regional development agencies such as the World Bank and the Asian Development Bank is called for, so that better market access can be met by appropriate supply responses.

As of end-December 2005, there are 29 outstanding applications for WTO accession, including the East Asian economies of Laos and Vietnam. Most of the applications were made after the establishment of the WTO in 1995 but a number predates that. There are two basic issues on WTO accession. First, there are no standard rules governing accession and the negotiating process has become long and difficult, taking years and years.[256] The practice is

---

[254] Labour standard and environmental issues were dropped completely from the Doha Declaration in view of objections to the protectionist intent of the proposals and the existence of other international organizations dealing specifically with these issues. Under the WTO, countries are permitted to impose trade restrictions in circumstances where this is needed to protect their environmental standards. It is to be noted that labour standards and environment are included in the US-Singapore bilateral FTA agreement.

[255] For example, Korean farmers were dead against agricultural liberalization, but farmers in many developing countries see such liberalisation as an important instrument for moving out of poverty.

[256] Because each accession Working Party takes decisions by consensus, all interested WTO members must be in agreement that their individual concerns have been met and outstanding issues resolved in the course of bilateral and multilateral negotiations. After examining existing trade and legal regimes of the acceding government, the WTO Working Party goes into substantive part of the multilateral negotiations, which includes commitments to observe WTO rules and disciplines upon accession, and transitional periods required to make any legislative or structural changes to implement these

for new members to accept more onerous obligations than earlier accessions, including transition periods for implementing the various agreements, and the use of certain instruments such as subsidies. To ensure a fairer and less onerous process of accession, the WTO should establish clear guidelines regarding the commitments to be sought from countries seeking accession which are linked to their institutional capacity to implement them and to ensure that they are not required to meet more onerous conditions than existing members. Second, the burden of meeting the requirements of accession falls on the acceding governments with little help from the WTO Secretariat. The WTO Secretariat could provide more resources to low income countries to assist them with negotiations and to meet the requirements and conditions of accession.

Difficulties with concluding the Doha Round are giving fresh impetus to the proliferation of regional trading arrangements (RTAs). Views are divided on whether the RTAs support or subvert the WTO. RTAs in East Asia between like-minded partners could lead to faster and deeper dismantling of trade and investment barriers than under the Doha Round. However, to ensure that RTAs do not undermine the multilateral system, there is need to overhaul RTA rules and oversight in the WTO. Issues that need clearer criteria include sectoral comprehensiveness, exclusion lists, transitional periods, rules of origin and product standards and conformance requirements. The WTO needs to be more pro-active in monitoring and evaluating RTAs with approval given only to RTAs that meet minimum standards.

Critics of East Asian RTAs point to their discriminatory nature and their negative consequences for the multilateral trading system. However, it should be noted that discriminatory RTAs did not originate from East Asia and the region has been on the receiving end of discriminatory treatment. And to the extent that RTAs in East Asia are leading to faster and deeper liberalization of trade in goods and services and liberalization and facilitation of investment, they should contribute to the goals of the WTO. Many East Asian RTAs have very wide agenda, incorporating features that have been deadlocked in the WTO because of divergent interests or are beyond current WTO mandates. Regional cooperation and coordination among like-minded countries help to break deadlocks on many sensitive issues in the WTO.

There is danger that countries are rushing into RTAs as part of political diplomacy and without serious prior studies of the pros and cons and effects of specific partnerships. The simultaneous negotiations on the Doha Round and regional, cross-regional, and bilateral RTAs are also putting a severe strain on the negotiating resources of smaller and less developed economies. This calls for careful prior studies on specific RTAs, with technical assistance to be provided by the WTO, ADB or ASEAN Secretariat. These institutions could also provide technical assistance on RTA negotiations. The low income economies of East Asia should not rush to join the bandwagon of bilateral FTAs as they have limited capacity to negotiate and their interests are best served by the special and differential treatment under the WTO.

Another problematic issue arises when individual economies engage in multiple and overlapping cross-regional, regional, and bilateral RTAs resulting in a “spaghetti bowl” effect of different rules of origin and product and standards requirements. This is a cost to business operations --- higher transaction costs of conforming to diverse requirements and inability to exploit economies of scale because of market segmentation. There is also the danger of less than effective implementation, as the business communities struggle to absorb the rapid changes in the trade and investment scene and the legal and business implications of various agreements. Businesses obviously have to “trade off” improved market access and market security that RTAs provide, against the spaghetti bowl effect. This calls for trade negotiators to “streamline and simplify”

---

commitments. At the same time, the applicant government engages in bilateral negotiations with interested Working Party members on concessions and commitments on market access for goods and services and stumbling blocks are usually experienced in negotiations with the large developed economies.

the rules of origin and product and standards requirements of various regional and bilateral FTAs. The spaghetti bowl effect can also be ameliorated by the consolidation of various regional and bilateral RTAs into a region-wide RTA.

An East Asian FTA is currently under study. However, longstanding political mistrusts and emerging economic rivalry between Japan and China are serious obstacles to its early realisation. Whatever the form and timeframe of an East Asia FTA or economic community, it is critical that it should not be an inward-looking bloc. Regionalism should complement and not substitute for multilateralism. East Asia has gained much and will continue to gain much from an open global trading system and should maintain a strong commitment to the WTO process and to the Doha Development Round. Also, for some time to come, East Asia will need the US security umbrella as well as North American and European markets and technologies. Trans-Pacific as well as Asia-Europe partnerships should be further developed, to prevent the world splintering into three unstable and competing economic blocs.

Financial stability

While trade globalisation has brought much benefit to East Asia, the risks of financial globalisation have been highlighted by the regional financial crisis of 1997-98. The East Asian region has paid a heavy price in terms of collapse of financial and corporate sectors and asset prices, severe negative economic growth, and sharp rise in unemployment and poverty incidence. The region is still recovering from the after-effects of the Crisis.

For countries that have not fully liberalised their financial sectors and capital accounts, the regional financial crisis has taught them to be more cautious to ensure that appropriate regulatory regimes are in place and financial institutions have been strengthened. For the crisis countries and other East Asian economies, there has been considerable progress in efforts at improving macroeconomic management, strengthening of financial sectors and improving corporate and financial governance. However, there is serious danger of slackening of efforts and even backsliding once their economies recover their growth trajectory. Also, the fiscal positions of several countries have deteriorated as governments pump prime to boost domestic demand and regain the growth path. These governments need to rein in their spending, as a sound fiscal position is as important as a healthy financial sector in preventing financial crises. Public sector and corporate governance requires continuing political commitment and vigilance. The ASEAN regional review and surveillance mechanism should be extended to cover other East Asian economies and member governments should have the political will to ensure that the mechanism should serve its objective and not just serve as "window dressing".

Multilateral institutions, as well as regional development banks and OECD countries could also improve the capacity of East Asian economies to improve their macroeconomic performance. The IMF has established codes of conduct on monetary and fiscal policies and sustainable debt levels. The IMF and other international groups as well as the OECD conduct multilateral surveillance of macroeconomic policies to provide early warnings of potentially dangerous imbalances. Multilateral surveillance should be made more forthright. At the same time, the multilateral surveillance requires understanding of the particular circumstances of developing countries. Multilateral institutions could also help strengthen the financial infrastructure of East Asian developing economies. There have been both global and regional efforts to encourage the adoption of internationally recognized accounting standards, the practice of comprehensive financial disclosure, and the construction of more efficient and predictable payment and settlement systems.

There is continuing debate on the precise circumstances under which the IMF should provide financial assistance to a crisis country. Eichengreen's 3 options for extending assistance for crisis countries deserve support. First, simply state that the IMF has considerable flexibility under its existing facilities to provide financial support for countries with strong policies that

are facing balance of payments pressures. Second, modify precautionary arrangements to provide more up-front financial assistance for countries that negotiate such arrangements --- create a new instrument, an Enhanced Monitoring Facility in the IMF, that would combine more intensive monitoring with more immediate financial assistance than is typically available under precautionary arrangements. Finally, in view of the limited appetite of international investors for debt securities denominated in emerging market currencies, the World Bank and other international financial institutions could help to create the necessary demand by issuing debt securities denominated in an inflation-indexed basket of currencies of emerging countries.

On exchange rate regimes, there is need to move away from the fixed and pegged exchange rates towards more flexible regimes. Some currencies were forced to unpeg following the massive capital outflows during the Crisis, but China, Malaysia and Hong Kong maintained their pegs to the US dollar. Under tremendous US pressure, China moved to unpeg the Chinese yuan from the US dollar and adopted a currency basket in August 2005. Malaysia also proceeded to unpeg the ringgit. Pegging to a basket of currencies is preferable to a free float or pegging to a single currency. Non-official discussions on regional monetary and financial cooperation have focused on a common currency basket and a single currency area in East Asia. However, such arrangements are premature given the diversity of economies and economic systems and the current lack of macro-economic policy coordination.

East Asia's reserves have surged to US$2.5 trillion or about two-thirds of the world total. There is a growing debate on the holding of such large foreign exchange reserves and there is no consensus on what is the optimal level for each country. The Asian Development Bank has warned that the reserves are well beyond "optimal" levels and declared it is "basically a reflection of a lack of imagination, a lack of innovativeness and to some extent a lack of self-confidence".[257] Most of the reserves are held in US dollar denominated assets, and the yield is much lower than the potential return they could earn on real investments in their economies. Defenders argue that large reserves are necessary to pre-empt future speculative capital flows and financial crises and opportunities for investment in low risk financial assets are limited within the region. However, there is less need for each country to hold large reserves if East Asian countries can pool their reserves to meet speculative and contingency requirements. There is need to expand the present bilateral swap arrangements among monetary authorities in East Asia. Further development of the Asian bond market to fund the region's infrastructural needs will also provide alternatives to investing the region's reserves in US financial assets.

There is danger of a growing disconnect between the IMF and East Asia. The negative experiences that some countries had with the IMF during the Crisis and the huge foreign exchange reserves that has been accumulated in recent years have encouraged some in East Asia to feel that IMF help is no longer needed. Japan has also been pressing for stronger Asian "ownership" of the IMF through increasing the size of the quotas granted to Asia, in order to accord more closely with the weight that these nations now represent in the global economy. Giving East Asia more weight and voice in the IMF and the World Bank, in recognition of the region's growing economic importance in the global economy, will help reduce the perception that these institutions are "Washington-dominated". As things stand, regional institutions and efforts will remain important in the provision of public goods in East Asia in the near term.

Knowledge acquisition and transfer

Technical knowledge and innovation are still largely generated by the advanced industrial countries. While knowledge is a global public good, a large part of pharmaceutical knowhow and industrial knowhow are held privately and available at prices unaffordable to many

[257] ADB Chief Economist, Ifzal Ali, speaking at an annual meeting of ADB in Istanbul, as reported in the International Herald Tribune Business on 4 May 2005.

developing countries. The TRIPS Agreement provides for protection of various types of intellectual property so as to encourage further production. It is also supposed to encourage technology transfers to developing countries, but it has largely failed to do so. Much of industrial technology is owned by MNCs and East Asian developing countries could only gain access via foreign direct investment. The more advanced East Asian developing countries are also building R&D infrastructure and manpower to adopt and adapt foreign technology and to engage in domestic R&D. Through the MNCs, East Asian countries are also gaining access to management knowhow and best practices. Development knowhow is more in the public domain. East Asian developing countries have adopted development strategies and best practices from the aid and advisory programmes of international and regional institutions. There is also the positive demonstration effect from the economic success of Japan and the Asian NIEs. Southeast Asian countries have been able to benefit from the development experiences and lessons of neighbouring countries ahead of them.

On the issue of intellectual property rights, fake branded goods, CDs, DVDs and software are readily available in most East Asian countries. Some IP infringements have negative externalities as they are hazardous to health and safety. Counterfeit pharmaceuticals and cosmetics and parts of machinery and equipment that are substandard could be life-threatening. Money earned by counterfeiters and traders in counterfeit goods have been involved in money laundering, drug trafficking and even terrorist activities. There is increasing collaboration between owners and distributors of intellectual property and local law enforcement agencies. More needs to be done by way of raising public awareness and expeditious remedies and sterner penalties meted out. Host governments are more prepared to enforce intellectual property rights when they become producers of IP themselves or when lack of protection is seen as deterring FDI inflows. Bilateral investment treaties should incorporate intellectual property protection. The US, EU and Japan have been strengthening their IP enforcement and pressuring East Asian governments to do likewise.

While expecting developing economies to cooperate to prevent IP infringements, developed countries and MNCs must also do their part to ensure that essential drugs, books and ICT are available to low income countries at affordable prices and that these countries rights to traditional knowledge and indigenous technologies are respected and protected and not cannibalised.

Possible lessons from the East Asian development experience

- Global and regional public goods provide an enabling environment for economic development. One key regional public good in East Asia, that may not be available in some other developing regions, is the geographical demonstration effect, that is, learning from the successful experiences of neighbours. However, in the final analysis, it is national policies and national efforts that made the difference.
- The East Asian flying geese sequential development, with Japan and the Asian NIEs undertaking domestic restructuring and outward FDI, transferring production and technologies to the next tier of economies in the region, so that "a rising tide raises all boats".
- Importance of the quality of government and governance. Successful East Asian economies include both the democratic and the authoritarian. Political and bureaucratic corruption is not rampant. Governments generally pursue prudent fiscal and monetary policies to achieve macroeconomic stability. Savings and investments are encouraged. Governments pay attention to comparative advantage, economic competitiveness, and human resource and infrastructural development. Governments generally pay attention to the maintenance of law and order and social stability.

Annex:

Table 1 East Asia - GNP and GDP Growth Rates, and Per capita GNP

	GNP growth rate 1965-96	*GNP per capita growth rate 1965-96*	*GDP growth rate 1990-2003*	*Per capita GNP 2003*
	%	%	%	US$
China	8.5	6.7	9.5	1,100
Hong Kong	7.5	5.6	3.7	25,430
South Korea	8.9	7.3	5.5	12,020
Singapore	8.3	6.3	6.3	21,230
Indonesia	6.7	4.6	3.5	810
Malaysia	6.8	4.1	5.9	3,780
Philippines	3.5	0.9	3.5	1,080
Thailand	7.3	5.0	3.7	2,190
Cambodia	na	na	4.8	310
Laos	na	na	6.6	320
Myanmar	na	na	na	na
Vietnam	na	na	7.5	480

Sources: World Development Indicators 1998; World Development Report 2005; Asian Development Outlook 2005.

Table 2 Poverty Changes in East Asia, 1975-1995

	No. of people in poverty (millions)				*Headcount ndex (%)*				*Poverty Gap (%)*			
	1975	1985	1993	1995	1975	1985	1993	1995	1975	1985	1993	1995
Indonesia	87.2	52.8	31.8	21.9	64.3	32.2	17.0	11.4	23.7	8.5	2.6	1.7
Malaysia	2.1	1.7	Below 0.2	Below 0.2	17.4	10.8	Below 1.0	Below 1.0	5.4	2.5	Below 1.0	Below 1.0
Philippines	15.4	17.7	17.8	17.6	35.7	32.4	27.5	25.5	10.6	9.2	7.3	6.5
Thailand	3.4	5.1	Below 0.5	Below 0.5	8.1	10.0	Below 1.0	Below 1.0	1.2	1.5	Below 1.0	Below 1.0
Laos	na	2.2	2.2	2.0	na	61.1	46.7	41.4	na	18.0	11.5	9.5
Vietnam	na	44.3	37.4	31.3	na	74.0	52.7	42.2	na	28.0	17.0	11.9
China	568.9	398.3	351.8	269.3	59.5	37.9	29.7	22.2	na	10.9	9.3	7.0

Source: Barry Eichengreen (January 2002), Capitalizing on Globalization, Table 5.
Notes: Except for Laos, poverty numbers are based on the international poverty line of US$1 per person per day at 1985 prices; thus the poverty estimates for Laos are not strictly comparable; Headcount index = percentage of population living below national poverty line; Poverty gap = mean distance below the US$1 per person per day at 1985 prices.

Table 3 East Asia - Trade and FDI Indicators of Economic Openness

	Exports	*Imports*	*Total trade*	*GDP*	*Trade/ GDP*	*Manufact./ exports*	*FDI Inflows Annual average*	
	2001	*2001*	*2001*	*2001*	*2001*	*2000*	*1990-95*	*1996-2001*
	US$ million	*US$ million*	*US$ million*	*US$ million*	*%*		*US$ million*	*US$ million*
China	266155	243567	509722	1159017	44.0	88	19360	42684
NIES								
Hong Kong	190676	202252	392928	162642	241.6	95	4859	24327
South Korea	150653	141116	291769	422167	69.1	91	978	5399
Singapore	121731	115961	237692	92252	257.7	na	5782	8594
SEA-4								
Indonesia	56716	31170	87886	145306	0.5	57	2135	-9
Malaysia	88521	74384	162905	87540	186.1	80	4655	4095
Philippines	33589	31373	64962	71438	90.9	92	1028	1355
Thailand	64223	60190	124413	114760	108.4	76		
CLMV								
Cambodia	1531	1476	3007	3384	88.9	na	80	218
Laos	320	437	757	1712	44.2	na	33	61
Myanmar	1760	2461	4221	na	na	na	180	324
Vietnam	15100	16000	31100	32903	94.5	na	947	1694

Sources: World Development Report 2003; World Investment Report 2002.

Table 4 ASEAN Exports by Product Section, 1993 and 2003

Chapter	*Section*	*1993*		*2003*	
		US$ million	*% distribution*	*US$ million*	*% distribution*
1-5	Live Animal	5,156	2.50	5,755	1.34
6-14	Vegetable Products	4,820	2.33	5,565	1.29
15	Fats and Oils	4,687	2.27	9,990	2.32
16-24	Prepared Foodstuffs	7,618	3.69	11,634	2.70
24-27	Mineral Products	25,378	12.28	47,945	11.12
28-38	Chemicals	6,282	3.04	24,603	5.71
39-40	Plastics	9,215	4.46	20,932	4.86
41-43	Hides and Leather	1,312	0.63	1,313	0.30
44-46	Wood and Wood articles	11,461	5.55	7,894	1.83
47-49	Pulp and paper	1,769	0.86	5,771	1.34
50-63	Textiles and apparel	18,462	8.93	22,014	5.11
64-67	Footwear	3,500	1.69	2,617	0.61
68-70	Stone/Cement/Ceramics	1,508	0.73	2,893	0.67
71	Gems	3,486	1.69	5,612	1.30
72-83	Base metal and Metal articles	6,203	3.00	14,243	3.30
84-85	Machinery and Electrical Appliances	78,898	38.18	205,962	47.78
86-89	Vehicles	4,618	2.23	11,143	2.59
90-92	Optical, precision & musical instruments	4,024	1.95	10,281	2.39
93	Arms	10	0.00	15	0.00
94-96	Miscellaneous Manufactured articles	4,634	2.24	6,748	1.57
97-98	Antiques and works of art	3,038	1.47	6,218	1.44
Other	Other	560	0.27	1,887	0.44
Total	Total	206,638	100.00	431,033	100.00

Source: ASEAN trade statistics, ASEAN Secretariat website.
Notes: 1993 covers ASEAN-6; 2003 covers ASEAN-6 and Cambodia.

Table 5 East Asia's Regional and Bilateral Economic Cooperation Agreements

WITHIN EAST ASIA	*Membership*	*Status as of mid-2005*
ASEAN's AFTA, AFAS, AIA	ASEAN-10 of Brunei, Indonesia, Malaysia, Philippines, Singapore, Thailand, Cambodia, Laos, Myanmar, Vietnam	Implemented
ASEAN-China Comprehensive Economic Cooperation (with bilateral FTA)	ASEAN-10, China	Framework Agreement signed in November 2002, trade in goods agreement and early harvest implemented; negotiations on trade in services ongoing. Bilateral agreements under negotiation
ASEAN-Japan Comprehensive Economic Partnership (with bilateral FTAs)	ASEAN-10, Japan	Framework Agreement signed in October 2003. Bilateral Japan-Singapore agreement implemented in 2003; other bilaterals under negotiation
ASEAN-South Korea Comprehensive Economic Partnership (with FTA)	ASEAN-10, South Korea	Negotiations ongoing
China-Japan-Korea FTA	China, Japan, South Korea	Under consideration
ASEAN+3	ASEAN-10, China, Japan, South Korea	Implemented Chiang Mai Initiative on monetary and financial cooperation
East Asia FTA	ASEAN-10, China, Japan, South Korea	Recommendation of East Asia Vision Group Report; the proposal is under study by ASEAN+3 governments
China bilaterals	with Hong Kong, South Korea	China-Hong Kong implemented; with South Korea, ongoing negotiations
Hong Kong bilaterals	with China	Implemented
Japan bilaterals	with Singapore, Malaysia, Philippines, Thailand	Only Japan-Singapore implemented; others under negotiation
South Korea bilaterals	with Japan, Singapore, China	Korea-Singapore bilateral signed; others, negotiations ongoing
Malaysia bilaterals	with Japan, US	Ongoing negotiations
Philippines bilaterals	with Japan, US	Ongoing negotiations
Singapore's bilaterals	with Japan, South Korea	Singapore-Japan implemented; Singapore-South Korea, signed
Thailand's bilaterals	with Japan, South Korea, China	Negotiations ongoing

Table 5 East Asia's Regional and Bilateral Economic Cooperation Agreements (continued)

CROSS-REGIONAL		
AFTA-CER Closer Economic Partnership	ASEAN-10 , Australia-New Zealand	Ministerial Declaration September 2002 Negotiations ongoing
ASEAN-US Enterprise for ASEAN Initiative (with FTA)	ASEAN-10, US	US announced EAI in October 2002, with prospects of bilateral FTAs. Bilateral FTA with Singapore implemented in January 2004. Other bilateral negotiations ongoing
ASEAN-India Comprehensive Economic Cooperation (with FTA)	ASEAN-10, India	Framework Agreement signed in October 2003; negotiations ongoing
Asian Cooperation Dialogue (ACD)	17-country members stretching from East Asia to South Asia and Gulf States	Dialogue initiated by Thailand
Asia Pacific Economic Cooperation (APEC)	21 economies in Asia Pacific including ASEAN-6, Vietnam, China, Hong Kong, Japan, South Korea, Taiwan	Established in 1989 with initial membership of 12. Not an FTA as it espouses open regionalism, with free trade in 2010 for developed members and 2020 for developing members
Hong Kong bilaterals	with New Zealand	Ongoing negotiations
Japan bilaterals	with Canada, Chile, Mexico	Ongoing negotiations
South Korea bilaterals	with Australia, New Zealand, Chile, Mexico, US	None implemented yet; negotiations ongoing
Malaysia bilaterals	with US	Ongoing negotiations
Philippines bilaterals	with US	Ongoing negotiations
Singapore's bilaterals	with Australia, New Zealand, Canada, Mexico, Panama, US, EFTA, India, Sri Lanka, Jordan,Bahrain	Bilaterals with Australia, New Zealand, EFTA, and US implemented; bilaterals with India and South Korea signed; other negotiations ongoing
Thailand's bilaterals	with Australia, New Zealand, Chile, Peru, Mexico, US, Croatia, Czech Republic, Bahrain, India, South Africa	None implemented yet; negotiations ongoing

Source: Chia (2004), updated.

Table 6 Net Capital Inflows into Crisis-5 Countries and China

	1994	*1995*	*1996*	*1997*	*1998* *US$ billion*	*1999*	*2000*	*2001*	*2002*
Crisis-5 countries:									
Total capital inflows, net	33.3	62.5	74.9	-13.1	-33.5	-12.5	-15.8	-12.1	-7.1
Direct investment, net	6.4	8.4	11.1	12.4	11.8	12.4	6.3	2.7	2.6
Portfolio investment, net	11.2	20.6	28.7	16.6	-3.4	13.1	7.2	6.2	0.0
Other capital flows, net	15.7	33.5	35.2	-42.1	-41.9	-38.0	-29.4	-21.0	-9.7
Memorandum items:									
ODA, net	3.2	3.3	2.2	1.8	2.8	4.0	3.0	2.4	na
Changes in reserves	-8.5	-14.9	-14.6	33.4	-46.4	-39.5	-26.0	-9.0	-23.2
Current account	-22.2	-39.1	-53.8	-26.4	69.8	62.5	44.3	30.0	33.0
China:									
Total capital inflows, net	32.6	38.7	40.0	21.0	-6.3	5.2	2.0	34.8	32.3
Direct investment, net	31.8	33.8	38.1	41.7	41.1	37.0	37.5	37.4	46.8
Portfolio investment, net	3.5	0.8	1.7	6.9	-3.7	-11.2	-4.0	-19.4	-10.3
Other capital flows, net	-2.7	4.0	0.2	-27.6	-43.7	-20.5	-31.5	16.9	-4.1
Memorandum items:									
ODA, net	3.2	3.5	2.6	2.1	2.4	2.4	1.7	1.5	na
Changes in reserves	-30.5	-22.5	-31.7	-35.9	-6.2	-8.7	-10.7	-47.4	-75.2
Current account	6.9	1.6	7.2	37	31.5	21.1	20.5	17.4	35.4

Notes: Crisis-5 countries = South Korea, Indonesia, Malaysia, Philippines, Thailand A minus sign for change in reserves indicates an increase.
Source: Fukasaku *et al.* (2005).

References

Bora, Bijit (2003). "Market access barriers and poverty in developing East Asia", in Kathie Krumm and Homi Kharas (eds), East Asia Integrates. Washington DC: World Bank.

Chia Siow Yue (2001). "ASEAN in the age of globalization and information" in Simon Tay, Jesus Estanislao and Hadi Soesastro (eds), Reinventing ASEAN. Singapore: Institute of Southeast Asian Studies.

Chia Siow Yue (2004). "Economic cooperation and integration", *Asia Pacific Review*, volume 11, number 1.

Chia Siow Yue (2005). "Economic globalization and equity in East Asia", in Natalie Dinello and Lyn Squire (eds), *Globalization and Equity: Perspectives from the Developing World.* Northampton: Edward Elgar.

Cottani, Joaquin, Claudia Silva, and Ivanna Bandura (March 2005). Issues Paper on International Public Goods for Economic Development. Monograph, first draft.

Dietz, Meagan C, Sarena Shao-Tin Lin and Lei Yang (2005). "Protecting intellectual property in China". The *McKinsey Quarterly*, 2005 number 3.

Eichengreen, Barry (2002). *Capitalizing on Globalization.* Manila: Asian Development Bank.

Fukasaku, Ki (2004). "Overview, miracle, crisis and beyond". Paper presented at the Experts' Seminar on *The Impact and Coherence of OECD Country Policies on Asian Developing Economies.* Paris: OECD.

Fukasaku, Ki, M Kawai, MG Plummer and A Trzeciak-Duval (2005). *Policy Coherence Towards East Asia: Development Challenges for OECD Countries.* OECD Development Centre Policy Brief No.26. Paris: OECD.

Kim, Linsu (2003). “The dynamics of technology development: lessons from the Korea experience”, in Sanjaya Lall and Shujiro Urata (eds) *Competitiveness, FDI and Technological Activity in East Asia*. Northampton: Edward Elgar.

Krumm, Kathie and Homi Kharas (2003). “Overview”, in Kathie Krumm and Homi Kharas (eds), *East Asia Integrates.* Washington DC: World Bank.

Lall, Sanjaya (2003). “Foreign direct investment, technology development and competitiveness: issues and evidence,” in Sanjaya Lall and Shujiro Urata (eds) *Competitiveness, FDI and Technological Activity in East Asia*. Northampton: Edward Elgar.

Lin, Justin Yifu (2004). “The China miracle: how OECD country policies contributed.” Paper presented at the Experts’ Seminar on *The Impact and Coherence of OECD Country Policies on Asian Developing Economies.* Paris: OECD.

Luthria, Manjula and Keith Maskus (2003). “Protecting industrial inventions, authors’ rights, and traditional knowledge: relevance, lessons and unresolved issues”, in Kathie Krumm and Homi Kharas (eds), *East Asia Integrates.* Washington DC: World Bank.

Martin, Will, Deepak Bhattasali and Shantong Li (2003). “China’s accession to the WTO: impacts on China”, in Kathie Krumm and Homi Kharas (eds), *East Asia Integrates.* Washington DC: World Bank.

McKibbin, Warwick and Wing Thye Woo (2003). “The consequences of China’s WTO accession on its neighbours”. Monograph, to appear in *Asian Economic Papers.*

Michalopoulos, Constantine (2005). “WTO: an assessment”. Paper prepared for the International Task Force on Global Public Goods.

O’Connor, David (2004). “OECD country economic and environmental policies: with implications for East Asia?” Paper presented at the Experts’ Seminar on *The Impact and Coherence of OECD Country Policies on Asian Developing Economies.* Paris: OECD.

Singapore, Agency for Science, Technology and Research (2004**).** *National Survey of R&D in Singapore 2003.* Singapore: Agency for Science, Technology and Research.

Snitwongse, Kusuma and Suchit Bunbongkarn (2001). “New security issues and their impact on ASEAN” in Simon Tay, Jesus Estanislao and Hadi Soesastro (eds), *Reinventing ASEAN.* Singapore: Institute of Southeast Asian Studies.

Staiger, Robert W (2004). “Report on the international trade regime for the International Task Force on Global Public Goods”. Monograph.

Stiglitz, Joseph (13 August 2005). “Intellectual property rights: Why they are so wrong”. The *Straits Times Interactive* (website).

Straits Times Interactive editorial (13 August 2005). “Jakarta hiding behind haze”. (website)

Subramaniam, Arvind and Shang-Jin Wei (October 2003). “The WTO promotes trade, strongly but unevenly”. NBER Working Paper No. 10024.

Thanh Nien Daily (11 August 2005). “Vietnam’s WTO entry to open door to hi-tech job opportunities.” (website).

Wanandi, Jusuf (2001). “ASEAN’s past and the challenges ahead: aspects of politics and security”, Simon Tay, Jesus Estanislao and Hadi Soesastro (eds), *Reinventing ASEAN.* Singapore: Institute of Southeast Asian Studies.

Woo Wing Thye (1999). “Understanding the Asian financial crisis”. Paper presented at the ASEAN Roundtable organized by the Institute of Southeast Asian Studies, Singapore, November 1999.

World Bank (1993). *The East Asian Miracle: Economic Growth and Public Policy.* Washington DC: Oxford University Press.

Yang Yao (2003). “In search of balance: technological development in China”, in Sanjaya Lall and Shujiro Urata (eds), *Competitiveness, FDI and Technological Activity in East Asia.* Northampton: Edward Elgar.

Young, Alwyn (1992). “A tale of two cities: factor accumulation and technical change in Hong Kong and Singapore”. *National Bureau of Economic Research Macroeconomic Annual 1992.*

Yusuf, Shahid and Simon J Evenett (eds) (2002). *Can East Asia Compete? Innovation for Global Markets.* Washington DC: World Bank

The Case of Latin America

Joaquín Cottani
Claudia Silva
Ivanna Bandura
Global Expert Services and Consulting Company
Weatherhead Center for International Affairs
Harvard University

1. Introduction

After a decade of severe economic decline, Latin America was set to resume economic growth in the 1990s, a period in which a series of market-oriented policies were introduced in several countries in the region. The outcome, however, was rather disappointing. Per capita growth increased from -0.9% per year in the 1980s to 1.3% in 1990-2002, an obvious improvement relative to the previous decade, but hardly an economic miracle. Thus, with annual growth rates of 0.7% per year (in per capita terms) from 1975 to 2002, the income gap that separated the region from the more advanced OECD countries widened considerably, insofar as the growth enjoyed by the latter was about twice as high. Meanwhile, other developing regions, such as East and Southeast Asia, were able to grow much more rapidly than Latin America (at 5.9% and 2.4%, respectively) and, in the case of East Asia, some countries (e.g. Korea, Taiwan, and Singapore) reached higher living standards than Argentina, the richest country in Latin America, despite being significantly poorer only three decades before.

The performance of Latin American countries was by no means homogeneous and as a consequence, income disparities also increased within the region. In Chile, for example, per capita income growth was 4.1% per year in 1975-2000, well above the 0.7% regional average. But, this was the only successful experience. In most other cases, economic performance ranged from unimpressive to bad (Table 1.1).

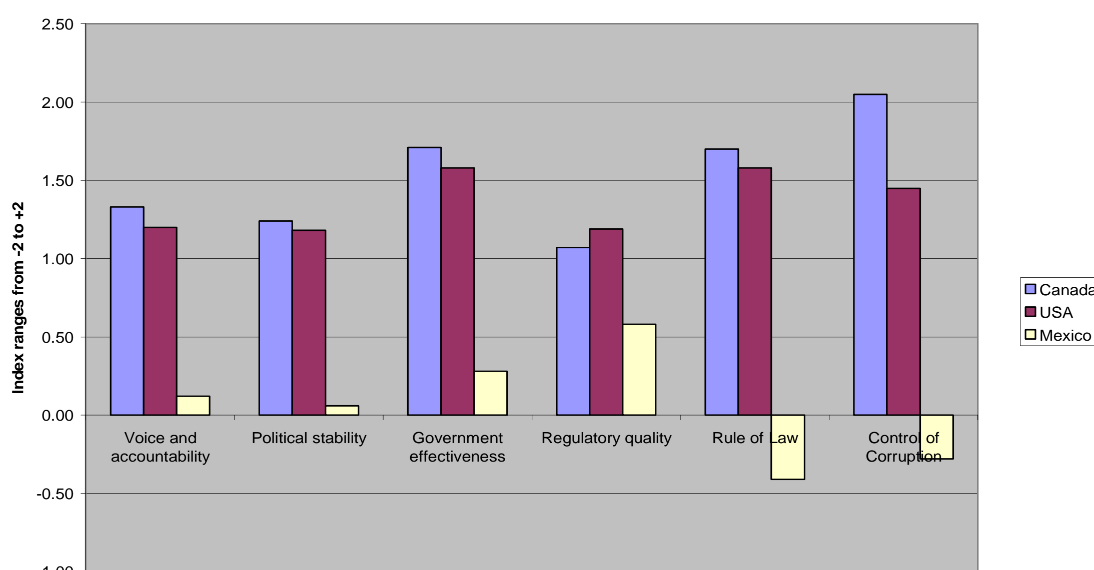
Table 1.1 Comparative Development and Performance in Selected Latin American Countries

Country/Region	*HDI Rank**	*Per Capita GDP*	
		Level PPP US$ (2002)	*Growth (1975-2002)*
Argentina	34	10,880	0.4
Chile	43	9,820	4.1
Costa Rica	45	8,840	1.2
Uruguay	46	7,830	1.3
Mexico	53	8,970	0.9
Venezuela	68	5,380	-1.1
Brazil	72	7,770	0.8
Peru	85	5,010	-0.6
Bolivia	114	2,460	-0.4
Haiti	153	1,610	-2.3
Latin America		7,223	0.7
East Asia inc. China		4,768	5.9
South Asia		2,658	2.4
World		7,804	1.3

* HDI: Human Development Index. *Source*: UNDP.

The causes of Latin America's failure to converge to the income levels of the more advanced regions of the world or to perform like East and South East Asia, have been examined in countless books and academic papers.[258] At the top of most experts' lists are: macroeconomic instability, gaps in education and technological innovation, and several institutional deficiencies affecting the investment climate, such as bad regulations and a weak rule of law. Since these are all public "bads," one possible conclusion is that Latin America suffers from a shortage of public goods. Even in Mexico, where the accession to NAFTA required the harmonization of trade, investment, patent, and other regulations with those of the US and Canada, the institutional divide that separates it from its North American partners is very large (Figure 1.1).

Figure 1.1 Institutional Gaps within NAFTA



Source: Kaufmann and Kraay (2002) cited in Lederman, Maloney, and Serven (2005).

At the risk of oversimplifying, one can say that, in Latin America, differences in growth performance are intimately related with differences in long-term competitiveness, which in turn are explained, albeit not exclusively, by differences in institutional quality. Out of 104 countries surveyed for the World Economic Forum's Global Competitiveness Index (GCI) in 2004-05, most Latin American countries ranked in the bottom half of the Index and eight in the bottom third. The only ones in the top 50% were Chile, Mexico, and Costa Rica, which were also the best performers in recent years. Chile, the only country in the region to experience a true economic miracle, is ranked in the top 25% (Table 1.2).

The GCI is, in reality, an index of institutional quality since it measures "the ability of individual economies to achieve sustained economic growth over the medium to long term by taking into account factors that are accepted to be critical for growth, such as the quality of the macroeconomic environment, the state of a country's public institutions, and its technological readiness" (GCI, 2004 Report). As it transpires from the comparison between Table 1.1 (last column) and Table 1.2 the correlation between the GCI and growth performance is very high, hence the importance of increasing the supply of public goods including good economic, social, and political institutions.

[258] For a good summary, see Inter American Development Bank (2001).

Table 1.2 Global Competitiveness Index, 2004

Country	*Rank*
Chile	22
Mexico	48
Costa Rica	50
Uruguay	54
Brazil	57
Peru	67
Argentina	74
Venezuela	85
Bolivia	98
Latin America	
Finland	1
United States	2
Taiwan	4
Singapore	7
Korea	29
China	46
India	55

Source: World Economic Forum, Global Competitiveness Report, (2004-2005).

The question is whether the public goods that are in short supply are all national or some can be regarded as international. For example, is macroeconomic instability exclusively the result of inadequate fiscal and monetary conditions at the local level or can it also be blamed on frequent external shocks, which could be ameliorated through appropriate international policies or interventions? Is technology adaptation more likely to be hindered by unfair international practices on intellectual property rights protection or by domestic market imperfections (such as externalities or coordination problems) that require national intervention? And if so, can or should international institutions be involved in supporting the latter? Is a preferential trade agreement, such as NAFTA or FTAA, an effective way to induce national governments to reform local institutions, hence improve the business climate? Can trade policy be used to push other non-trade agendas, such as the protection of the environment?

This report attempts to shed some light on these issues. The overarching theme is the role international institutions (multilateral, regional, and bilateral) should play, ideally, to foster growth and development in emerging countries such as those of Latin America. This necessarily requires us to reflect on what these institutions have done in the past—particularly at critical junctures, such as reform and crisis episodes—and what they could have done better. The focus of the study is on the supply of international public goods (IPGs) in the areas of trade, finance, knowledge diffusion, and environmental protection. One obvious component is the creation and enforcement of rules-based systems of international trade, cross-border investment, intellectual property rights, and environmental protection. However, the role of most international agencies is also to assist local governments (through credits, grants, and technical assistance) in supplying public goods that are predominantly national in nature and scope, such as the building of local institutions. Hence, a related topic, the international provision of national public goods (NPGs), is also analyzed.

2. Trade Liberalization and Integration

If we accept, as a general principle, that trade matters for growth, then any policy that enhances trade must also enhance growth. The problem in Latin America is that most trade liberalization (TL) episodes occurred at times when other policies or reforms (macroeconomic stabilization, financial sector liberalization, privatization, etc) were also being introduced. Isolating the pure effects of TL is, thus, very difficult.

The standard TL example found in international economics textbooks purports that lifting import restrictions causes the equilibrium real exchange rate (RER) to depreciate.[259] This is because preserving full employment and external balance requires exports to increase by the same amount as imports. For this, it is not enough that the price of exportables rises in terms of importables; it is also necessary that it rises in terms of nontradables. Hence, the RER must depreciate. Notice, however, that this analysis ignores the capital account.

Introducing the capital account opens up many possibilities that escape the standard TL paradigm. One is that TL per se may attract capital inflows. This will happen if, for example, economic agents perceive that as a result of TL the productivity of capital will rise. Another possibility is that every time TL is announced or implemented other programs, whose result is to attract capital inflows, are also announced or implemented. Consider disinflation policy, for example. A common effect of it is real appreciation. While in some cases this also reflects RER misalignment,[260] in most successful disinflation experiences the RER appreciates without becoming overvalued. The reason is that lower inflation means lower inflation uncertainty, hence reduced financial risk. This encourages international capital to flow into the economy. As this happens, the trade deficit expands and the equilibrium RER appreciates.[261]

When TL and disinflation take place simultaneously, the equilibrium RER appreciates or depreciates depending on whether the improvement in the capital account outweighs or falls short of the deterioration in the current account. Even if the RER depreciates, the net effect is lower in absolute terms than it would be in the absence of a disinflation program. In Latin America, real appreciation has been the rule rather than the exception during TL episodes, the reason being that both TL and its accompanying policies were successful, at least in the beginning, at improving market confidence.

As the effect on relative prices departs from the conventional, so does the political economy of TL. In the textbook example, export prices are up, import prices are down, and nontradable prices are up or down depending on the numeraire we use to value them. In the actual case, in which TL is part of a broader package of measures, export prices are down, import prices are *way* down, and the only prices that are up are those of nontradables. As a result, exports grow less, imports grow more, and the trade deficit increases, most of the time quite significantly. Traditional TL supporters, such as producers of exportable goods, are now on the defensive. Those who, in the past, thrived thanks to import substitution can barely stay afloat. Ironically, the greatest supporters of trade liberalization are the producers of nontradables. These, in many cases, are also the most active borrowers in international markets, as they seek to expand their lucrative commercial activities at home. Regrettably, as they increase their FX exposure they also contribute to raise country risk, hence creating a negative externality for the economy as a whole.

In this section, we argue that the problem with most failed liberalization attempts in Latin America has never been a lack of response or adaptability to the new incentives by domestic producers, but a distortion of the incentives themselves caused, primarily, by the instability of

---

[259] See, for example, Caves, Frankel, and Jones (2002).

[260] RER overvaluation generally occurs as a result of a monetary imbalance. As an example, if the government fixes the nominal exchange rate to abate inflation but continues to expand the money supply vigorously to finance a high fiscal deficit, a monetary crisis will sooner or later occur. This policy, which results in RER misalignment, is neither consistent nor credible.

[261] Real appreciation (an increase in the price of nontradables relative to tradables) occurs as part of the increase in capital inflows "spills over" (i.e., increases the demand for) nontradables. Since there are more dollars claiming nontradables, the price of the dollar falls in terms of nontradables, and vice versa.

the RER. While many exogenous factors contributed to that instability—including, of course, external shocks of varying intensities and durations—the adverse effects could have been ameliorated—and, in some cases, quickly overcome—if the main economies in the region had been (a) more frugal, (b) more open to trade, and (c) more mindful of the overall business climate. This hypothesis is supported by the dramatic improvement in the economic performance of Chile, particularly since 1985 when it was finally able to overcome all three problems at once. As for the role of IPGs, the main conclusion is that these, as well as the NPGs supplied under international technical and financial assistance, should be effectively aligned to help countries in the region meet those three objectives.

Latin America's Trade Policies in Historical Perspective

International trade has traditionally been taxed more heavily in Latin America than in other parts of the world. As noted by Coatsworth and Williamson (2002), this was even the case in 1870-1914, a period internationally regarded as the *belle epoque* of free trade.[262] However, relatively high tariffs did not preclude regional exports and imports from booming in that early period. Trade expansion was driven by reductions in costs of production and transportation, comparative advantages, and world income expansion. Tariffs, though higher in Latin America than elsewhere, were not high enough to hinder trade, let alone prevent it. Since they were designed to collect fiscal revenue, they could not be prohibitively high, as this would have choked imports undermining tax collection.

The interwar period (1918-1939) saw a significant increase in import protection all over the world, and Latin America was no exception. Restrictive trade policies, which included increases in tariffs and non-tariff barriers as well as competitive devaluations, were introduced in country after country to protect national incomes from the fall in exports.[263] While, globally, these policies contributed to the Great Depression and may have even contributed to trigger World War II, in Latin America they actually helped local governments to cope with the negative effects of both.[264]

After WWII, the geography of industrial protection changed significantly, with the US, Canada, Australia, New Zealand, and peripheral Europe drastically reducing their tariff levels (which gradually converged to the lower ones in core Europe) and the rest of the free world (i.e., Latin America and the emancipated colonies of Asia, Middle East, and North Africa) increasing theirs. As a result of these changes, the collected tariff (tariff revenues divided by imports) fell in all regions, except Asia.[265] In most cases, changes in the collected tariff reflected parallel shifts in trade protection. In Latin America, however, the fall occurred in spite of a significant increase in trade protection.

That high protection can be associated with low tariff collection per dollar of imports is not surprising. First, hard-core protection is usually less reliant on tariffs than on other forms of protection, including quantitative ones (quotas, exchange controls, import bans, etc). Second, even if price distortions are favored tariffs are not the only instrument since the same effects can be achieved via multiple exchange rates, custom surcharges, etc. Third, in most protectionist environments the tariff structure is highly dispersed and includes lots of

[262] By the end of the period (1914), collected tariffs represented 27% of imports in Latin America, compared with 18% in US, 16% in Australia, Canada, and New Zealand, 13% in peripheral Europe, 9% in the European colonies located in Asia, North Africa and the Middle East, and 5% in core Europe (UK, France, and Germany).

[263] Tariff protection may have also increased inadvertently in this period due to a combination of price deflation and specific (as opposed to *ad-valorem*) tariffs.

[264] Díaz-Alejandro (1983).

[265] By 1965, collected tariffs were 23% in Asia, 15% in Latin America, 14% in peripheral Europe, 10% in Canada, Australia, and New Zealand, 7% in the US, and 5% in Europe.

exemptions, particularly on inputs, as a way to convey more *effective* protection to favored sectors. All these instruments of protection were used in Latin America with varying degrees in the past six decades. In some cases like Brazil and Argentina, export taxes exacerbated the anti-export bias caused by import restrictions.

Two new globalization periods took place after WWII, one going from 1947 to 1971—i.e., from the aftermath of the war to the collapse of the Bretton Woods system—and the other starting around 1986, the year when the Uruguay Round was launched. In between these two periods, there was a decade and a half of relatively high macroeconomic instability during which OPEC delivered two major oil price shocks, world inflation accelerated, productivity growth in the US and Europe declined, and globalization retreated. Like the earlier globalization period when the gold standard ruled unabated, the 1947-71 one was characterized by remarkable exchange rate stability and low inflation, courtesy of the Bretton Woods system. By contrast, the reversal in globalization that took place in 1971 coincided with the adoption of flexible exchange rates by most OECD countries. This inaugurated a period of high exchange rate volatility fueled by increased capital mobility resulting from the rebalancing of the vast trade surpluses of the oil-rich nations.

Shockingly, Latin America's trade policies ran counter to global trends in both periods. In the 1950s and 1960s, amid a global trade boom fueled by decreasing import barriers in industrial countries, the region chose to experiment with import substitution industrialization (ISI), a growth strategy based on maintaining high levels of industrial protection (Box 2.1). By contrast, in the 1970s, when exchange rate instability and protectionism escalated in the core countries, several Latin American countries embarked in trade and financial liberalization of their own (Box 2.2). This strategy was momentarily suspended in the early 1980s when, owing to a sharp increase in world interest rates, debt crises unfolded in several countries and regional GDP collapsed.

While Latin America stagnated in the 1980s, several East Asian economies, including Korea, Taiwan, Hong Kong, and Singapore, continued their non-interrupted growth expansion joining Japan as the world's most successful exporters of manufactured products. Their brand of protectionism was less inward-looking (i.e., more export-oriented) than the one adopted by Latin America. In contrast, the use and abuse of import substitution as a deliberate growth strategy made Latin America more vulnerable to external shocks, hurting economic welfare and growth performance in the long run.[266]

A new wave of trade liberalization took place in the late 1980s and 1990s, this time in full sync with globalization. It began in Chile in 1985, followed by Mexico in 1986, and finally in a string of other countries—including Argentina, Brazil, Costa Rica, Peru, Uruguay, and Venezuela—in the early 1990s. Of these experiences, the most successful and far reaching one was that of Chile (Box 2.3). On the whole, Latin America exhibited higher real GDP growth in the 1990s (3.3% per year) than in the 1980s (1.3%), but less than in the 1970s (5.5%), 1960s (5.2%), and 1950s (5.0%).

More recently, the emphasis on unilateral liberalization has begun to fade and it is being replaced by a growing interest in preferential trade agreements (PTAs). In March 1991, Argentina, Brazil, Paraguay, and Uruguay signed the Asunción Treaty, which created Mercosur (Southern Common Market), while in December 1992, the US, Canada, and Mexico signed NAFTA (North American Free Trade Agreement). Both PTAs began in full force in the mid-1990s. More recently, Chile signed a bilateral agreement with the US, Mexico did the same with the European Union, and Central America and the US negotiated CAFTA (Central America-US Free Trade Agreement). These are only preludes to the most ambitious hemispheric proposal of all, the creation of a Free Trade Association of the

[266] On the empirical evidence about the relation between trade policies and growth, see Dollar (1992).

Americas (FTAA), which would comprise all countries in Latin America and the Caribbean plus the US and Canada. However, based on the experience of NAFTA and Mercosur to date, the contribution of PTAs to economic welfare, though it remains inconclusive, raises some skepticism (Box 2.4).

The Role of the Multilateral Trade System

Before 1986, the multilateral trade system represented by GATT had little influence in shaping up trade policies in Latin America. While 12 out of the 20 largest countries in the region were GATT members,[267] most decisions did not affect them directly. The majority of negotiations, panels, and dispute resolutions in the 1950s, 1960s, and 1970s were among industrial countries. Indirectly, however, they benefited from the application of the most favored nation clause (MFN), since every time a negotiation or a dispute between third countries resulted in a reduction of tariffs and other protection devices, it was automatically extended to other GATT members (and, in most cases, also to nonmembers). An interesting example is the 1960-61 negotiation (during the Dillon Round) between the US and the CEE to reduce to zero the tariff on soybeans and soy oil, which evidently helped Argentina and Brazil to become top international producers and exporters. When, in the late 1970s, the CEE decided to introduce subsidies to local producers, a dispute between the US and the CEE arose which was not resolved until 1992, when the CEE was forced to cap the subsidies and compensate the US and other international exporters, including Argentina and Brazil, for damages (Lanús, 1996).

As said before, the postwar era was characterized by a significant reduction in trade barriers on the part of the industrial countries, as a result of which international trade grew consistently more than GDP in 1950-94 (6% versus 4%, respectively). While Latin America obviously gained from the expansion of global trade, most governments in the region did not really trust the GATT, which they regarded as little more than a club of the rich and powerful nations to advance their own agendas, sometime at the expense of the developing countries. Unfortunately, reality did not always help to dispel this notion. The club atmosphere, whereby the rich countries often monopolized the decision-making process to the exclusion or marginalization of the poor ones, did exist. Large contracting parties, such as the US, the UK, Germany, and France, were able to exploit the loopholes of the system more efficiently than the smaller ones.[268] Moreover, many issues that were crucial for Latin American and other developing nations, such as non-tariff barriers in industrial countries, agriculture subsidies, and international monopolies, were not subject to GATT regulations, while those that were (tariffs, dumping, and manufacturing export subsidies) were ubiquitous in less developed countries forcing the latter to play defensive position most of the time.

Opacity in international trade rules was one of the factors that motivated Latin American and other less developed countries to look for alternatives to free trade in the 1950s and 1960s.[269] The move was boosted by the creation, in 1963-64, of the Group of 77, an association of all the developing and socialist countries that were members of the UN system at the time, and the United Nations Conference on Trade and Development (UNCTAD). Both institutions were very influential in laying out the main principles of the new growth agenda. One of these principles was that industrialization was the fundamental pillar of economic development and, as such, it had to be achieved rapidly and at any cost. The other was that markets were too

[267] The most conspicuous nonmembers were Mexico, Bolivia, Paraguay, and all Central American countries except Nicaragua.
[268] The most notorious example of this behavior was the Multi-Fiber Agreement (MFA) of 1974, by which the largest world importers of textiles agreed to set up an elaborate system of import quotas by country of origin, in marked contrast with the general principles professed by the GATT.
[269] The other factors included the triumph of Keynesianism over old classicism in economic theory and practice and the economic "success" of socialist regimes, which were growing faster than most Latin American economies at that time, thanks to massive mobilizations of domestic savings and labor.

important to be left to capitalists and for that reason government intervention was needed in virtually all economic areas.[270]

Consistent with these principles, Latin America saw the visible hand of the government substitute for the invisible one of the market in so many areas that a hybrid economic system evolved, one that was too rarified to function well. Typical government interventions included the management of myriad public enterprises; over-regulation of goods, services, and factor markets; direct controls on prices, wages, and interest rates; direct allocation of credit to private firms and individuals; capricious picking of winners and losers among domestic producers, who were heavily subsidized or taxed accordingly; and lax enforcement of good regulations that would have served to improve the business climate. This economic system, which one of the present authors once described as "capitalism without markets and socialism without a plan," began to crumble in the mid-1970s.[271]

Meanwhile, the Bretton Woods institutions were doing what they had been created to do. When a Latin American country faced a balance of payments crisis, the IMF assisted them with liquidity in return for corrective macroeconomic measures, including devaluation and fiscal and monetary contraction. The problem with this approach was that it did not attack the structural issues that were at the root of the frequent crises, such as excessive industrial protection and low domestic saving. As for the other IFIs, mainly the World Bank and the IADB, their main objective was to finance infrastructure projects. Here, the rationale was that growing at acceptable rates required high levels of investment relative to GDP. Since in most Latin American countries domestic saving rates and foreign direct investment (FDI) were insufficient the gap had to be filled with international official loans. But as argued by Easterly (2002), this rationale was also flawed. First, the reason that investment, domestic saving, and FDI were low was not accidental, but the consequence of bad domestic policies that distorted economic incentives. Under such circumstances, international financial assistance was more likely to crowd out national saving than to increase investment, hence contributing to the problem rather than the solution. Second, in many cases, it was not even true that investment rates were low. If anything, the problem was investment efficiency, which in turn was exacerbated by government inefficiency. For example, despite the fact that, in 1960-83, net investment rates were 10% or above in all major countries except Uruguay and Bolivia only Brazil, Mexico, and Colombia exhibited per-capita growth in excess of 2.5% per year.[272] As the theory of the second best suggests, when domestic distortions are too high FDI can be immiserizing.[273]

The international trade climate started to improve in the mid-1980s, particularly in 1986. That year the Uruguay Round (UR) was convened and, in Latin America, Mexico joined the GATT. The importance of the UR for Latin America cannot be stressed enough. It came at a time the economy of the region was in shambles, partly because of increased protectionism in the industrial countries. Concluded in Marrakech in 1994, the UR was the longest international trade negotiation of all times, and also the most successful. This was not because its achievements were huge (in some cases, like agriculture, they were rather modest), but because it helped to revive the cause of multilateralism, which had begun to lose impetus after 1971. Among the most transcendental results of the UR for Latin America: (a) for the first time, several countries in the region—among them Argentina, Chile, Brazil, and Mexico—became relevant actors in the negotiations, this time pushing for greater liberalization rather than taking defensive positions like in the past, and (b) the agenda incorporated issues of great

[270] The populist Argentine leader Juan Peron once said: "Markets and trade are never free: either they are controlled by the state in the benefit of its own people or by the large corporations against it."
[271] Cavallo (1984).
[272] Cavallo, Cottani, and Khan (1990).
[273] Brecher and Díaz-Alejandro (1977).

importance for Latin American countries, such as agriculture and non-tariff barrier protection in industrial countries, which had traditionally been excluded.

The re-foundation of multilateralism included the creation, in 1995, of the World Trade Organization (WTO) as an independent institution from the UN system. It also coincided with a change in the strategy of the IFIs regarding their lending practices. Their emphasis shifted away from financing investment projects into supporting structural reforms, including TL, through so-called "adjustment lending" programs. This was not only true for the World Bank and the regional development banks, such as the IADB, but also for the IMF, which early in the1990s introduced the Extended Fund Facility (EFF), a new credit modality characterized by longer periods of disbursement and repayments along with institutional reform conditionality in the form of "structural benchmarks." This facility was critical for the implementation of the Brady Plan of debt and debt interest reduction in ten Latin American countries between 1989 and 1994.[274]

Adjustment lending was not successful always and everywhere. Outside Latin America (in Russia and Sub-Saharan Africa, for example), some countries received the loans but did not reform and some that reformed did not grow. And, while the record was much better in Latin America, this probably reflects the increased willingness of the local leadership in the 1980s and 1990s to undertake reforms, rather than any serious inducement created by the availability of official finance itself.

Finally, another IPG which was present in Latin America, particularly since the mid-1990s, was the push for regional trade integration. However, in this case, the results are mixed at best. While both NAFTA and Mercosur succeeded at increasing regional trade and FDI, and though no clear evidence of trade diversion exists in any of the two cases, the impact on per-capita income was limited, as was the effect on institutional transformation. One of the few advantages PTAs have relative to MFN is that, under the right circumstances, they can help to accelerate the improvement of domestic policies and institutions, hence long-run competitiveness, in the member countries. This effect, however, was not strong enough in Mexico and almost inexistent within Mercosur. And while 11 years may not be a long-enough period to appreciate in their full dimension the potential advantages NAFTA and Mercosur can bring to their members, the results achieved so far have lowered expectations regarding other regional trade agreements, in particular FTAA, where the differences among the countries hoping to become members are even larger than in the other two cases. In our view, without reforms that dramatically reduce the existing gap in education, technology, and enabling institutions, FTAA will have a modest impact on average living standards across the region.

[274] The countries were Mexico, Costa Rica, Venezuela, Argentina, Brazil, Peru, Dominican Republic, Ecuador, Panama, and Uruguay.

Box 2.1 Did Import Substitution Enhance Economic Growth?

The fact that Latin America grew faster during the heyday of ISI than when the region supposedly succumbed to the dictums of the "Washington consensus" has led critics of the latter to suggest that import substitution worked better than trade liberalization (or, at least, than the version of it preached by Washington).[1] In our view, this conclusion is flawed for several reasons.

First, to assess the long-term effect of ISI, the relevant question is not whether growth was higher in the 1950s and 1960s than in the 1990s but whether the kind of growth Latin America enjoyed in the heyday of import substitution was sustainable. Judging from the evidence of the last 25 years, it is clear that it was not: growth fell drastically in the 1980s due, in part, to external shocks, but also because of external vulnerabilities, which were exacerbated by ISI.

Second, Latin America's growth record in the 1950s and 1960s (5.0% and 5.2% annually, respectively), was, actually, unimpressive in comparison to that of the industrial countries in the same period (4.4% and 5.2%, respectively). Had ISI been truly successful, there would have been greater convergence during that period.

Last, if any correlation exists between import substitution and growth, it is negative rather than positive. Annual growth increased from about 5.0% in the 1950s and 1960s to 5.5% in the 1970s despite the fact some trade liberalization took place in the 1970s, then plummeted to 1.1% in the 1980s, just as the economy became more inward-looking, and increased again (to 3.3%) in the 1990s after trade was again liberalized.

This said it would be a stretch of the imagination (and the data) to suggest that changes in trade liberalization had a dominant effect on growth performance in any of these periods. Other factors, such as macroeconomic stabilization, fluctuations in oil prices, and changes in net capital inflows, probably played a much more significant role.

Box 2.2 Trade Liberalization in the 1970s

The 1970s label is not totally accurate since two of the episodes actually started in the late 1960s. The main ones are: Brazil (1964-74), Colombia (1967-82), Chile (1974-82), Uruguay (1974-82), Argentina (1976-81) and Peru (1979-84). All of these episodes had common characteristics. Each was preceded by unstable economic conditions, typically high inflation accompanied by recession or stagnation. In all cases except Chile, the commitment to trade liberalization was rather vague. Trade liberalization took place as part of an economic program that had macroeconomic stabilization as the main objective.

Each episode had three phases. During the first phase, which often lasted a few months, the focus was on removing relative price distortions and re-establishing external balance. This generally required the government to unify multiple exchange rates and devalue. Tariff redundancy was eliminated at that time and, where export taxes existed, they were also eliminated. The objective of the second phase was to reduce inflation. This generally involved three kinds of measures: eliminating financial restrictions (such as lifting interest rate ceilings and capital controls), some further rationalization of the tariff, and controlling inflationary expectations by actively managing the nominal exchange rate. Soon, positive real interest rates, lower inflation, and pegged exchange rates became a magnet for capital inflows causing domestic absorption to increase and the real exchange rate to appreciate. In many cases, capital inflows fed into fiscal expansion and vice versa, hence contributing to exacerbate real appreciation. As the gains in competitiveness obtained in the first phase eroded, import liberalization was put on hold while fiscal and credit incentives on exports were beefed up.

In general, export performance was weak and imports increased too rapidly, probably reflecting the perception, on the part of economic agents, that the RER was overvalued and trade liberalization was not going to last.[275] This perception became stronger when, in 1981, the US Fed started a severe cycle of monetary tightening which jacked up international interest rates to about three or four times their previous levels causing the sign of net capital flows to reverse. A series of devaluations took place in the early 1980s, at which time regional GDP contracted and trade account balances went from negative to positive. Yet, given the increased debt exposure and the fact most foreign loans where at variable interest rates, which were significantly higher in real terms, the current account balance remained in deficit. Seeing that devaluation was not enough to restore external balance, most countries introduced import restrictions, hence reversing trade liberalization. The problem did not stop there and by the mid 1980s all countries except Chile and Colombia had defaulted on their foreign loans.

[275] In Colombia, the effect of capital inflows was exacerbated by a coffee boom and a surge in illegal exports.

Box 2.3 Chile's Success with Unilateral Liberalization

In 1982-83, Chile was hit by a severe crisis. The trigger was partly exogenous (a tremendous increase in international interest rates) and partly endogenous (Chile's own exchange rate and financial vulnerabilities). In the years preceding the crisis (1980-81), a massive increase in capital inflows had resulted in a 14.5% of GDP current account deficit and a 28% real appreciation. Another factor contributing to real appreciation was inflation inertia due to backward indexation of nominal wages in formal labor contracts. The adjustment to the crisis included a massive real depreciation (15.7% per year in 1982-83 and 13.3% per year in 1984-85) and some increase in import protection (the uniform import tariff was raised from 10% to 35%, temporary surcharges were introduced on a case by case basis, and imports became subject to a minimum financing requirement). The adjustment was not smooth: the trade account shifted from -10.3% of GDP in 1981 to +2.7% in 1983 while GDP fell by 7.6% per year in 1982-83.

As the crisis was left behind, the Chilean economy experienced a tremendous recovery. GDP grew by 6.3% per year between 1984 and 1996 led, primarily, by exports (which grew at 9.2% per year) and investment (which increased from 12.9% of GDP at the height of the crisis to 27.2% in 1996). After peaking at 18.6% in 1983, the unemployment rate fell to 5.3% in 1989. Between 1985 and 1988, the uniform tariff was reduced from 35% to 15% and the minimum financing requirement was gradually eliminated. Chilean debtors, including the government, continued to service the foreign debt and were able to reduce it through market friendly mechanisms. Notwithstanding the resumption of trade liberalization and the higher debt service outflows, the current account deficit was eliminated in 1996, at which time the national saving rate reached 27.3% of GDP, up from 5.0% in 1981. Remarkably, trade liberalization had survived the crisis.

It is now commonplace to praise Chile's economic policies in 1985-90 for being able to maintain a competitive and stable real exchange rate as a way to support export growth and facilitate the recovery. A simplistic interpretation is that this was possible thanks to good exchange rate and monetary management. However, a more relevant reason was that Chile's fundamentals in the late 1980s supported a stable and competitive real exchange rate. In particular, (a) foreign exchange was in high demand since imports had been liberalized and the foreign debt continued to be honored; (b) the public sector ran a balanced budget; (d) private saving was on the rise, thereby reducing the need for foreign saving to finance the growth in investment; (e) pension fund reserves were accumulating steadily, giving impetus to the development of domestic capital markets; and (f) the labor market was flexible, particularly after backward wage indexation was eliminated.

By not abandoning, in response to the crisis, the reforms introduced in the 1970s (trade liberalization, commitment to fiscal discipline, pension reform, and labor market flexibility, among others), Chile was able to recover much more strongly once the crisis was over. In turn, the success of its market-oriented policies assured their continuity when a democratically elected government took office in 1990. Fearing the transition could destabilize markets, the opposition became convinced that any changes in the economic front had to be minimal. To reassure investors, the Aylwin administration reduced the tariff further (to 11%) in June 1990. The main distinguishing feature of the new government was an emphasis on social programs, which were financed by raising taxes, without compromising fiscal stability.

Box 2.4 Preferential Trade Agreements

NAFTA: The first trade agreement between a developing county and industrialized ones is now 11 years old. Practically all tariffs and other import restrictions between Mexico and the US and Canada have been eliminated though exports are still subject to strict rules of origin. The agreement also covers a series of non-trade related measures, including on direct investment, financial services, intellectual property rights, and government procurement. Restrictions on foreign ownership of Mexican banks continue to apply (25% of the system's aggregate capital), but otherwise there is free capital mobility within the free trade zone. According to a recent study, NAFTA accounts for the doubling of Mexican overall exports and a 66% increase in total FDI. Yet, the effect on per capita GDP directly attributable to it was only 4 percentage points (Lederman, Maloney, and Servén, 2005). These results are adjusted for the negative impact of the tequila crisis on GDP, which cannot be attributed to NAFTA. The crisis was also responsible for a sharp decline in real wages, which have been growing, albeit slowly, since then. Changes in labor and total factor productivity were important only in the modern manufacturing sector integrated with NAFTA and the agriculture sector that uses irrigated lands. Elsewhere, the effects were less significant, which raises social and regional inequalities. In general, there is no evidence of trade diversion due to NAFTA. Actually, the share of Mexican exports in non-NAFTA markets did not fall as would have been the case had trade diversion existed. Overall, NAFTA was good for trade and investment in Mexico, but so far the effect on growth, real wages, and general living conditions has been less favorable than initially expected. Gaps in education, technology, and institutions vis-à-vis their North American trading partners explain this disappointing performance.

Mercosur: Created by Argentina, Brazil, Paraguay and Uruguay in March 1991 with the signing of the Treaty of Asunción, it was originally set up with the ambitious goal of creating a common market/customs union between the participating countries on the basis of various forms of economic co-operation that had been taking place between Argentina and Brazil since 1986. The Treaty of Ouro Preto of 1994 added much to the institutional structure of Mercosur and initiated a new phase in the relationship between the countries. A transition phase was set to begin in 1995 and to last until 2006 with a view to constituting the common market. In 1996, association agreements were signed with Chile and Bolivia establishing free trade areas with these countries on the basis of a "4 + 1" formula. During this period, Mercosur also created a common mechanism for political consultations, which was formalized in 1998, in which the four countries plus Bolivia and Chile all participate as full members. Mercosur's ratio of trade (imports + exports) to GDP is 26.75%. In 2002, imports and exports amounted to $64bn and $89bn, respectively, representing 1.29% and 1.91% of the world flows. The EU is Mercosur's main trade partner. In 2002, 16% of EU agricultural imports came from Mercosur and 6.96% of its FDI went there. Co-operation and technical assistance between the EU and Mercosur was strengthened through the 1995 Framework Co-operation Agreement. The main objective of this agreement is the preparation of negotiations for an Interregional Association Agreement between the EU and Mercosur, which should include a liberalization of trade in goods and services, aiming at free trade, in conformity with WTO rules, as well as an enhanced form of co-operation and a strengthened political dialogue. Trade within Mercosur increased significantly between 1991 and 1998, when exchange rate policies among its members were in harmony. For example, the share of Argentina's exports to Brazil on its total exports grew from 12% to 30% during this period. The collapse of Brazil's crawling peg regime at the end of 1998 resulted in a massive devaluation relative to the Argentine peso, which at the time was pegged to the US dollar. This caused Argentina's imports from Brazil to fall from a peak of $7.0bn in 1998 to $2.5bn in 2002 while exports declined from $8.0bn to $4.8bn. Brazil's devaluation was a major cause in determining the fate of Argentina's convertibility system, which collapsed at the beginning or 2002. Yet, despite the sharp depreciation of the Argentine peso, exports to Brazil stagnated (at about $5bn) while imports shot back to $7.0bn.

3. Financial Stability

Achieving greater financial stability than the norm in emerging markets requires having macroeconomic and microeconomic institutions in place that reduce vulnerability to crises and, if prevention fails, being blessed by the presence of a central bank or a government that is able to handle crises so that their damage is minimized or contained. Due to its unpredictability, the international financial system (IFS) can be a blessing (as in Mexico in 1995) or a curse (as in Argentina in 2001-02).

This section reviews the salient financial market developments in Latin America over the past 30 years and discusses the role the IFS played during the region's main financial crises. The principal conclusion, which is analyzed in more detail in Section 6, is that, while it would be wrong to blame the IFS for Latin America's proverbial financial instability, the IFS has a long way to go before it can emerge as a true contributor to financial stability in the region.

There are different opinions about how preventable financial crises are in developing countries. According to Eichengreen (2005), while "there is broad agreement on the kind of steps needed to limit the frequency of financial crises (…) there is no similar consensus about how to manage and resolve crises once they occur." He cites a consensus list of measures of prevention, which includes good macroeconomic policies, improved supervision and regulation of financial systems, and development of adequate warning mechanisms at the international level. Cooper (2005), on the other hand, is less sanguine about crisis prevention. In his view, financial crises are "an inevitable concomitant of economic development, a kind of adolescent growing pain." He notes that as financial intermediation increases, it is likely to generate episodes of investment euphoria during which fundamental imbalances are likely to occur.

Can the IFS do a better job at preventing and handling emerging market crises than national governments and central banks? The answer, as many in economics, is: it depends. On the one hand, it seems unrealistic to expect international agencies with limited analytical resources devoted to the monitoring of a single country will warn investors, including local ones, about risks that these or the national governments are not aware of. On the other hand, anticipating a crisis long before it occurs so that it can be prevented requires "detached, disinterested, and farsighted" institutions (Cooper, 2005). This gives the IFS a natural advantage over the more absorbed, self-interested, and short-sighted investors and local governments.

While being less politically biased is a good thing, to be effective at preventing and handling emerging market crises the IFS must be able to differentiate (better than national governments and central banks do) among the different kinds of crises that can occur in developing countries and call for appropriate remedies or interventions. However, as the experience of past crises in Latin America and elsewhere shows, this assumption is far from granted. In terms of prevention, the IFS (which includes, inter alia, the IMF, the G7 governments, the BIS, and the main international credit rating agencies) has generally been behind the curve. And in terms of crisis management, while some interventions were better than others, in hindsight none was optimal.

Types of Financial Crises

Radelet and Sachs (2000) identify five types of financial crisis: (a) macroeconomic policy-induced; (b) moral hazard-induced; (c) bubble collapse; (d) financial panic; and (e) disorderly debt workout. The first type of crisis is usually caused by an inconsistency between monetary and exchange rate policy à la Krugman (1979). Preventing this type of crisis requires avoiding excessive domestic credit expansion when pegging the nominal exchange rate. This, in turn, calls for a minimum of fiscal discipline since simply substituting debt financing of large fiscal deficits for monetary financing would lead to unsustainable public debt accumulation. On the

other hand, floating the exchange rate while monetary expansion is allowed to happen would only accelerate inflation.

Most macroeconomic policy-induced crises can be stopped by a combination of a corrective devaluation and fiscal contraction. International intervention is not required, except to bridge the period before the current account begins to improve. Neither is international intervention required in cases (b) or (c). On the contrary, pumping more official money into an economy affected by moral hazard or asset bubbles can only exacerbate the problem. So, the only clear cases for international intervention are (d) and (e).

An international financial panic typically occurs because domestic borrowers (sovereign, private or both) have too much short-term debt relative to liquid assets. The run on domestic assets is usually triggered by an abrupt change in expectations that becomes self-fulfilling. As in the case of a domestic bank run, an international one can be forestalled by a lender of last resort—in this case an international one, such as the IMF. However, as argued by Sachs (2000), this is not the only or even the best way to deal with this problem. An alternative way, which reduces moral hazard and does not require the assembling of a large international bail out package, is to seek an agreement between creditors and debtors to extend debt maturities. The role of the IMF in this case is not to bail out private creditors but to act as an impartial referee between creditors and debtors (the latter being or being represented by the governments of the indebted countries) and, if necessary, to provide new money until market confidence is restored. In the absence of fundamental macroeconomic imbalances, these funds should entail no conditionality other than a significant maturity extension of the national debt.

While in a panic situation the debtor is solvent provided he/she/it is given enough time to pay, in a disorderly debt workout the overall debt is too high relative to the repayment capacity of the borrower. Hence the net present value of the debt has to be reduced. Even then, the optimal solution involves coordination among creditors (to prevent a disorderly grab race) and new money (to finance working capital). Failing to supply both would force the liquidation of the debtor's assets, which in most cases implies lenders end up recovering a lower percentage of their credits than if debtors were allowed to continue in business.[276] Once again, there is nothing that says that new lending has to come necessarily from an official source of credit. Actually, to eliminate the appearance of a bailout, it would be preferable if other methods, such as granting senior status to new loans from private lenders relative to the old ones, were utilized (Sachs, 2000).[277]

While Radelet and Sachs' typology of financial crises is useful, few actual crises fall neatly in one category or another, which makes finding appropriate solutions harder in real life. Moreover, implementing the proposed solutions for cases (d) and (e) requires a "Chapter-11-for-countries" type of scheme, such as SDRM.[278] Unlike other methods to facilitate sovereign debt restructuring, such as collective action clauses (CACs),[279] SDRM requires consensus among the main creditor nations and an amendment of the IMF's Articles of Agreement.[280] Finally, while these proposed reforms of the international financial architecture may help resolve sovereign debt crises more quickly and efficiently, their marginal contribution in terms of crisis prevention is likely to be modest.

---

[276] Naturally, in the case of a sovereign borrower this is always the case.

[277] This is what Argentina did in 2001, when it swapped sovereign bonds held by domestic institutional investors by loans guaranteed with tax revenues (*préstamos garantizados*).

[278] The Sovereign Debt Restructuring Mechanism (SDRM) was proposed by the IMF in 2001.

[279] Collective Action Clauses (CACs) comprise representative, majority enforcement, and majority restructuring provisions in bond contracts. They have been around for a long time in private bond markets, but its use in sovereign debt contracts was first proposed in the 1980s.

[280] So far, the US Treasury has endorsed CACs but not SDRM.

Latin America in the 1970s: Goodbye Financial Repression, Hello Financial Crash[281]

For many decades, interest rate ceilings, officially directed credit, and foreign exchange controls were common currencies in Latin America. Amid expansionary monetary and fiscal policies, the principal objective of those regulations was to make credit cheap for the government and the private sector so that investment could grow and fiscal deficits could be financed. Yet, as inflation accelerated, real interest rates became negative causing private savings to decline, credit allocation got severely distorted, and domestic financial markets remained underdeveloped. McKinnon (1973) coined the term "financial repression" to describe this situation.

A first attempt at financial liberalization occurred in the late 1970s in Argentina, Chile, and Uruguay. The main measures included the elimination of restrictions on interest rates, credit allocation, foreign exchange transactions, and the capital account. When a series of financial crises struck in the early 1980s, most experts attributed them to moral hazard and adverse selection, exacerbated by poor supervision of banks and non-bank financial intermediaries. There was, however, another important problem. The removal of interest rate ceilings took place at a time when domestic inflation was, despite government efforts to reduce it, still very high. Financial openness created arbitrage opportunities. Given the uncertainty about the rate of inflation, the domestic interest rates needed to compensate domestic lenders were inordinately high. At those levels, only high-risk firms and individuals could borrow. This did not deter domestic banks from lending, however, as their deposits were covered (explicitly or implicitly) by government insurance. Thus, moral hazard and adverse selection were exacerbated by high inflation.[282]

In an effort to curb inflationary expectations, hence reduce real interest rates, the governments of Argentina, Chile, and Uruguay introduced an exchange rate system called "tablita," which consisted of pre-setting the rate of devaluation of the next 12-18 months.[283] The scheme did reduce inflationary expectations. However, since lower exchange rate uncertainty stimulated capital inflows, inflationary expectations fell more rapidly than inflation, hence the real exchange rate appreciated and the current account deficit expanded.

At first, the availability of foreign capital allowed the public sector and some large and well-connected private sector conglomerates (many of which produced nontradable goods and services) to borrow at relatively low interest rates in US dollars (i.e., Libor plus a reasonable spread). The gap between domestic and foreign interest rates also attracted speculators, who took long peso/short dollar positions in the expectation that the preannouncement of the exchange rate was equivalent to an implicit government guarantee. For the same reason, despite the currency mismatch between the borrowers' assets and liabilities, foreign banks were happy to play along. As for the rest of the economy, the situation was no better than during the heyday of financial repression. With no access to foreign capital, small firms and individuals had to choose between borrowing domestically at prohibitively high interest rates and not borrowing at all.

---

[281] This was the title of an insightful article written by Carlos Diaz Alejandro in the early 1980s (Diaz-Alejandro, 1983).

[282] We can think of the real interest rate required on a domestic bank loan denominated in pesos as a multilayered cake. The lower layers include the international real interest rate, the expected real rate of depreciation, and the net between the FX risk premium and the liquidity discount of local deposits, which together determine the deposit rate. The upper layers include the opportunity cost of holding reserve requirements (the difference between the nominal loan rate and the nominal return on bank reserves, if there was any) and the bank's management fee, which together determine the spread between lending and saving rates. In an unstable macro environment, all these factors other than the international interest rate (which is exogenous), can push the domestic loan rate well above the normal return on physical or human capital. And this is before the probability of default of the individual borrower is factored in!

[283] In Chile, this was followed by a formal peg in late 1978.

Financial conditions reversed unexpectedly when, due to a sharp increase in world interest rates starting in 1981, it was no longer possible for the central banks of Argentina, Chile, and Uruguay to sustain the pre-announced exchange rates, which had became severely overvalued. Between 1981 and 1983, the currencies of the three countries collapsed triggering the socialization of private external debts (i.e. their absorption by the national government) and, in the case of Argentina and Uruguay (where socialized private debts piled on top of a large public one), also the default on the entire external debt.

The Lost Decade

The Southern Cone countries of Latin America were not the only ones to be hit by financial crises in the 1980s. The four-fold increase in international interest rates produced many other casualties, including Mexico, Brazil, Venezuela, Bolivia, Peru, Ecuador, and Panama. In all of these cases, external vulnerability had also increased in the 1970s, before the interest rate shock took place, due to the excessive accumulation of foreign debt, particularly by sectors that did not have the capacity to generate foreign exchange, such as the government and those producing nontradable goods and services. The 1980s crisis led to a protracted period of stagflation in the region and, in some countries (Argentina, Brazil, Bolivia, and Peru), it ended in dramatic episodes of hyperinflation (see Box 3.1).

Part of the reason the crisis lasted so long in Latin America was the delay by the IFS to understand that the insolvency problem faced by the region was not temporary but permanent, thereby requiring more than debt rollovers (as in the so-called Baker Plan). The solution finally came in the early 1990s in the form of the Brady Plan, a swap from defaulted commercial bank loans to sovereign securities ("Brady bonds"), which carried government collaterals in exchange for reductions in interest rates and principal. As the debt crisis was put behind, several Latin American countries (chiefly among them, Argentina, Bolivia, Brazil, Chile, Mexico, Peru, and Venezuela) embarked in far-reaching stabilization and reform programs, with mixed results as we see below.

The first country to overcome the 1980s crisis was Chile in 1984. Unlike others in Latin America, this country did not necessitate a Brady Plan to solve its external debt situation. Rather, through a combination of strict fiscal discipline and debt-to-equity swaps, the public debt was reduced to manageable levels in the second half of the 1980s. Meanwhile, the deepening of the market-oriented reforms initiated in the previous decade plus a sensible monetary policy and a flexible exchange rate system allowed Chile to abate inflation relatively quickly and begin an era of rapid growth.[284]

Two important developments in Chile during the post-crisis period were the increase in the national saving rate and the growth of the domestic capital market, a phenomenon known in the literature as "financial deepening."[285] Three factors contributed to this: macroeconomic stability, social security privatization, and financial asset indexation.[286] In addition, the "crowding in" of the private sector in capital markets due to the gradual disappearance of the government as a major borrower allowed the private sector to reduce its dependence from foreign capital while still enjoying a steady supply of short- and long-term capital, hence avoiding financial "dollarization."

---

[284] These policies were discussed in more detail in the previous section.

[285] See McKinnon (1973).

[286] The social security system was privatized in 1980. Financial indexation (the denomination of financial assets in a CPI-indexed unit of account called *unidad de fomento* or UF) existed since 1967 and was never eliminated despite stabilization. By eliminating any residual inflation uncertainty, financial indexation helped to develop long-term credit markets. For a discussion of the importance of the UF for the development of Chile's capital market, see Shiller (2003).

The Roaring Nineties[287]

The success of Chile in the late 1980s prompted other countries in the region to follow its steps but, unfortunately, not all of Chile's policies were emulated. Mexico, for example, initiated its quest for stabilization and market reform around 1986 with good results. Inflation fell from 159% in 1987 to 7% in 1994 thanks to a combination of fiscal discipline, a well-crafted incomes policy, and a managed exchange rate. However, Mexico did not succeed at raising national savings, as Chile had done. Actually, despite a massive improvement in the fiscal accounts, the restoration of confidence in the Mexican economy caused foreign savings to increase and private domestic savings to fall quite dramatically. As a result, the current account deficit increased from 1% of GDP in 1988 to 8% of GDP in 1994. In the same period, the real effective exchange rate appreciated by 22%.

Argentina and Brazil were able to stop hyperinflation in 1991 and 1994, respectively, by pegging their currencies to the US dollar. Both countries introduced structural reforms, such as privatization, trade liberalization, more financial opening, etc. While the formal monetary arrangements differed in the two countries (Argentina had a currency board-type system while Brazil had a crawling band), both exhibited similar characteristics while international conditions were favorable. Once the latter changed (as in 1998, for example), Argentina's system proved to be more resilient than Brazil's, but eventually both collapsed. The remainder of this section makes a brief synthesis of the crises that took place in Mexico, Brazil, and Argentina in the 1990s.

Mexico, 1994-95

While the sheer magnitude of the current account deficit in Mexico alarmed some observers in 1994,[288] other indicators pointed at a more sustainable macroeconomic situation. In particular, (a) export growth averaged 8.7% per year in 1989-93; (b) based on standard international comparisons, foreign indebtedness was moderate relative to exports (184%) and low relative to GDP (36%); and (c) since FDI financed a growing proportion of the current account deficit, both indebtedness ratios were falling.

Whether the current account deficit was an important contributor to the Mexican crisis or not, the immediate trigger of the crisis was not the deficit per se but some policy mistakes made in response to unexpected political shocks such as the Chiapas uprising and the Colossio assassination in 1994. These mistakes were the attempt to stop interest rates from rising by sterilizing capital outflows through monetary expansion and the government's handling of the December 1994 devaluation. As a result, a run on Mexico's short-term government liabilities, particularly treasury bills denominated in pesos (Cetes) and dollars (Tesobonos), took place in the last week of the year. After some initial hesitation and loss of reserves, the government floated the peso, which lost 35% of its value relative to the US dollar in one week. The IFS responded by arranging a $52bn rescue package, which allowed the government to retire most of the maturing government debt, at which point the exchange rate stabilized. Since then, Mexico has been pursuing responsible monetary and fiscal policies, targeting inflation at low levels and letting the nominal exchange rate to float. In the area of public debt management, the objective has been to reduce exposure to both exchange rate and rollover risk. Today, most of Mexico's public debt today is denominated in pesos and its duration is much longer than when the tequila crisis took place.

Ten years after the crisis, there is still some disagreement about its causes. Williamson (1995) compared the Mexican crisis with the one that struck Chile in 1982-83. In both cases, the

---

[287] Stiglitz (2003) uses this term to characterize the buoyancy of capital flows to emerging markets during a good part of the 1990s.

[288] See, for example, Dorbusch and Werner (1994). Their main concern stemmed from the fact the current account deficit was high despite growth performance being unimpressive: between 1987 and 1994, GDP grew only 2.8% per annum.

current account deficit grew significantly before the crisis (in Chile it was 14% of GDP in 1981), notwithstanding the fact that the fiscal balance had improved significantly, too. Just as the Chilean peso was perceived to be overvalued in 1981, so was the Mexican peso in 1994. Finally, after a difficult adjustment period complicated by the increase in international interest rates, both economies were able to take off. For Sachs, Tornell, and Velasco (1996), however, the similarities end there. Noting that the crisis started as a run on government liabilities at a time there was no fundamental fiscal imbalance, these authors contend that the crisis was primarily due to a panic. In all likelihood, the crisis resulted from several causes, including excessive private consumption, bad monetary policy, and an international financial panic.

Brazil, 1998-99

The Russian crisis of 1998 had a strong contagion effect in Latin America. At least three countries in the region (Brazil, Ecuador, and Argentina) can be regarded as direct or indirect casualties of Russia. For more than four years, Brazil exchange rate had depreciated slowly within a narrow band. This policy had allowed the country to control inflation between 1994 and 1998, albeit at the cost of some real exchange rate misalignment and high domestic interest rates. Concerns about the exchange rate mounted after the Russian crisis and, by the end of 1998, domestic interest rates were phenomenally high.

In unfolding the Brazilian crisis, the exchange rate system, the current account deficit, and the domestic public debt played important roles. The perception that the Real was overvalued caused real interest rates to be persistently high. This and sluggish GDP growth resulted in very unstable public debt dynamics. Between 1994 and 1998, the net stock of public debt increased from 28% of GDP to 42%. In addition, the main holders of domestic public debt were local banks, which funded themselves partly through foreign correspondents' credit lines. The unstable debt dynamics threatened to provoke the suspension of those lines feeding not only fears of devaluation but also fears of private default. In this context, the announcement by the governor of the state of Minas Gerais, Itamar Franco, that his state would suspend debt payments to the national government was one of the possible triggers of the crisis.

The way in which Brazil solved the crisis was threefold: (a) it devalued and then floated the domestic currency; (b) it signed an emergency agreement with the IMF, which provided immediate liquidity assistance; and (c) it obtained a rollover commitment from foreign banks on their lines of credit to local financial institutions. Together, these measures stopped the run against the government debt and cause the domestic interest rate to plummet. In addition, real depreciation, by drastically cutting primary spending in real terms, caused an improvement in the primary budget balance (from -1% of GDP in 1998 to 3.2% in 1999). After that moment, the primary surplus continued to increase and, by 2004, it had reached 4.6% of GDP.

Unlike in Mexico, however, government debt continued to grow and its composition is not very different than in 1998. In 2000, the gross debt of the public sector represented 69% of GDP, 78% of it was domestic, and 75% of the latter was indexed either to the daily inter-bank interest rate (Selic) or to the nominal exchange rate. Because of this public debt dynamics remain unstable, real interest rates are still high, and GDP growth continues to be sluggish.

Argentina, 2001-02

The convertibility regime lasted almost 11 years. Besides stabilizing the economy and raising output by more than 50% between 1990 and 1998, "convertibility" generated significant financial deepening. However, this was only in US dollars since despite the long lasting stability of the peso Argentina was unable to develop a long-term yield curve in pesos like Chile had done before or like Mexico did in recent years. Hence, the economy became exposed to the risk of devaluation, which due to the mismatch between asset and liabilities on the part of most borrowers also exacerbated the risk of default. These risks increased considerably between 1998 and 2001 owing to the reduction in capital inflows to emerging

markets after the Russian crisis, the appreciation of the US dollar vis-à-vis the euro and the yen, the devaluation of the Brazilian real, and the collapse in the prices of Argentina's main commodity exports.

Another weakness of Argentina was fiscal.[289] During the 1980s, the public sector accumulated fiscal skeletons, including unpaid bills to contractors and a rising debt with provincial governments and pensioners. Between 1991 and 1994, the government was able to stop the accumulation of these liabilities while balancing the fiscal accounts. The budget situation exhibited a temporary reversal in 1995 due to the contagion effect of the Mexican crisis, but one year later it was back to normal. In 1997, however, several provincial governments including that of Buenos Aires, the largest province in the country, started to increase spending ahead of the 1999 presidential and gubernatorial elections. This fiscal expansion was financed through borrowing, mainly from domestic banks.

The surveillance of the IFS failed on many grounds during that period. First, it failed to realize that while the national government was meeting fiscal targets agreed under several standby programs from 1997 to 1999, several provincial governments had abandoned fiscal discipline. This happened because, unlike in Brazil, fiscal targets did not include the provinces. Second, the IFS failed to anticipate that the strength of the US dollar was likely to cause excessive real appreciation for the Argentine peso vis-à-vis the euro and the Brazilian real and that this was going to hurt the production of tradable goods. Had the government re-pegged the peso to a basket of currencies more consistent with Argentina's foreign trade in 1996 or 1997, this problem could have been avoided. Finally, the IFS failed to recognize the need for public debt restructuring in 2000, when it was obvious that, due to increasing interest rates on new bond issues and a declining real output, the dynamics of the debt were unstable. Instead, it recommended increases in distortionary taxes, which exacerbated the recession making the debt situation even more unsustainable. Finally, after two IMF rescue packages, a voluntary debt exchange, and additional fiscal austerity measures failed in 2001, a financial crisis finally ensued in the last quarter of that year. As in previous crisis episodes in Argentina, the worst manifestation was a panic run on the domestic banking system.

The reaction of the government was twofold. First, to prevent the devaluation of the peso and the further loss of international reserves, the government introduced exchange controls. This was necessary as a temporary measure since, given the high degree of dollarization of public and private sector liabilities a large devaluation was guaranteed to trigger defaults followed by disorderly debt workouts. Second, to restore long-term fiscal solvency the authorities launched a plan for an orderly restructuring the public sector debt, which consisted of two phases. The first phase affected $55bn worth of domestic public debt and was completed in November 1, 2001. Local institutional investors, including banks and pension funds, agreed to have their government securities swapped for "guaranteed loans." These instruments were not tradable, had longer maturities than the restructured bonds, and carried significantly lower interest rates. But, in exchange for this redefinition in their terms, they were granted senior status over other sovereign obligations, as their repayment was guaranteed by the entire collection of the financial transactions tax.

But, before the government could implement the second phase of the restructuring program, which would have taken care of the remaining $42bn of national public debt, which was mostly in the hands foreign investors, two things happened that derailed the government's efforts to produce an orderly exit to the crisis. First, in mid-November, the IMF announced that it would not make the second disbursement under the existing program. This had been agreed only three months before and was supposed to include $3bn for debt restructuring

[289] Unlike in Chile, Mexico and Brazil, however, the current account deficit (less than 2% of GDP) was not an issue.

upon the recommendation of the US Treasury.[290] Second, in December several politicians opposed to the President Fernando de la Rua (including the governor of the province of Buenos Aires, Eduardo Duhalde) participated in a conspiracy to remove him from office by instigating riots and causing social mayhem. Morbidly, the opponent's plan succeeded when, on December 20, 2001, the police killed 21 demonstrators causing the president to resign and be replaced by an interim figure and then by Mr. Duhalde.

The outcome could not be worse. In January 2002, Argentina defaulted on the sovereign debt and abandoned the convertibility regime. Within a few months, the peso lost three fourths of its value. The new government forcibly converted the dollar-denominated loans and deposits of the banking system and the guaranteed loans into pesos, thereby imposing a drastic haircut on domestic financial assets that destroyed the contractual base of the economy. GDP contraction in 2002 was of the same magnitude of the one that had accumulated in the previous three and a half years of recession. Legal contacts between the government and the privatized utility companies were repudiated. It took more than three years to reach an "agreement" with domestic and foreign sovereign creditors, which covers only 75% of them to date.

Unsurprisingly, after hitting bottom in the second quarter of 2002, the Argentine economy was able to recover quite strongly. The main reasons for that were two: exceptionally favorable international conditions and the unprecedented expansion of productive capacity achieved in the previous decade. While it has become commonplace to praise the current government, led by President Kirchner, for implementing a tight fiscal policy that avoided the resurgence of inflation, the truth of the matter is that the improvement in the primary balance that took place so far is not sustainable and may have already reached a limit. It was possible because the devaluation of the peso caused a sharp reduction in real expenditures. However, in the case of public wages and pensions this is already being reversed due to union demands or to improve living conditions among the poorest members of the population. In addition, fiscal skeletons are everywhere: in the pension system, in the international disputes brought by privatized companies before ICSID, in the domestic financial system, and in the 25% of sovereign debt holdouts, which still remain. Notwithstanding the precariousness of the fiscal situation, the IFS seems content because, unable to learn from past mistakes, it continues to focus myopically on cash-flow budget balances.

[290] The IMF decision was the culmination of a series of unfortunate international events that exacerbated investor panic and maximized the damage of the crisis, including (a) the Meltzer Commission's criticism to the IMF and its emphasis on the moral hazard problem that its programs were supposedly creating; (b) US Secretary Paul O'Neil's undiplomatic statements about Argentina's proclivity to get in trouble, suggesting that help for Argentina was not on the way; and (c) the public comments of the IMF's managing director about a future sovereign debt restructuring mechanism (SDRM) that, regrettably, would not be ready in time to help Argentina (Cavallo, 2004).

Box 3.1 Hyperinflation in Argentina

During most of the 1980s, Argentina's access to foreign capital from private sources was virtually inexistent since frequent devaluations and the increase in world interest rates had pushed the country to external insolvency. The government which took office in 1983 (led by President Alfonsín) did little to improve the situation. Hence, the only way in which it could finance its own deficit without accelerating inflation was by borrowing from the local banks. To reduce borrowing costs, the government reintroduced some forms of financial repression. Instead of interest rate controls, which were opposed by the IMF and would have resulted in additional disintermediation, the government relied on other instruments, such as mandatory bank investments in public debt instruments (including poorly remunerated reserve requirements) and exchange controls (i.e., restrictions on the selling of foreign exchange by the central bank). The latter were needed to discourage capital flight since one of the effects of mandatory investments at below market interest rates was to reduce the interest rate banks could pay to depositors.

Two problems became immediately obvious. First, the interest rates private borrowers were charged on their loans (if they were lucky enough to get any) were extremely high, with all the undesirable adverse selection and moral hazard implications that had. Second, because of capital controls a parallel exchange rate market had emerged, which created additional distortions for the economy. In response to these problems, the Argentine government eliminated exchange controls in 1985, hence reunifying the exchange rate system and setting up a financial system that exhibited two main characteristics" (a) a crawling peg supported by high domestic interest rates; (b) a requirement that banks held most of their liabilities at the central bank in the form of fully remunerated deposits and other mandatory investments. While the intention was to introduce greater stability in financial markets, the actual effect was to leave inflation undetermined. This is because, in such a financial system, bank "reserves" account for most of the money base. Exogenous increases in expectations (e.g., the anticipation of higher inflation) are instantly accommodated by the central bank, as the latter prints money to pay interest on money. Not surprisingly, in 1989, political uncertainty associated with that year's presidential election caused inflation to accelerate resulting in the first of two bouts of hyperinflation seen by Argentina in recent years.[291]

The second bout occurred a year later, after an unsuccessful attempt by the new administration (led by President Menem) to control the monetary situation in 1990. This attempt had started in December 1989 with the so-called "Bonex Plan," a forcible conversion of short-term peso deposits into long-term dollar-denominated government bonds (Bonex '89). With this plan, the government was able to stop hyperinflation momentarily by cutting the main source of growth in the money supply, which was the payment of interest on bank reserves. The conversion resulted in a sharp reduction in the value of domestic savings since the 10-year Bonex traded at only one fifth of its face value. More worryingly, by substituting bonds for deposits, the plan also wiped out most of the money supply. Now, the financial sector was vulnerable in a more conventional way: the economy was heavily dollarized, the exchange rate was flexible, and the monetary base was insignificant. For a while, the government was able to keep the exchange rate and inflation under control thanks to the fact the exchange rate was undervalued and the government avoided printing money to finance the budget deficit, essentially by accumulating arrears. Eventually, however, a large amount of money had to be issued. This caused a large devaluation, which in turn triggered hyperinflation again at the end of 1990.

[291] The uncertainty was due to the fact that most Argentineans mistakenly perceived the winner of the election, Carlos Menem, to be a populist.

4. Knowledge Creation, Adaptation and Dissemination

The causes of Latin America's maladies are manifold, and the account provided up to here has touched upon some of them. Alongside those factors, however, a technological dimension also emerges.[292] In Latin America, like in other parts of the world, differences in per capita income are rooted in the productivity with which factors are used rather than in factor endowments. Technological change, indigenous skills, and their interactions are key elements underneath total factor productivity growth. Hence, a crucial challenge faced by Latin American countries is to develop the capabilities to generate and manage technological changes and innovation. In this section, we take a closer look at the institutions that play a central role in the creation, adaptation and dissemination of knowledge and innovation in Latin America.

National Innovation Systems

Technological innovation is the outcome of the interplay among different social actors, including firms, universities, research centers, and the government. The complex set of relationships among them, including national practices, policies, and institutions, defines a country's National Innovation System (NIS).[293]

Scientific and technological institutions have a long history in Latin America, but it was not until the 1950s that governments introduced science and technology (S&T) policies. During the period of import substitution industrialization (ISI), innovation systems leaned heavily upon the public sector. Most research and development (R&D) activities were predominantly carried out by research centers funded by the government and the state-owned enterprises (SOEs). These activities were aimed, fundamentally, at adapting imported technologies to local conditions. In the private sector, the protectionist policies favored by the ISI model reduced innovation incentives.

Although there is nothing intrinsically wrong about R&D being funded publicly rather than privately,[294] in Latin America this may have contributed to a lack of synergies between the public and the private sectors and the resulting alienation of the scientific community from the businesses and their technological needs. Neither the universities nor the private sector have developed a culture of developing linkages with one another in the pursuit of technological knowledge and adaptation. More often than not, universities and university researchers have set their own research agendas responding to their individual tastes rather than to national or local business priorities.

In recent years, privatization and trade liberalization allowed firms in the region to upgrade their technological standards. However, the same circumstances rendered some local R&D and engineering activities no longer necessary (Cimoli and Katz, 2002). Thus, Latin America moved toward a more modern production structure, closer to international productivity standards but less intensive in the use of local technical knowledge and engineering services (Melo, 2001).

The existing literature coincides in rating Latin America technological innovation performance as poor and its NISs as weak and dysfunctional.[295] Although there has been some progress in recent years, it is insignificant compared to the one recorded in Asia's newly

[292] Among recent publications that elaborate on this issue are Alcorta and Peres (1995), IADB (2001), and de Ferrantis *et al.* (2003).
[293] Mani (2001).
[294] In theory, government subsidization of R&D is a first-best policy to mitigate the undersupply of knowledge innovation. The problem is in the implementation, hence the reliance on IPR protection as a second best.
[295] See, for example, De Ferrantis *et al.* (ibid).

industrialized countries (NICs). The World Economic Forum's Technology Index, a component of the Global Competitiveness Index, shows Chile leading the region in 2004.[296] Besides Chile, two other Latin American countries (Brazil and Mexico) were positioned in the first half of the ranking, albeit far below the Asian NICs.[297] The picture becomes worse if, instead, we look at the number of patents granted by the United States Patent and Trademark Office (USPTO). By this yardstick, the leading Latin countries are Mexico, Brazil, and Argentina. While the absolute number of patents granted to these three countries increased fivefold from 1977-82 to 1990-2003, their share in the total number of patents issued by USPTO remained practically constant (0.14%), notwithstanding the fact that, during the same period, the share of foreign patents increased from 38% to 45%. Compared to Israel, Singapore, Taiwan, and South Korea, the number of patents granted to Argentina, Brazil and Mexico in 1990-2003 was negligible, despite their being comparable some thirty years before.

Another useful parameter to gauge knowledge use and adaptation in newly industrialized countries is the Index of Technological Specialization (ITS) developed by Alcorta and Peres (1995) for the period 1977-94. This index attempts to capture the contribution of a particular country or region to changes in world trade patterns affecting high- and low-technology products. The index shows, for example, that G7 nations have been losing ground as net exporters of high- and low-tech products in favor of four other groups of less developed nations: the traditional Asian tigers (Hong Kong, South Korea, Taiwan, and Singapore); the new Asian tigers (China, Indonesia, Malaysia, and Thailand), the European NICs (Ireland, Greece, Portugal, Spain, and Turkey), and the Latin American NICs (Argentina, Brazil, Chile, Mexico, and Venezuela). In Latin America, however, the only country that exhibited a rising trend in the high- and low-tech export share over the sample period was Mexico. If this country is taken out of the sample, the index level for Latin America is as low in the 1990s as it was for the new Asian tigers in the 1970s. These findings confirm the poor technological performance, little upgrading, and lack of international competitiveness of Latin America's manufacturing sector.

Finally, among the indicators that reflect a country's commitment to becoming a "knowledge society" is the amount of financial resources devoted to R&D. With the exception of Brazil, whose R&D investment was above the region's average in 1990-2002 (0.87% of GDP versus 0.52%, respectively), Latin America' financial commitment to knowledge is well below that of the world as a whole (2.12%). The good news, however, is that private sector involvement in R&D financing is on the rise: in 2002, private corporations funded 37% of R&D, up from 22% in 1990.[298]

Technological upgrading is unlikely to occur unless the necessary indigenous skills are in place. Here, too, Latin America exhibits a serious deficit. Relative to the Asian tigers, the education system is of lower quality and delivers fewer years of schooling for the adult population with considerably less equitable access, particularly at the secondary and tertiary levels. Surprisingly, there is no shortage of scientists and engineers in Latin America. Rather, the problem is on the demand side: since, traditionally, the private sector has not been engaged in innovative activities, most employment opportunities for well-trained, highly educated scientists and engineers are still found in the universities and the public sector.

Fostering Knowledge through International Research Networks

Global competitiveness ultimately implies continuous learning and innovation, hence the need for an active government role in supporting technological diffusion and adaptation. Different

[296] The TI is constructed differently depending on the country's stage of development. Innovation is given more weight in industrialized countries since these are closer to the technological frontier. For developing countries, a technology transfer subindex is also considered.
[297] Chile was ranked #32 against Taiwan's #2, Korea's #9, and Singapore's #11.
[298] For comparison, the share is 45% in Canada and 65% in the US.

policies are capable of enhancing NISs, among them innovation clusters and international research networks.

Innovation clusters are groups of firms (mainly SMEs), research centers, and investors, which work in close geographical proximity to create new products and technologies in areas where business success critically depends on the availability of knowledge and the capacity of private entrepreneurs to absorb it. A key feature of an innovation cluster is, thus, the intensity with which the cluster's components exchange knowledge and information. In their recent study on clusters in Latin America, Bortagaray and Tiffin (2000) identify industrial clusters in many countries (including Brazil, Costa Rica, Argentina, Mexico, Cuba, and Uruguay), and in various sectors (e.g., tourism, agribusiness, petrochemicals, textiles, and fruit production). Few of these clusters, however, are true innovation ones. Some of them, such as those in the natural resources and auto parts industries, do not have the standard features that characterize "innovation" clusters. Their focus is on importing foreign equipment rather than on creating knowledge. Others, such as the metal-mechanic, textile, garment, and leather clusters, have greater potential for innovation but assign limited resources and efforts to it. Finally, the clusters that have the greatest potential to be innovation ones (such as those in the biotechnology, software, advanced materials, and environmental technology areas) are still in their infancy (see the next subsection).

One of the problems of Latin American clusters is that the people involved in them are, typically, unaware of the existence of freely available technologies. Thus, a central part of the public policy agenda should be fostering connections between them and the international scientific and business communities. Two types of international connections are usually highlighted: among institutions and among individuals. Connections between local universities, research centers, and firms with counterpart institutions abroad create "external antennas" that facilitate knowledge diffusion. As shown in the next subsection, a successful experience along these lines took place in Chile, in the fruit sector. Connections among individuals take different forms ranging from professional exchange programs to the "brain gain" and "brain circulation network" approaches to the *diasporas* (see the last section). As suggested by Kuznetsov (2005), networks of educated expatriates can become entry points into knowledge-intensive value chains. The examples of Taiwan, India, China, and Israel in this area are emblematic. Despite its importance, however, the issue of strengthening the international links of local research institutions has not received enough attention in Latin America.

Successful Examples of Knowledge Diffusion and Adaptation in Latin America

The fact that Latin America has been less successful than Asia and peripheral Europe at adapting and diffusing knowledge does not mean that the region is devoid of success stories. This subsection is a remainder that, even within Latin America, there are many good examples to learn from.

Mexico and the Green Revolution

In 1943, the Rockefeller Foundation (RF) and the Mexican government launched a cooperative agricultural research and training program aimed to increase the production of maize, wheat, and beans, which later became a model for many other developing countries. By that time, Mexico was importing a significant proportion of the grains it consumed (50% in the case of wheat) as local yields were poor. The individual at the helm of the RF program was Dr. Norman Borlaug, recipient of the 1970 Nobel Peace Prize, and considered the father of the Green Revolution. The program involved scientific research in genetics, plant breeding, plant pathology, entomology, agronomy, soil science, and cereal technology. Improvements obtained thanks to research were applied in the farms and incorporated into production programs. Mexico enjoyed remarkably positive results very soon, and became self-sufficient in wheat production in 1956. Twenty years of sound research led to a breakthrough in wheat production that diffused to other parts of the world. In the 1960s the new seed varieties

developed in Mexico were imported by India and Pakistan. As important as the use of these new seeds was the transfer of the production technology that enabled these new varieties to attain their high-yield potential. Thus, Pakistan's annual wheat production rose from about 3.4 million tons in pre-green revolution years to 7.3million tons in 1970 and to more than 19million tons in 2004. India's annual wheat production went from a pre-green revolution record of 12.3 million tons in 1964-65 to 20 million tons in 1970, and 72 million tons in 2004.

The revolution extended to other developing countries including China in the 1980s and to other crops such as rice. The increase in volume has been accompanied by a significant increase in yields, which translated into higher incomes to the farmers who applied those seeds and breeding techniques. Although the greatest impact was in Asia, it is estimated that, by the 1990s, about 40% of all farmers in the developing world were using green revolution seeds.

Two distinctive features of the green revolution can be highlighted: the development of indigenous skills in the recipient countries and the dissemination of the existing knowledge. Dr. Borlaug pointed out that one of the main obstacles encountered by recipient countries was the scarcity of well-trained human resources. This led to the creation of international research centers, which specialized in the crops that were regionally important. The International Rice Institute in the Philippines, the International Center for Maize and Wheat Improvement in Mexico, the International Center of Tropical Agriculture in Colombia, and the International Institute of Tropical Agriculture in Nigeria, established in the 1960s, constituted an early worldwide network of research and training centers, which attempted to solve the practical problems farmers found in their activities while disseminating the benefits of research in the shortest time and at the minimum cost possible. These institutions were born as joint efforts of local governments and international donors such as the Ford, Rockefeller, and Kellogg Foundations, together with the Canadian International Development Agency and, down the road, received the support of USAID, UNDP, and IADB. In 1971, the Rockefeller and Ford Foundations, the World Bank, FAO, UNDP, and the USAID established the Consultative Group for International Agriculture Research (CGIAR) with the objective to fund and expand the international agriculture research system. Since then, CGIAR has been the main source of seed improvement developed from conventional breeding methods. Research was conducted with the explicit aim of creating technologies that could be transferred internationally. As an example, the improved germoplasm was made freely available, therefore becoming an international public good.[299]

[299] Until the 1990s, the involvement of the private sector in plant improvement research was limited. This situation changed with the appearance of hybrids and the admission by several industrialized countries of patents on artificially obtained genes and genetically modified plants. The incentives for the private sector increased further with the approval, during the Uruguay Round, of patent protection for biotechnology inventions and plant varieties. Nowadays, the green revolution has been replaced by the "gene revolution." Most agricultural biotechnology research is being carried out by private firms based on developed countries. As a consequence, transgenic technologies are mostly proprietary technologies, and are transferred internationally primarily via market mechanisms. Several issues have arisen from this new setup ranging from access and ability to save seeds by farmers to protection of biotechnological intellectual property in developing countries and the patenting of indigenous crops by TNCs without compensating the communities that make them available. In particular, concerns have been raised regarding whether poor farmers in developing countries would be able to benefit from technological progress either because the innovations they need are not available or because they are too expensive and thus out of their reach. As FAO has noted, this new production paradigm has relevant implications with regards to the kind of research that is undertaken, the technologies that are developed, and the way they are used. This poses new challenges to developing countries and the international community in terms of designing a system of technology flow that, while preserving incentives to innovation by the private sector, is responsive to the needs of farmers, especially poor farmers, in the developing world (for more on this, see Bravo-Manríquez, 2005).

Chile's Successful Promotion of Fruit Production and Exports
In 1965, the University of Chile and the University of California established a long-term program aimed at fostering technical cooperation and upgrading the quality of graduate training. This agreement first complemented and then significantly expanded the efforts initiated in the early 1960s by CORFO, a Chilean government institution, which included production feasibility studies and export promotion. As a consequence, Chile was able to create the knowledge infrastructure necessary to transfer and adapt technologies created elsewhere and, later on, to upgrade and improve technologies in all stages of the production chain. As noted by De Ferranti et al. (ibid), while most of the innovation was carried out by the private sector the leadership and intervention provided by the government was critical as it established the enabling environment that allowed private initiative to flourish. Also, in contrast to the typical industrial policies applied in Latin America, CORFO established clear objectives and was able to provide coherent and stable long-term support.

Brazil's Experience with Clusters and Incubators
Brazil invested heavily in promoting clusters using business incubators as the main vehicles. Today, the country counts over 200 business incubators, of which 70% are linked to universities established in the Southern and Southeastern part of the country. Brazilian incubators host more than 1,200 firms, which employ 5,000 people and have already graduated some 350 enterprises. Of all the firms hosted by Brazilian incubators, about 33% are in the computer software industry, 14% in electronics, and 9% in biotechnology and chemistry. Incubators receive strong government support but have also private and non-for-profit sponsors.

In 1995, the Universidad Federal do Rio Grande do Sul (UFRGS) and the Prefeitura Municipal de Porto Alegre launched the Porto Alegre Tecnopole Project with the objective of transforming that metropolitan area into a knowledge-based economy. The main components of the project are a technology extension service for SMEs, connections with other business incubators in the region, a science-technology campus, links between the two main regional universities and the city's industrial park, and specific business projects in the fields of IT and health. Three incubators nurture new technology-based firms. A distinctive feature of the project is the existence of a private venture capital firm. This particular cluster, which focuses on the health and software sectors, has achieved many goals so far including a clear sense of mission and shared goals and a distinctive S&T base. It has established linkages between researchers, inputs providers, and markets that are facilitated by cluster managers and incubators. Nevertheless, the project has yet to demonstrate its capacity to produce profitable, self-sustained businesses and regional development. In its current stage, this cluster can be regarded as a proto innovation one.[300]

The Case of Embraer
Embraer, the Brazilian aircraft producer, has become a commercial success story and is responsible for Brazil's presence in the global trade of air transport equipment. The firm has almost tripled its net exports from US$266 million in 1997 to US$750 million in 2000. Born as a state-owned firm, Embraer enjoyed strong government support, including tax exemptions, import protection, government contracts, subsidized loans, and grants, in addition to being exempted of local content regulations, which are quite pervasive in Brazil's protected industrial environment. As a result, the import content in Embraer's products is quite high (about 50% in the 1980s, reaching more than 60% in the late 1990s).

From the outset, the company's strategy focused on the foreign market. Its export orientation gave it an early exposure to external markets resulting in a high ratio of exports to production (ranging from 50-60% in the 1980s to 95% at the beginning of this decade). Embraer began

[300] Bortagaray and Tiffin, (2000).

producing aircrafts by entering into agreements with foreign manufacturers, using foreign technologies while simultaneously developing in-house R&D activities. Although some of the initial prototypes were commercial failures, the company was able to improve its technological capacity and soon it began producing planes that were technically viable and delivered good operational records. Heavy indebtedness led to the privatization of the company in 1994, at which time the government took over the debt and reduced its equity share to less than 7%. After this, Embraer became a world-class manufacturer of commercial planes and a strong competitor in the world market. Alhough this took place at a high cost for Brazilian taxpayers over the years (a full cost-benefit analysis has not yet been undertaken), the venture can be regarded as successful relative to similar projects in other Latin American countries and has the potential of becoming a full success story if things continue to go well.

Cooperative R&D in Petrobras

Cooperative R&D can help firms in developing countries to become part of innovation processes that take place at the technological frontier. A case in point is Petrobras. As Furtado and Gomes de Freitas (2000) have shown, this company used cooperative R&D to gain access to sub-sea boosting technology and eventually became a key provider of the technology. Facing the challenge to produce oil in deep waters offshore, Petrobras entered into agreements with other world companies to develop a novel sub-sea boosting technology. During the process, Petrobras associated with a Brazilian university to develop an original patentable concept of a separator model, was able to install the first electrical submersible pump in the world, and broke the record for its adoption in deep waters. Several factors led to the positive outcome achieved by Petrobras: it was a large firm with a strong technological base and innovative culture, it made a consistent and remarkable internal learning effort, and it demonstrated flexibility to switch projects, contractors, strategic partners, and agreements according to the evolution of its technological learning process.

Intellectual Property Rights

IPRs can be divided into two main categories: copyrights and industrial property rights. Copyrights aim at rewarding creative work and protect the rights of authors of literary and artistic work, including computer programs. Industrial property rights, on the other hand, refer to the protection of trademarks and geographical indications as well as inventions, industrial designs, and trade secrets.

The TRIPS agreement is a far-reaching attempt to narrow the gaps in the way IPRs are protected by different countries around the world, bringing them under common international rules. The system works by setting minimum levels of protection to which each member country of the WTO has to commit. The stated objective of the agreement, besides the protection and enforcement of IPRs, is the contribution to promoting technological innovation as well as the transfer and dissemination of technology to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare. The Agreement is divided in seven parts, and covers topics ranging from general provisions and basic principles to standards concerning the availability, scope and use of IPRs; enforcement, acquisition and maintenance of IPRs; dispute prevention and settlement mechanisms; and transitional and institutional agreements. In cases where the licensing practices of the right holders negatively affect trade, prevent the transfer of technology, or constitute an abuse of IPRs that harm competition in the relevant market, country members are allowed to take corrective actions through so-called “compulsory licensing.”

Box 4.1 TRIPS and Latin America: An Overview

The Agreement on Trade-Related Aspects on Intellectual Property Rights (TRIPS) was negotiated and approved during the Uruguay Round (1986-94) introducing IPR rules into the multilateral trading system for the first time. Historically, the extent of IPR protection and enforcement has varied widely from country to country. As this diversity led to tensions in international economic relations, TRIPS was born as a means to reduce such differences and provide minimum international standards for the protection of IPR.

Under article 63.2 of TRIPS agreement, WTO members are required to notify the laws and regulations pertaining to IPR to the Council for TRIPS, which in turn is required to review the operation of the agreement. As a consequence, most Latin countries have been reviewing their IPR legislations since 2000. During TRIPS proceedings, the individual countries have to provide statements and address the questions presented by other WTO members. Latin American countries have made significant efforts to comply with the TRIPS agreement. But, at the same time, some of them have been calling for a more leveled playing field where the legitimate interests of the developing nations are also taken into account. This section provides a succinct overview of the steps taken by a selected group of Latin American countries in this area.

Argentina: The TRIPS agreement was enacted and became effective on January 1, 2000. Consistent with it, Argentina's normative body provides protection for copyrights and related rights, trademarks, geographical indications, industrial designs, patents and utility models, topographies of integrated circuits, undisclosed information including coverage of agricultural chemical products, and the rights of breeders of new plant varieties. As member of WTO, Argentina honors the national treatment and most-favored-nation clauses, which cover all forms of intellectual property, patents and utility models, industrial designs, trademarks, appellations of origin and indications of source. Regarding copyright and related rights, the protection afforded by domestic legislation makes no distinction between national and foreign creations, thus guaranteeing national treatment to all right holders. In the case of plant varieties, the applicable legislation is the 1978 Act of the Convention of the International Union for the Protection of New Varieties of Plants (UPOV) and the provisions of the Law on Seeds and Phytogenetic Developments. IPR laws make no distinction between nationals and foreigners, or between foreigners from different countries, apart from the exceptions allowed under the TRIPS Agreement. Argentina introduced the necessary amendments to its legislation on those aspects that were not already in compliance with TRIPS, and regards itself as having a comprehensive, clear, secure and effective intellectual property rights regime.

Bolivia: It entered the modern age of intellectual property in the 1990s by acceding to WIPO and ratifying the Paris and Bern Conventions. The TRIPS agreement is, currently, part of Bolivia's domestic law since the country is a member of the WTO and has ratified all the WTO agreements. In the late 1990s, Bolivia put in place mechanisms and institutions to meet its commitments under TRIPS, including the creation of the National Intellectual Property Service (SENAPI), and ratified UPOV. Nonetheless, Bolivia has also emphasized that a large informal sector lives under conditions of extreme poverty, making it difficult for the government to fully comply with international commitments. Honoring its commitments in the framework of the WTO presupposes a steep price from an economic, political, and social point of view that is not commensurately matched by the benefits derived from the international system. In response, Bolivia calls for international actions aimed at preserving Bolivia's genetic and biological heritage while safeguarding its traditional knowledge.

Brazil: The government of Brazil does not consider the protection of IPRs as an end in itself. Patent regulations seek to ensure that the protection of rights of patent holders is conducive to fulfilling the need of industries and society in general to have access to new and improved knowledge. IPR protection was first introduced in Brazil at the beginning of the 19th Century. The country is one of the original signatories of the Paris and Bern Conventions and a founding member of WIPO. TRIPS was incorporated into Brazilian legislation in 1994 and enacted in 1996 via the Law on Industrial Property (LPI). Brazil has eliminated discrimination of patentability in all fields of technology, thus allowing coverage for pharmaceutical and chemical products and processes. The only possible exclusions now and in the future are those allowed by TRIPS. The country notified in a timely and complete manner its national legislation on IPR to the TRIPS Council in February 2000 and notes that its legislation on IPR is fully consistent with the provisions of the TRIPS agreement. Notwithstanding, Brazil considers there are provisions of the agreement that require clarifications and even modifications to avoid negative effects in areas such as health, technology transfer, environment, nutrition or other development needs.

Box 4.1 TRIPS and Latin America: An Overview (continued)

Chile: Chile enacted a significant number of legal reforms in order to comply with the obligations stemming from the Marrakesh agreements. Thus, it not only amended existing legislation but it also introduced new rules regarding rights, which were previously unregulated. Existing legislation with respect to plant varieties is totally consistent with TRIPS. The new law on industrial property, research and innovation, was published as recently as March 2005. With this new legal framework Chile will fully comply with the obligations stemming from both TRIPS and the Free Trade Treaty signed with the United States.

Mexico: The normative framework governing IPR is provided by the Industrial Property Law (LPI), which entered into force in 1994. As in the case of Chile, domestic legislation is not only fully consistent with TRIPS but it conforms to the more demanding requirements of the NAFTA, the North American Free Trade Agreement with the US and Canada. Mexico has also reformed its legislation in order to increase the penalties and strengthen enforcement.

Peru: This country protects IPRs through a combination of international, regional, and domestic provisions. It has harmonized its legislation to TRIPS and is committed to further develop a culture of respect for IPR internally and internationally. Peru is a signatory of TRIPS and the Bern and Paris Conventions. Its legal system covers copyrights and related rights, protects inventions through patents, industrial designs, trademarks, geographical indications, integrated circuits designs, and business secrets. It also provides the possibility to pursue administrative, civil and criminal actions to enforce IPR. Besides, it has established the Multisectoral Commission on Piracy, Counterfeiting and Forgery to coordinate efforts to combat wrongdoing and monitor compliance. Peru notes that its IPR protection scope has expanded to cover new rights, and thus advocates the extension of the IPR international regime to traditional knowledge. It has published a Draft Regime for the Protection of the Collective Knowledge of Indigenous Peoples, and understands that its beneficiaries should be granted legal standing to assert their rights in other countries.

The Agreement entered into force on January 1, 1995. Nonetheless, it stated special provisions for compliance of developing and least-developed countries and economies in transition, which were warranted different extensions in order to have the Agreement in place. As a matter of fact, developing countries and economies in transition were given, under certain specified conditions, 5 years, until 2000, whereas least-developed countries were allowed 11 years, until 2006, to conform to TRIPS. The Agreement determined, however, that patenting and other special provisions should be made available for pharmaceuticals and agricultural chemical products despite the extension. Nonetheless, WTO ministers at the Doha Ministerial Conference in November 2001 extended exemptions on pharmaceutical patent protection for least-developed countries until 2016.

The deadlines set by the Agreement have been met so far. As a matter of fact, developed nations complied with their 1996 deadline and developing countries did the same regarding their 1 January 2000 one. Least-developed countries must implement TRIPS by 2005, except for pharmaceuticals, as indicated before. Additionally, in August 2003, trade delegates to the WTO adopted the Agreement on the Implementation of Paragraph 6 of the Doha Declaration, allowing developing countries to import generic drugs to treat diseases that are public health hazards.

While Latin America has a long tradition of respect for IPRs (see Box 4.1), many countries in the region have voiced their concerns regarding the TRIPS Agreement. The two most pressing issues are the protection of traditional knowledge developed by indigenous communities over the years and the effect of TRIPS on technology transfers. Regarding the second issue, the fear is that TRIPS will not be able to fulfill the promise of facilitating access to technological knowledge. Regrettably, the empirical evidence suggests that far from closing, the technological gap has continued to grow since TRIPS was adopted.[301]

[301] See, for example, Correa (2000) and Adede (2001).

5. Environmental Cooperation

The Latin American and Caribbean (LAC) region currently faces a severe process of environmental decline, characterized by land degradation, unprecedented rates of deforestation, air, water and soil pollution, contamination of coastal habitats, increased water resource stress, urban sprawl and loss of biodiversity (PNUMA, 2004). Moreover, it is not exempt from the impacts of global climate change or ozone layer depletion—or from their causes either.

Fortunately, LAC countries are increasingly taking action to address many of the local and international environmental problems. A rapid institutionalization evolved with the creation of environmental ministries, the enactment of environmental legislation, an increase in protected areas and in environmental awareness (ibid). Moreover, the progressive ratification of major multilateral environmental agreements (MEAs) indicates the region's commitment to cooperative action. Yet, despite these achievements, many challenges lie ahead, especially in the global domain.

Protecting the Global Climate

A changing climate is expected to highly impact water resources, ecosystems, agriculture and plantation forestry, sea-level rise and human health in the LAC region.[302] Vulnerability is high and the adaptive capacity is very low, especially with respect to extreme weather events. Many of these impacts will fall heavily on the poorest segments of society.

Regional Contribution to Climate Change

The region's participation in global greenhouse gas (GHG) emissions is relatively low, and per capita values are 30% lower than the global average (PNUMA, 2004; World Bank, 2005). A limited economic growth during the last decades kept levels lower than they would otherwise have been.

Land-use changes (deforestation, agriculture and urbanization) constitute the most important sources of GHG, representing almost 67% of total GHG emissions in 2000. In many LAC countries (e.g., Brazil) emissions from land use changes are greater than those from fossil fuel combustion. For instance, while industrial processes contribute to 4.3% of world carbon dioxide (CO_2) emissions, the region contributes with almost 50% of the world's total CO_2 emissions arising from land-use change, especially deforestation (PNUMA, 2004). Economic pressure, coupled with ill-defined subsidies and incentives have led to the conversion of forests to agricultural lands and extensive cattle-ranching. In tropical and subtropical regions of South America, soy cultivation has become a key cause of land conversion (UNEP, 2003). Other causes include policies promoting highway development, settlement programs and large-scale projects (e.g., dams).

The energy sector (fossil fuel combustion, electricity production and transportation) is also an important source of emissions (approximately 29% of GHG emissions in 2000). The industrial and transportation sectors together accounted for over 60% of energy consumption in 2001 (PNUMA 2004). Per capita consumption remains 20% below world average and almost four times less than in developed countries (World Bank, 2005). However, energy consumption is more inefficient due to obsolete energy infrastructure and economic barriers to new technologies (PNUMA, 2004). For example, the Mexican energy sector has remained a state monopoly, leaving little room for private sector participation in power production. Coupled with insufficient public investment, power generation and transmission infrastructure are obsolete. Moreover power is subsidized, with rates being 30 to 49% lower than real costs leading to over-consumption (Chandler *et al.*, 2002).

[302] For a detailed description of the impacts, see IPCC (2001), pp. 699-734.

Regional Contribution to Climate Change Mitigation
While LAC countries have no formal emission reduction targets under the Kyoto Protocol, many have been adopting measures that, while not driven primarily by climate change concerns, reduce the growth of GHG emissions and promote sustainable development. In Brazil for instance, emissions in 2000 were estimated to be 11% lower than they would otherwise have been, due to a series of measures adopted to reduce its dependence of imported oil, diversify its energy mix, control the demand of energy, and promote the use of smaller vehicles (ibid).

The conversion to cleaner energy sources (e.g., natural gas) has also reduced the growth in emissions, even in countries like Mexico – a major CO_2 emitter from fossil fuel combustion. Other successful examples are also found in the areas of renewable energy sources, energy efficiency programs, technological development, transportation and agricultural practices (PNUMA, 2004).

Several conditions still favor the use of conventional fuels, hindering the full potential of the abundant renewable resources in the region. However, many countries are increasingly overcoming the barriers and promoting their use. Guatemala's 2003 Renewable Energy Incentives Law, is expected to "level the playing field" for renewable energy projects by providing economic and fiscal incentives (e.g., exemption of duty taxes on imports of new equipment, and various degrees of tax exemptions for implementing renewable energy projects). The PROINFA program in Brazil, by guaranteeing a minimum purchase of renewable-based electricity by the government-owned utility Electrobras, stimulates the development of biomass cogeneration, wind, and small hydro generators.[303]

With approximately 14% of the population without access to modern energy services, renewable energy is considered an attractive alternative. Many countries are advancing with rural electrification by providing subsidies (e.g., Chile provides subsidies of 60%-70% of the initial investment costs for off-grid rural electrification projects), rural concessions (e.g., Argentina, with the support of the Global Environment Facility (GEF) and World Bank (WB), gives exclusive power provision concessions for specified areas, combined with a uniform kWh subsidy) and by restructuring the rural energy subsidies (e.g., in Brazil the Diesel Subsidy Fund - Conto de Consumo de Combustiveis - may now also be used to invest in solar, wind, and biomass energy where these technologies are more appropriate).[304]

Energy saving efforts also provide important reductions in GHG emissions. Mexico undertook significant efforts during the 90s to improve energy efficiency, through the creation of the CONAE (National Commission for Energy Saving) and the Fund for Saving Electric Energy (Chandler et al., 2002; PNUMA, 2004). Colombia also implemented in 1995, the 'Efficient and Rational Use of Energy Programme' to introduce efficient lighting in the residential sector, with potential savings of 9,300 GWh by its tenth year of operation. In addition, energy savings in the industry sector are expected to reduce electricity consumption by 10% (United Nations Framework Convention on Climate Change, 2004).

Economic growth was accompanied by a growth in the vehicle fleet, making transportation one of the highest CO_2 emitting sectors in the region. Given its impacts on local air quality and health, several LAC countries have adopted measures to improve public transportation, substitute to cleaner fuels and develop new and cleaner vehicles. The City of Bogota, Colombia, as part of an integral transportation plan, launched a rapid bus transit system - the Transmilenio. Buses run on natural gas and diesel, have catalytic converters and use exclusive segregated lanes. The program, a private-public partnership, aims at decreasing approximately 80% of emissions from passenger buses. In Sao Paulo, Brazil, a hybrid public bus project

[303] This paragraph is based on OAS (2004).
[304] Ibid.

(developed and produced in the country) could achieve 90% reductions in vehicle emissions and 30% in fuel consumption. Costing only 30% more than a conventional diesel bus, hybrid vehicles may represent a promising technology in cities where capital investments for subways or other mass transit projects are not available in the short-term. Moreover projects like these could be promising especially in a sector where alternatives to reduce emissions are currently scarce.[305]

These examples represent valuable efforts towards climate change mitigation, which could be replicated as strategies to advance sustainable development in the region. Moreover, they may help the region prepare for future climate change regimes that formally incorporate developing countries in the global effort.

Latin America in the Carbon Market and the Clean Development Mechanism (CDM)
While the region has been a leader in the carbon market and among the main providers of CDM proposals, its development still faces several limitations. While there are high expectations in terms of private investment and technological transfer, if the risks and transaction costs are not adequately managed, few countries will be able to take advantage of the benefits (Eguren, 2004).

Hydroelectric projects in 2003, represented the majority in number (50%) and monetary terms (54%), followed in number by wind (15%) and biomass (13%) projects (ibid). Currently methane-capture and power generation from landfills are also attracting investments, as rates of return tend to be higher - based on the higher global warming potential values of non-CO_2.[306] Ethanol and biodiesel projects could also play an important role especially in Brazil, where many bagasse projects (ethanol from sugar cane waste) are already being developed, and in Argentina too (Hatch, 2005).

Projects in the forestry sector are slightly more limited, as credits cannot be used to control more than 1% of the concerned party's base-year emissions. Moreover, the EU trading scheme excludes the use of forestry credits. Except for the WB Biocarbon Fund, there is little demand for forestry sector credits. However, as this market gains potential, the LAC region may be at a comparative advantage given its scientific knowledge and experience in the development of these projects – especially in Costa Rica (Eguren, 2004; PNUMA, 2004).

The entry into force of Kyoto and the implementation of the EU-emission trading scheme have given momentum to the carbon market (and the CDM in particular), notably in Asia and Latin America. Estimates indicate however, that Asia's participation is increasing and since 2003 has surpassed the LAC in the number of projects (PNUMA, 2004). Considering its potential in terms of clean technology investments, GHG mitigation and carbon sequestration, all LAC countries should strive to create CDM offices and establish a network to exchange information and experiences. Also, as a group, the region has increased negotiating power to eliminate unnecessary obstacles and facilitate the CDM's implementation. Moreover, a growth in demand of carbon credits could also come from other voluntary or government initiatives (e.g., in the USA) which will influence both the demand and price of carbon credits (Eguren, 2004; PNUMA, 2004).

Biological Diversity in Latin America
The region is among the richest and most diverse areas in the world. However, the loss of biodiversity is increasing, driven primarily by the destruction of habitats through the clearing of tropical forests for agriculture and other uses, and the pressure of a rapidly growing

---

[305] This paragraph is based on PNUMA (2004).
[306] The emission reduction price is proportional to the global warming potential (GWP) of each GHG (e.g., every ton of methane reduced will have a price in the carbon market 21 times higher than the one for CO_2). Gases are expressed in CO_2 equivalent for accounting and trading (Eguren, 2004).

population (UNEP, 2003; PNUMA, 2004). The annual deforestation rate is 2.5 times the global average (World Bank, 2005). Moreover, inappropriate land management policy and practice (often prompted by overcrowding, food deficits, national debt or inequitable land tenure) are leading to severe land degradation, even in productive agricultural lands.

As biodiversity is linked to agricultural productivity and food security, its conservation is crucial for the region. Biotechnology, could potentially increase agricultural yields, and thus enhance global food security. However, given the potential risks to human health and to the environment, cautious approaches are recommended especially with the release of genetically modified organisms (GMOs). Most countries in LAC are parties to the Cartagena Protocol on Biosafety focusing on the transboundary movements of living modified organisms (LMOs) and the risks to human health. Organic agriculture has also made headway in the region, with 24% of the world's total certified crop area. Argentina, has the second largest certified cropland in the world after Australia.[307]

Conserving Biodiversity

Various legal and market-based instruments have been applied by governments in LAC that reverse the trend of biodiversity destruction. Venezuela has a tax on deforestation, while Costa Rica's 1996 Forestry Law compensates private landowners who maintain or increase the area of forest as recognition of the environmental services that forests provide to the nation.[308] Moreover, if prices in the carbon market became sufficiently competitive, many landowners in the country could be induced to preserve natural forests outside protected areas (Castro and Cordero, 2003). The Brazilian government has recently launched an action plan to prevent and control deforestation in the Amazon, the largest effort ever undertaken in the country against deforestation (UNEP, 2005).

Bolivia has adopted a law that opens state-owned forests to private companies under concessions, as long as participation of local people is secured (UNEP, 2003). The Convention on Biological Diversity (CBD) recognizes the importance of traditional knowledge of indigenous and local communities for the conservation and sustainable use of biological diversity.[309] In Mexico for example, the management of the Sian Ka'an Biosphere Reserve includes the inhabitants of Mayan descent to help maintain the balance between pure conservation and the need for sustainable use of resources by the local community.[310]

National protected areas represent 11% of the total LAC land area, almost the same as the world average of 10.7% (UNEP, 2003; WB 2005). The creation of private or community-managed forest reserves is also increasing and there have been isolated successes in curbing the illegal trade in endangered species (UNEP, 2003). While all the LAC countries are parties to the CBD, additionally, there are important regional agreements related to biodiversity and land degradation that constitute strong platforms upon which to build regional actions, e.g., the Andean Pact nations enacted a law, regulating genetic resources prospecting and exploitation (UNEP, 2002).

Other Global Issues

In other important areas as ozone layer protection and persistent toxic chemicals – among them persistent organic pollutants (POPs), the region has also demonstrated clear signs of cooperative action. Brazil was among the first countries to adopt unilateral action in the early 70s by capping chlorofluorocarbons (CFCs) production while Mexico was the first country in the world to ratify the Montreal Protocol on Substances that Deplete the Ozone Layer. All the

[307] This paragraph was based on UNEP (2005).
[308] PNUMA (2004); http://www.biodiv.org/doc/publications/guide.asp?id=action-nat.
[309] CBD Article 8 (j) http://www.biodiv.org/programmes/socio-eco/traditional/default.asp.
[310] http://www.biodiv.org/doc/publications/guide.asp?id=action-nat.

countries in LAC are currently parties to this agreement.[311] CFC production in the region has decreased by 21 per cent and a total phase-out has been achieved in Brazil (UNEP, 2000). Argentina, Mexico and Venezuela, the three other CFC producers, also have legislation in place to phase-out production (UNEP, 2002). Moreover, Venezuela is expected to cease production more than two years in advance of the deadline set by the Protocol (January 1, 2010).[312] While this treaty is considered one of the most successful environmental treaties, many challenges still lie ahead. The Multilateral Fund provides valuable assistance to countries in the LAC region in their progress towards the phase-out of ozone depleting substances.

The global regime governing the movement and use of chemicals to minimize the adverse effect on human health and the environment has recently been expanded. Two major agreements, complementing the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, have entered into force in 2004: the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the Stockholm Convention on Persistent Organic Pollutants (POPs) (UNEP, 2005). The majority of LAC countries are parties to the Basel Convention. However, as of March 2005, only 16 have ratified the Stockholm Convention and 14, the Rotterdam Convention.[313] In this respect, countries in Latin America will need further assistance to adhere to these important conventions, as well as strengthen their capacities and abilities to comply with the international agreements they are parties to.

6. Main Lessons

The four international public goods analyzed in this paper are not the only ones that matter for sustainable economic development. Others, such as peace and security and international control of plagues and epidemics, are also very important. However, our selection is sufficiently relevant to merit careful scrutiny. Except for environmental cooperation, the "IPGs" in our sample are neither purely public nor purely international, begging the question of whether and when supranational official intervention (multilateral or regional) is warranted to reduce chronic undersupply in some countries. This is important since lack of international provision may delay growth and reduce welfare; yet, excessive intervention may hinder the development of local capacities. In this final section, we summarize the main lessons that can be extracted from the experience of Latin America.

Improving the Supply of Trade-related International and National Public Goods

In the area of trade liberalization and integration, there are great challenges ahead for the international system. Reduction of protection in agriculture is at the heart of the Doha Agenda and progress in this area will determine the success or failure of a new development round. The FTAA will certainly create trade opportunities in the region, but it is not a panacea. Latin American leaders cannot sit and wait for these events to happen. Trade liberalization, not just through bilateral or regional agreements but with the world as a whole, needs to be deepened.
Yet, accepting these challenges requires being better prepared than in the past so as to avoid making new mistakes. Much of the policy debate in the 1980s revolved around how to avoid real appreciation from jeopardizing the effects of trade liberalization. At the time, many observers concluded that one of the main problems of liberalization attempts in the 1970s had been the premature opening of the capital account.[314] Had it not occurred to the extent it did,

[311] This is based on MEA Secretariat website on ratifications, available at http://www.unep.ch/ozone/Treaties_and_Ratification/2C_ratificationTable.asp.
[312] http://www.multilateralfund.org/.
[313] This is based on MEA Secretariat websites on ratifications, available at http://www.basel.int/ratif/frsetmain.php; http://www.pops.int/documents/signature/signstatus.htm and http://www.pic.int/en/ViewPage.asp?id=265.
[314] See, for example, Edwards (1984).

the argument went, capital inflows would have been lower, the RER would have not appreciated, export performance would have been stronger, and the debt crises that plagued the region in the 1980s would have not materialized. While some people still find this conclusion appealing, its practical relevance is close to nil. To think that a capital-starved economy trying to stabilize and recover from a hard recession would impose binding controls on capital inflows (i.e., effectively restrict the access of the private sector to capital held abroad) is unimaginable, if not economically unsound.[315]

Box 5.1 Brazil's Development Policies with Climate Change Benefits

Reducing Oil Dependence
During the oil crisis in 1973, Brazil was importing over 80% of its oil supplies. To reduce this dependence, the PRO-ALCOOL program was launched (1975) promoting the production and use of ethanol as a substitute for gasoline. From 1985 to 1990, 90% of the new cars sold where fueled solely by ethanol. The program also helped the sugar industry by creating jobs and income. Government subsidies in the form of low-interest loans, guaranteed ethanol purchases, favorable pricing and sales tax reductions, were justified based on the positive economic, social and environmental benefits of the program. While ethanol is now being primarily used as a gasoline additive to control local air pollution, the PRO-ACOOL program however, paved the way for another alternative source of energy with lower emissions: sugar-cane bagasse. Produced as a waste by-product of alcohol production, bagasse is used for power generation in combined heat and power plants.

Diversifying the Energy Mix
A long drought in 2001 reduced hydroelectric power generation and resulted in a major power supply crisis. To reduce the excessive dependence on hydropower to generate electricity, the energy matrix was diversified by expanding the supplies of natural gas (mainly through imports). The government also launched the PROINFA program (2002) to stimulate the use of alternative renewable energy sources such as biomass and wind, as well as small hydro-electric power generation. A power sales contract with the State-owned utility (Electrobras) assures a minimum energy purchase of 70% as well as a protection against the risk of market fluctuations in the short-term.

Energy Efficiency
The PROCEL program (1985) focusing on energy efficiency projects has contributed both to electricity savings and the development of new technologies (e.g., lighting controls, solar water heaters, demand limiters). The program set a target of reducing electricity consumption and supply-side losses by 2003, equivalent to 2.5% of Brazil's power consumption. In 2001 mandatory efficiency standards for household appliances and lighting standards were also enacted.

Improvements in the Transportation Sector
To make cars more affordable to lower-income households, a tax incentive was introduced in 1993 to encourage the production of more efficient automobiles (smaller engines) and consequently, less polluting. By 2001 almost 75% of the domestic sales of new automobiles consisted of one-liter engines. However, as tax incentives result in loss of government revenues, other alternatives should be considered, such as a wider use of ethanol in automotive gasoline and the upgrading and expansion of public transportation systems.

If all these programs and measures were implemented on a broader scale, the projected increases in carbon emissions in Brazil could be sharply curtailed. However, as the largest source of emissions comes from changes in land-use, the adoption of specific measures to reduce deforestation will become a top priority for carbon mitigation in Brazil.

Sources: Chandler *et al.* (2002), PNUMA (2004) and Szklo *et al.* (2005).

[315] Most financial inflows at the beginning of a stabilization-cum-liberalization process do not result from real foreign borrowing, but from capital repatriation, sometimes disguised as foreign credit to avoid tax penalties and take advantage of interest deductibility.

In the absence of sufficient national saving, allowing foreign saving to increase may be the only way to jumpstart the economy. The critical issue in this case is how to reduce dependence on foreign saving once the economy has begun to grow. And the obvious answer is: by finding ways to increase the national saving rate. This, of course, implies reducing public and private consumption as a share of national income. While the recipe is easy to enunciate, implementing it is another matter. Obviously, it cannot be carried out without fiscal discipline. At a minimum, the government must be able to rein in budget spending and allow tax stabilizers to work (tax collection increases during expansions) until a significant improvement in the fiscal balance occurs. If this is not enough to keep the current account deficit at bay, the government should strengthen fiscal discipline by becoming more proactive. One possibility is to raise taxes on consumption (e.g., the VAT) while cutting inefficient or superfluous government programs, such as producer subsidies and low-productivity investments. The target should not just be fiscal balance but a sizable fiscal surplus.[316]

Once a fiscal surplus is generated, the next question is what to do with it. There are three main alternatives. One is to stash the money away in a "rainy day fund." Another is to buy back public debt. Still another is to reduce taxes, especially those that distort investment and saving at the margin. A special case of this third initiative is to privatize the social security system (i.e., shift pension contributions from the public pay-as-you-go system to individual retirement accounts). Which alternative to use is a matter of policy choice in which not only technical but also political economy considerations prevail.

Despite the economic soundness of this approach, few Latin American economies were able to put it consistently into practice. Among the few that did was Chile after the 1983 crisis. Unlike many of its neighbors, lack of fiscal discipline had not been Chile's problem in the years before the crisis (though low private saving had).[317] After a recession-induced fiscal deterioration in 1982-85, the overall fiscal surplus climbed to 5% of GDP in 1989, notwithstanding the fact Chile had also privatized the social security system in 1981. As a result of these measures, the national saving rate increased from 5.0% in 1981 and 6.5% in 1985 to 21.7% in 1989. Compared to this, the much publicized "encaje," introduced in 1991 to discourage short-term capital inflows, though it may have contributed to check excessive exchange rate and interest rate volatility in the 1990s, had no significant effect on the current account balance, which was, on the whole, very stable, as was the RER (Figure 6.1).

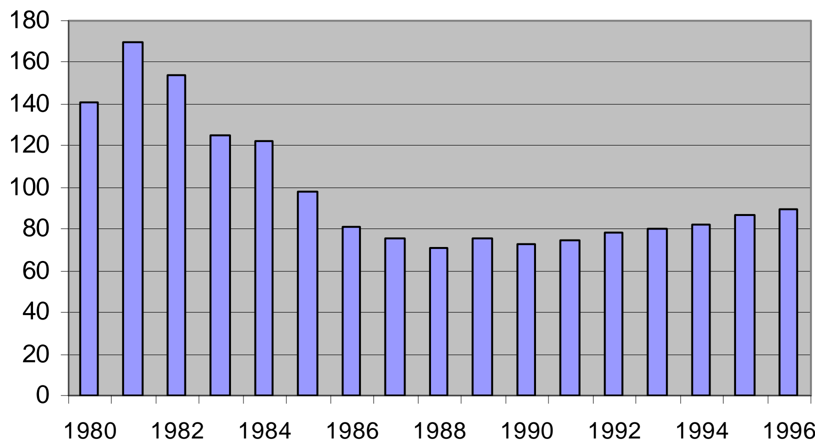
A more recent example is Mexico after the 1995 tequila crisis. There, too, the combination of fiscal balance and pension reform helped successive governments to preserve macroeconomic stability and trade liberalization. Moreover, in both Chile and Mexico, buoyant conditions in international financial markets and an investment grade status for their foreign debts did not produce an expansion in the current account deficit (CAD) in recent years. On the contrary, the latter averaged 1.3% of GDP with little dispersion in Chile and declined from 3.1% in 2000 to 1.1% in 2004 in Mexico, where it is expected to remain more or less stable, barring unexpected shocks, in the next few years.

---

[316] In addition to increasing domestic saving, another stabilizing effect of a fiscal surplus is that it sterilizes excessive monetary expansion due to capital inflows, and it does so at no financial cost for the government.

[317] The fiscal deficit, which had reached 20% of GDP in 1973, the last year of the Allende government, was quickly reduced after the new (Pinochet) administration took place and, by 1979, it had been practically eliminated.

Figure 6.1 Chile: Real Effective Exchange Rate, 1980-96



Finally, Argentina also followed Chile's approach in the early 1990s. There, however, revenue increases from traditional taxes and privatization were not used to accumulate reserves, but to cancel domestic public debt and to reduce other taxes, particularly on exports, financial intermediation, and labor.[318] In addition, trade liberalization proceeded faster and was deeper for capital goods than for other goods produced in the economy. The decline in the relative price of investment goods boosted investment, which—together with the reduction in distortionary taxes and the improvement in basic services achieved thanks to the privatization of telecoms, the energy sector, ports, and transportation—help to explain the outstanding performance of exports that occurred, despite real appreciation, during that period.[319] Unfortunately, the Menem administration had inherited a sizable domestic public debt, including with pensioners, which had to be paid. This prevented the government from generating larger fiscal surpluses or from using fiscal resources in a less pro-cyclical way. Fiscal vulnerability—exacerbated by external shocks and a sharp increase in provincial public spending in 1997-99—came to haunt the public sector after 1999 and was a major factor contributing to the 2001-02 financial crisis.

The international institutions can help governments in Latin America and other regions of the world to raise public savings. They can do this by designing methods to improve tax collection and spending management, retrain public sector employees who must leave their jobs and relocate, increase the availability of information that may help governments to detect tax evasion and corruption across international borders, privatize more efficiently, etc. An interesting possibility to help countries improve tax collection would be for an international agency to coordinate the signing of an international tax treaty in which participant countries assume the obligation to tax capital transfers to and from a non-participant country. Since the latter are likely to be tax havens, evasion through this channel would be discouraged. The same information system that currently helps the US and other countries to detect money transfers that finance terrorist activities could be used for the purpose o helping developing countries to control tax evasion.

A complementary approach to mitigate the effect of RER appreciation is for the government to support producers of tradable goods through well-crafted interventions that generally fall

[318] Argentina also reformed social security (in 1994). Besides allowing workers to move their contributions to privately managed pension funds the government cut payroll taxes, which overburdened employers.
[319] Between 1994 and 1997, exports in US dollars increased by 67%.

under the label of "industrial policies."[320] Often invoked are the examples of East and South East Asia, where trade liberalization proceeded cautiously, with a stronger initial emphasis on export promotion than on trade liberalization. In Latin America, the same could be said about Brazil in 1965-74 and even Chile, where Fundacion Chile helped to achieve export diversification both by supporting private entrepreneurs (e.g., fruit, forestry, wines) and through direct investments (e.g., salmon). In this area of industrial policy, we tend to agree with Rodrick's assertion that no perfect mapping exists between trade regimes (as opposed to trade itself) and growth performance.[321] How trade policies can be adapted to induce growth is a relatively idiosyncratic phenomenon. In the final analysis, what matters is not how a country's anti-export bias is reduced but if it is at all and by how much. Here, too, the international organizations can provide knowledge and technical support.

Finally, adjustment lending at subsidized rates can help finance some of the temporary costs of trade liberalization, but it should be a reward for good behavior rather than a "bribe" to induce governments or countries to introduce good policies or reform.[322] We believe that if these recommendations were followed, it would be easier for the future rounds of negotiations in the WTO to make real progress in the area of multilateral trade liberalization and integration.

Preventing and Managing Financial Crises

A common characteristic of Latin American crises in the 1980s and 1990s was the central role that public sector debt played in them. Whether the accumulation was due to large fiscal deficits, recognition of "fiscal skeletons," nationalization of private sector liabilities, or sterilization of monetary expansion due to capital inflows, government debt was always at the heart of the problem. In some cases (such as Mexico and Brazil in the 1990s), the main issue was the short duration of the debt, which increased the probability of a financial panic. In others, it was its size and currency composition—i.e., the fact that a large part of the public debt was denominated in foreign currency.

As shown in Table 6.1, five of the ten largest economies in Latin America are severely externally indebted according to the World Bank. Unlike in East Asia, the main contributor to external indebtedness is the public sector (Table 6.2). Public debt exceeded 40% of GDP in eight of the ten countries in 2000. In seven of these countries, more than 40% of the public debt was external rather than domestic, hence exposing sovereign borrowers to the fluctuations of capital inflows and real exchange rates.[323] With notable exceptions, such as Chile and Mexico, public debt ratios have deteriorated in recent years. In Argentina, Ecuador, and Uruguay, for example, they now exceed 90% of GDP on account of real depreciation notwithstanding the fact these countries have implemented comprehensive debt restructuring programs and drastic (though haphazard) fiscal adjustments.

Hence, the first lesson for the provision of the international public good of global financial stability in Latin America is the need for the IMF, G7 governments, credit agencies, and other international financial agents or institutions to improve public sector surveillance in emerging markets. Unfortunately, this is not easy. The standard surveillance procedure is to make long-term projections of the ratio of public debt to GDP. If this ratio is more or less constant or declines over time, the public sector is automatically assumed to be solvent, and vice versa.

---

[320] Rodrick (2004).
[321] Rodrick (2005).
[322] Easterly (2002) also makes this recommendation.
[323] Also, in some countries such as Argentina, Brazil, and Uruguay, a significant proportion of the domestic public debt was either denominated in or indexed to the dollar.

Table 6.1 Classification of Countries by Degree of External Indebtedness, 1999-2001

Degree of Indebtedness	*Country*
Severely indebted: three of four key ratios (averaged over 1999-2001) are above critical levels: external (private and public) debt to GNI (50%); debt to exports (275%); debt service to exports (30%), and interest to exports (20%).	Argentina Brazil Ecuador Peru Uruguay
Moderately indebted: three of the four key ratios exceeds 60% of, but does not reach, the critical levels.	Chile Colombia
Less indebted: all other.	Costa Rica Mexico Venezuela

Source: World Bank (2004).

Yet, as Goldstein (2003) observes, this type of exercise can be seriously misleading if taken at face value. He cites nine potential pitfalls of the standard analysis, including the failure to capture (a) hidden liabilities (a.k.a. fiscal "skeletons") in the definition of public debt; (b) negative feedbacks running from high real interest rates and fiscal policy tightening to the growth rate; and (c) in those cases where a significant proportion of the public debt is denominated in foreign currency, both the sensitivity of the debt ratio to changes in the real exchange rate and the ability of the government to earn foreign exchange. Furthermore, the standard procedure does not allow the analyst to judge how much public indebtedness is "too much" in a given country (since this depends on how deep capital markets are) or how the financial system will react to a discrete change in the debt ratio even when the dynamics of the process are stable. While it is safe to assume that financial vulnerability increases with the level of public indebtedness to GDP,[324] the elasticity cannot be determined with certainty. Yet, this is precisely where the problem lies.

Table 6.2 Public Debt in Selected Latin American Countries, 2000

Country	*Gross Public Debt % of GDP*	*External Public Debt % of Total Debt*
Argentina	51.0	58.0
Brazil	69.0	22.0
Chile	33.7	20.6
Colombia	58.0	50.0
Costa Rica	46.7	42.3
Ecuador	103.6	100.0
Mexico	49.0	29.9
Peru	45.9	73.6
Uruguay	45.5	66.6
Venezuela	33.6	77.0

Source: IMF (2005).

Another important lesson is for the IFS to act responsibly during a crisis. Pulling the plug on Argentina might have been the adequate response if the 2001 crisis had been due to moral hazard, inconsistent macroeconomic policies, or asset bubbles. This, however, was not the case. Rather, what investors feared in Argentina was that devaluation would trigger default since both were correlated. Because of this, abandoning the peg to the dollar at that particular

[324] A 10 percentage point increase in the public debt ratio to GDP in Mexico, where the current level is x%, is likely to be less destabilizing than a similar increase in Brazil, where the ratio is y%.

juncture was a bad idea, as it could only exacerbate the panic and maximize investor losses. The way the Argentine authorities conceived the solution to their problems in late 2001 was the best possible one given the circumstances: impose temporary exchange controls, restructure the debt, and deal with the exchange rate, if necessary, once market confidence had been restored.[325] By contrast, the solution envisaged by the international financial community, starting with the IMF's insistence on floating the peso, was tantamount to "throwing the baby out with the bath water."

Finally, there is the issue of "original sin." The term was coined in the 1990s to refer to the fact most developing countries cannot borrow in their own currencies, except for short periods of time, owing to a lack of monetary reputation.[326] This makes countries vulnerable to either rollover or exchange rate risk. Original sin is a special case of market incompleteness, whereby an unbounded risk of inflation and/or nominal devaluation cannot be hedged or diversified away by the investor. In the case of sovereign lending, this is aggravated by the possibility, on the part of the government, of reducing the real value of the debt by creating inflation, a problem known in the literature as time inconsistency.[327] Given these problems, issuing nominal debt in local currency at fixed interest rates and with long maturities is not possible. The alternative is to issue long-term debt in foreign currency. But, as mentioned before, this typically increases the risk of default of the debtor by creating a mismatch between his assets or revenue side (most local borrowers earn in local currency) and his liability side. One solution would be to issue local currency debt indexed to the CPI or to nominal GDP. Since local assets and revenues are likely to be strongly and positively correlated with these indices, default risk should fall. Yet, despite the advantages of indexation in financial contracts, few countries do it. One of the only exceptions is Chile where, paradoxically, lack of monetary reputation is not an issue.

A common explanation for why indexation is avoided in financial contracts is that it helps perpetuate inflation. Another is that international investors are not attracted to it. Both are wrong. On the one hand, indexation did not prevent Chile from keeping inflation under control in the last 20 years. On the other, if international investors were not willing to take real exchange rate risk in emerging markets, there would not be any direct foreign investment or portfolio purchase of real assets, such as stocks and real estate. The fact that there is indicates that real exchange risk, like default risk, but unlike long-term nominal inflation or devaluation risk, can be priced. But, if countries can eliminate the problem by borrowing in CPI- or GDP-indexed instruments, why is original sin an international public bad that requires official intervention? The reason is one of credibility: CPI indexes and GDP estimates are elaborated by institutions located in the borrowers' countries. In the case of the public debt, these institutions actually report to the borrower (i.e., the government). International cooperation is, therefore, needed to guarantee the quality and incorruptibility of these local indexes. Another way in which international cooperation can help is if multilateral lenders start lending in local currencies. In some cases (viz., Mexico) this could be done even at fixed nominal interest rates. Local currency lending by international organizations would help develop more liquid derivative markets (swaps, futures, etc) in those currencies. In all other cases, it would help develop liquid markets for indexed debt. This is because, to hedge their positions, institutions like the World Bank would have to place indexed bonds denominated in domestic currencies in the international capital markets.

---

[325] As it turned out, the overvaluation of the peso that existed in 2001 (about 20% in real effective terms) would have corrected itself thanks to the depreciation of the US dollar, the real appreciation of the Brazilian real, and the improvement in export prices that started to take place in the second half of 2002.

[326] Eichengreen, Hausmann, and Panizza (2003).

[327] Calvo (1978).

In conclusion, while the key to preventing and managing financial crises is mostly in the hands of the nation states, there is much the multilateral system can do to assist member countries in this area provided, of course, it first gets a clue. This is particularly important if, as proposed, the IMF will be in charge of refereeing sovereign debt restructuring procedures via a Chapter-11-for-countries-type institution like the SDRM.

Fostering Knowledge Diffusion and Adaptation

There is an overwhelming consensus among economists that technological progress is the most important determinant of growth. Being extremely mobile, it is rapidly becoming a central part of international trade. But, although knowledge is being diffused more rapidly than ever before, the ability of most developing countries to absorb it is still very limited, particularly since the few countries that produce knowledge (mostly, the industrialized ones) tightly control the distribution.

While sensible knowledge excludability has a strong economic rationale (if inventors were not able to gain from their inventions, there would be few of them), too much of it is a problem, as it contributes to widen the gap between rich and poor countries. Just as the enforceability of intellectual property rights (IPRs) requires international cooperation, the latter is also needed to strike a balance between the need to protect innovation and the goal of alleviating world poverty.

In recent years, international IPR protection has been filled with controversy. The main issues are the welfare and equity effects emerging from the use of monopoly pricing by patent holders; the costs to developing countries of streamlining their legal systems to TRIPS provisions; the exception that allows developing countries to import generic drugs; the matter of genetically modified foods; the protection of living organisms for environmental reasons; and the divergent opinions regarding the effects of the TRIPS Agreement in facilitating the transfer of new technologies to developing country users. These issues raise the question of whether the international system can do more to foster knowledge diffusion and adaptation than promote TRIPS. While, generally speaking, the dissemination and adaptation of knowledge within national borders is the responsibility of the individual states, in many cases national efforts are insufficient, particularly since the countries that produce knowledge (innovate) are few and rich and have incentives to limit its diffusion. It is commonplace to say that the rise of globalized production under the aegis of TNCs reduces the need for building domestic capabilities since TNCs provide affiliates with technology, production expertise, training, and so on. However, factual evidence shows that getting access to niches or larger production networks is by no means widespread or immediate. FDI can reduce the need for local capabilities only in the case of very simple activities. Subsequent technological upgrading involves investment in skill and institution building plus modern infrastructure. International institutions can help developing countries to build those capabilities, as demonstrated by the support of UNIDO, UNDP, and IADB, among other international agencies, to the development of clusters and incubators in several Latin American and Caribbean countries including Honduras, Nicaragua, Mexico, and Jamaica.

Finally, the emigration of scientists, engineers, and highly skilled workers from developing countries is another drain, which the increasing importance of the knowledge-based economy has brought to the fore. New approaches exist, however, that seek to make a public good out of this public bad. Rather than lost assets, the *diasporas* should be regarded as potential assets. As the successful experience of Hinschu Park in Taiwan demonstrates, expatriates can be mobilized even if they choose to stay and live their lives in other countries. Here, too, international cooperation (sharing the experiences of other countries to promote new ones) may prove to be useful.

Cooperating to Save the Environment

Countries in LAC have many opportunities too integrate environmental protection within their path of development. Moreover, their reliance on the environment renders this indispensable. Many countries are increasingly stepping up to the challenge.

In the case of climate change, there are ample opportunities for synergies between greenhouse gas reduction and sustainable development – from policy reforms that promote energy efficiency, switching to less-carbon intensive fuels, technological development, transportation restructuring and carbon sequestration by controlling land use changes and promoting forests, to the full potential of the CDM. The exchange of experiences and information, taking advantage of the existing regional fora and agreements, can increase the region's performance. The tendency towards the use of renewable sources should be hastened by removing the institutional and economic barriers, especially the subsidies on fossil fuels, and providing the right incentives for their development. Given the clear linkages between climate change and biodiversity, and the importance of biodiversity itself, land-use policies must be based on an integral approach of all the benefits and services provided by forests and ecosystems, and the impacts of unsustainable practices. The region should expand its use of economic instruments (i.e., taxes or tariffs), which introduce flexibility through incentives based on costs and prices, to generate resources for environmental investments.

To continue its progress in the global challenges, especially in the areas of ozone depletion and persistent toxic chemicals, the region must continue to take advantage of international assistance to strengthen its capacities and the abilities of its countries to comply with the international agreements to which they are parties.

Summing up, Latin America faces, like other developing regions in the world, a chronic undersupply of public goods. Improving the current state of affairs should, therefore, rank high in the public policy agenda. While there are different kinds of measures that national and local governments can implement to increase the supply of trade integration, financial stability, technological progress, and environmental protection services, the spillover effects associated with the provision of these public goods makes it also necessary that international cooperation be part of the package.

References

AgBioWorld, "Life of Norman Borlaug." Available at: http://www.agbioworld.org/biotech-info/topics/borlaug/life-of-borlaug.html, 2005.

Alcorta, Ludovico, and Wilson Peres, "Innovation Systems and Technological Specialization in Latin America and the Caribbean." UNU/INTECH. ECLAC/UNDP Regional Project RLA/88/039. Discussion Paper Series, December 1995.

Bortagaray, Isabel, and Scott Tiffin, "Innovation Clusters in Latin America." 4th International Conference on Technology Policy and Innovation, Curitiba, Brazil, June 29, 2000.

Borlaug, Norman, "The Green Revolution, Peace and Humanity." Nobel Lecture. December 11, 1970. Available at: http://nobelprize.org/peace/laureates/1970/borlaug-lecture.html.

Bravo Manriquez, Eleazar, "Nueva Ley de Propiedad Industrial, Investigacion e Innovacion." Ministerio de Economia de Chile, Departamento de Propiedad Industrial, 2005.

Brecher, Richard, and Carlos Díaz-Alejandro, "Tariffs, Foreign Capital, and Immiserizing Growth," *Journal of International Economics* 7, 1977.

Calvo, Guillermo, "On the Time Inconsistency of Optimal Policy in a Monetary Economy," *Econometrica*, Vol. 46, No. 6, November 1978.

Cavallo, Domingo, Volver a crecer, Editorial Sudamericana/Planeta. Buenos Aires: 1984.

Cavallo, Domingo, "Argentina and the IMF during the Two Bush Administrations," *International Finance* 7:1, 2004.

Cavallo, Domingo, Joaquín Cottani, and M. Shahbaz Khan, "Real Exchange Rate Behavior and Economic Performance in LDCs, *Economic Development and Cultural Change* 39, No. 1, 1990.

Caves, Richard, Jeffrey Frankel, and Ronald Jones, World Trade and Payments: An Introduction, Ninth Edition, Addison Wesley Longman: Boston, MA, 2002Inter American Development Bank, "The Business of Growth: Economic and Social Progress in Latin America," Annual Report, 2001.

Castro, René, and Sarah Cordero, "Global Trade for Local Benefit: Financing Energy for All in Costa Rica." in Inge Kaul, Pedro Conceição, Katell Le Goulven and Ronald U. Mendoza (eds.), Providing Global Public Goods: Managing Globalization, Oxford University Press, New York: 2003.

Chandler et al., "Climate Change Mitigation in Developing Countries: Brazil, China, India, Mexico, South Africa, and Turkey," prepared for the Pew Center on Global Climate Change, October 2002.

Cimoli, Mario, and Jorge Katz, "Structural Reforms, Technological Gaps and Economic Development. A Latin American Perspective." ECLAC. Division of Production, Productivity and Management, Restructuring and Competitiveness Network. Serie Desarrollo Productivo Nro. 129, August, 2002.

Coatsworth, John, and Jeffrey Williamson, "The Roots of Latin American Protectionism: Looking Before the Great Depression," NBER Working Paper 8999, 2002.

Cooper, Richard, "Chapter 11 for Countries?" in King, Philip, and Sharmila King (eds.), International Economics and International Economic Policy. A Reader, Fourth Edition, McGraw-Hill/Irwin, New York: 2005.

De Ferranti, David, Guillermo E. Perry, Indermit Gill, J. Luis Guasch, William F. Maloney, Carolina Sanchez-Paramo, and Norbert Schady, "Closing the Gap in Education and Technology." The World Bank: 2003.

Díaz-Alejandro, Carlos, "Stories of the 1930s for the 1980s," in Aspe Armella, Pedro, Rudiger Dornbusch, and Maurice Obstfeld (eds.), Financial Policies and the World Captial Market: The Problem of Latin American Countries, University of Chicago Press: Chicago, IL, 1983.

Díaz-Alejandro, "Good Bye Financial Repression, Hello Financial Crash," Discussion Paper No. 441, Economic Growth Center, Yale University, 1983.

Dollar, David, "Outward-oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-85," *Economic Development and Cultural Change* 40, No. 3, 1992.

Dornbusch, Rudiger, and Alejandro Werner, "Mexico: Stabilization, Reform, and No Growth," Brookings Papers of Economic Activity, 1994.

Easterly, William, The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics, MIT Press, Cambridge, MA: 2002.

Edwards, Sebastian, "The Order of Liberalization of the External Sector," Princeton Essays on International Finance 156, 1984.

Eguren, Lorenzo, "El mercado de carbono en América Latina y el Caribe: balance y perspectivas. CEPAL, División de Desarrollo Sostenible y Asentamientos Humanos, Serie medio ambiente y desarrollo," No. 83, Santiago de Chile, Marzo 2004.

Eichengreen, Barry, "Restructuring Sovereign Debt: Analytical Issues and Policy Proposals," in UNDP, The New Public Finance: Responding to Global Challenges, forthcoming 2005.

Eichengreen, Barry, Ricardo Hausmann, and Ugo Panizza. "Currency Mismatches, Debt Intolerance and Original Sin: Why They Are Not the Same and Why It Matters." NBER Working Paper # 10036, October 2003.

FAO, "Green Revolution vs. Gene Revolution. Questions of Access and Equity Must Be Addressed." Available at:
http://www.fao.org/newsroom/en/focus/2004/41655/article_41667en.html.

Goldstein, Morris, "Lessons of Recent Currency Crises," Brookings Trade Forum 2002: pp 173-182. Brookings Institution, Washington, DC, January 2003.

Hatch, George, "Q&A: CDM seen as key step in world climate-change battle," March 2005, available at www.ecoamericas.com.
Inter-American Development Bank, "The Business of Growth. Economic and Social Progress in Latin America," Washington DC: 2001.
Intergovernmental Panel on Climate Change (IPCC), "Climate Change 2001: Impacts, Adaptation and Vulnerability," Cambridge University Press, Cambridge, MA: 2001.
International Monetary Fund, "Stabilization and Reform in Latin America. A Macroeconomic Perspective on the Experience since the Early 1990s," Occasional Paper 238, Washington, DC: 2005.
Kaufman, Daniel, and Aart Kraay, "Governance Matters II: Updated Indicators for 2000-01. Policy Research Working Paper 2772, World Bank, 2002.
Kuznetsov, Yevgeny, "Mobilization of Diasporas for Knowledge Transfer." Taller Internacional para Lideres de los Sectores Publico y Privado, Ministry of Labor and Social Security, Argentina. April 26, 2005.
Lanús, Archibaldo, Un mundo sin orillas, Planeta: Buenos Aires: 1996.
Lederman, Daniel, William Maloney, and Luis Servén, Lessons from NAFTA for Latin America and the Caribbean, World Bank and Stanford University Press: Washington, DC, 2005.
Mani, Sunil, "Government, Innovation and Technology Policy. An Analysis of the Brazilian Experience during the 1990s." UNU/INTECH Discussion Papers, 2001.
McKinnon, Ronald, Money and Capital in Economic Development, Brookings Institution, Washington, DC: 1973.
Melo, Alberto, "The Innovation Systems of Latin America and the Caribbean. IADB, Research Department. Working Paper # 460, August, 2001.
Organization of American States (OAS), "Policy Reform for Sustainable Energy," Policy Series No. 5, December 2004.
PNUMA, "El Cambio Climático en América Latina y el Caribe," versión preliminar, 2004, available at *www.pnuma.org*.
Radelet, Steve, and Jeffrey Sachs, "The Onset of the East Financial Crisis," in King, Philip, and Sharmila King (eds.), International Economics and International Economic Policy. A Reader, Third Edition, McGraw-Hill/Irwin, New York: 2000.
Raney, Terri, and Prabhu Pingali, "Private Research and Public Goods: Implications of Biotechnology for Biodiversity." FAO. ESA Working Paper Nr. 04-07, April 2004.
Rodrick, Dani, "Industrial Policy for the Twenty-first Century," mimeo, John F. Kennedy School of Government, Harvard University, 2004.
Rodrick, Dani, "The Global Governance of Trade as if Development Really Mattered," in King, Philip, and Sharmila King (eds.), International Economics and International Economic Policy. A Reader, Fourth Edition, McGraw-Hill/Irwin, New York: 2005.
Rosset, Peter, "Lessons from the Green Revolution. Do We Need New Technology to End Hunger?" March/April 2000. Food First. Institute for Food and Development Policy. Available at: http://www.foodfirst.org/media/opeds/2000/4-greenrev.html.
Sachs, Jeffrey, "The International Lender of Last Resort: What Are the Alternatives?" in King, Philip, and Sharmila King (eds.), International Economics and International Economic Policy. A Reader, Third Edition, McGraw-Hill/Irwin, New York: 2000.
Sachs, Jeffrey, Aaron Tornell, and Andrés Velasco, "Financial Crises in Emerging Markets: The Lessons from 1995," Brookings Papers on Economic Activity, August 1996.
Schiller, Robert, The New Financial Order, Princeton University Press, Princeton, NJ: 2003.
Stiglitz, Joseph, Globalization and its Discontents, Norton, New York: 2003.
Stiglitz, Joseph, The Roaring Nineties, Norton, New York: 2003.
Szklo, Alexandre Salem, Roberto Schaeffer, Marcio Edgar Schuller and William Chandler. 2005. Brazilian Energy Policies Side-effects on CO2 Emissions Reduction, *Energy Policy* 33: 349–364.
Tosi Furtado, Andre, and Adriana Gomes de Freitas (2000). "The Catch-up Strategy of Petrobras through Cooperative R&D." Journal of Technology Transfer. 25: 23-36, 2000.

UNEP, "An Overview of our Changing Environment," Global Environment Outlook 2005, a*vailable at http://www.unep.org.*

_____, "Latin America and the Caribbean Fact Sheet," Global Environment Outlook 2003, available at *www.unep.org.*

_____, "Change and Challenge: A State of the Environment Briefing for the Global Environment Facility," Global Environment Outlook 2002, available at *www.unep.org.*

_____, "Action on Ozone," Ozone Secretariat 2000, available at *www.unep.org.*

United Nations Framework Convention on Climate Change, "The First Ten Years," 2004.

Velho, Lea. "Science and Technology in Latin America and the Caribbean: An Overview." UNU/INTECH. Discussion Paper Series, February 2004.

Williamson, John, "Causes and Consequences of the Mexican Peso Crisis," Remarks by John Williamson to the Institute of International Economics, March 14, 1995.

World Bank, Global Economic Prospects, Washington, DC: 2004.

World Bank, The Little Green Data Book, 2005.

WTO, Council for TRIPS. Document: 04-0789, February 24, 2004. IP/Q/BRA/1; IP/Q2/BRA/1/ IP/Q3/BRA/1; IP/Q4/BRA/1.

________________________. Document: 03-0338, January 22, 2003. IP/Q/ARG/Add 1; IP/Q2/ARG/Add 1; IP/Q3/ARG/Add 1; IP/Q4/ARG/Add1.

________________________. Document: 02-0729, February 13, 2002. IP/Q/BOL/1; IP/Q2/BOL/1/ IP/Q3/BOL/1; IP/Q4/BOL/1.

________________________. Document 01-6340, December 14, 2001; IP/Q/ARG/1; IP/Q2/ARG/1/ IP/Q3/ARG/1; IP/Q4/ARG/1.

___________________________. Document: 01-2877, June 12, 2001. IP/Q/PER/1; IP/Q2/PER/1; IP/Q3/PER/1; IP/Q4/PER/1.

___________________________. Document: 01-2814, June 7, 2001. IP/Q/CHL/1; IP/Q2/CHL/1/ IP/Q3/CHL/1; IP/Q4/CHL/1.

__________________________. Document: 00-4818, November 14, 2000. IP/Q/MEX/1; IP/Q2/MEX/1/ IP/Q3/MEX/1; IP/Q4/MEX/1.

PART III

UNIDO CONFERENCE ON INTERNATIONAL PUBLIC GOODS FOR ECONOMIC DEVELOPMENT

PROCEEDINGS

UNIDO CONFERENCE ON INTERNATIONAL PUBLIC GOODS FOR ECONOMIC DEVELOPMENT, 7-8 September 2005

WEATHERHEAD CENTER FOR INTERNATIONAL AFFAIRS
HARVARD UNIVERSITY, CAMBRIDGE, MASSACHUSETTS, USA

Introduction

The UNIDO Conference on International Public Goods for Economic Development was a contribution to better understand the role of international public goods in economic development and the modalities of their provision in the present global environment.

The Conference was a key component of a broader UNIDO Research Programme on "Public Goods for Economic Development." The Research Programme sought to identify the public goods most relevant for reaching sustainable economic development in developing countries but that are in short supply, thus affecting the speed and quality of those countries' development. The research agenda explored the impact of the provision of public goods in four specific realms: financial stability and institutions; international trade and its institutions; knowledge creation and diffusion; and environment. The research also took on a regional focus by conducting regional studies referred to the provision of international public goods in the following six regions: Latin America, India and China, Eastern Europe and Russia, Sub-Saharan Africa, Middle East and North Africa, and South and East Asia.

The regional studies were presented and discussed during the Conference, which was co-organized and hosted by the Weatherhead Center for International Affairs at the Harvard University. The Conference brought together a select group of faculty members, scholars, policymakers and economic development specialists to discuss issues rasied by the six regional studies, and the recommendations for policy making, drawn from the various presentations and discussions.

CONFERENCE PROGRAM

CONFERENCE ON INTERNATIONAL PUBLIC GOODS FOR ECONOMIC DEVELOPMENT

7-8 SEPTEMBER 2005 (*)
AT
WEATHERHEAD CENTER FOR INTERNATIONAL AFFAIRS

Harvard University
Cambridge, Massachusetts, USA
All Conference events were held at The Harvard Faculty Club, 20 Quincy Street, Cambridge, MA 02138

September 7

12:00-12:30 PM RECEPTION AND REGISTRATION

The Harvard Faculty Club, Room 4, 2nd Floor

12:30-2:00 PM LUNCH

Welcome:

Jorge Domínguez, *Clarence Dillon Professor of International Affairs; Director, Weatherhead Center for International Affairs, Harvard University*

Domingo F. Cavallo, *Harvard University; former Minister of Finance, and of Foreign Affairs, Argentina*

Carlos Magariños, *Director General, United Nations Industrial Development Organization*

Keynote Address:
Hon. Prime Minister of Tanzania, Mr. Frederik T. Sumaye

2:00-3:45 PM *SESSION 1* - **IPGS FOR ECONOMIC DEVELOPMENT: STATE OF THE ART AND RELEVANT ISSUES**

All Sessions will be held at The Harvard's Faculty Club Library, 2nd Floor

José Antonio Alonso, *Director, Instituto Complutense de Estudios Internacionales, Spain*

Inge Kaul, *Director, Office of Development Studies, United Nations Development Programme*

Discussants:

Lawrence Kotlikoff, *Professor and Chairman, Department of Economics, Boston University*

Jeffrey Frankel, *James W. Harpel Professor of Capital Formation and Growth, Harvard University, Harvard University*

Carl Dahlman, *Luce Professor of International Affairs and Information Technology, The Edmund A. Walsh School of Foreign Service, Georgetown University*

3:45-4:00 PM **COFFEE BREAK**

4:00-6:00 PM *SESSION 2* **- LATIN AMERICA**

Laura Bocalandro, *Chief, Regional Technical Cooperation Division, Inter-American Development Bank*

Joaquín Cottani, *Latin Source, USA; former Undersecretary of Finance, Argentina*

Discussants:

Roberto Dañino, *former Prime Minister, Peru*

Eduardo Aninat, *Ambassador of Chile to Mexico; former Minister of Finance, Chile*

Rodrigo Botero, *former Minister of Finance, Colombia*

Ricardo Hausmann, *Professor of the Practice of Economic Development, Harvard University; former Minister of Planning, Venezuela*

Gonzalo Sánchez de Lozada, *former President of Bolivia*

Domingo F. Cavallo, *Harvard University; former Minister of Finance, and of Foreign Affairs, Argentina*

6:00-6:30 PM **COCKTAIL RECEPTION**
The Harvard Faculty Club, East Room

6:30 PM **WELCOME DINNER**

Keynote address:
Lawrence Summers, President, Harvard University

September 8

08:00-08:30 AM **BREAKFAST**
The Harvard Faculty Club, Rooms 2 and 3, 2nd Floor

08:30-10:30 AM *SESSION 3* **– MIDDLE EAST AND AFRICA**

Jean-Claude Berthélemy, *Professor of Economics, Université de Paris 1 (Panthéon Sorbonne), France*

Samir Radwan, *Managing Director, Economic Research Forum, Egypt*

Discussants:

Michael Braungart, *Professor, University of Lüneburg, Germany*

Carlos Garcimartin, *Lecturer, Economics Department, Universidad Rey Juan Carlos, Spain*

James S. Henry, *Founder and Managing Director of the Sag Harbor Group*

10:30-11:00 AM **COFFEE BREAK**

11:00 AM-1:00 PM *SESSION 4* **- ASIA**

Richard Cooper, *Maurits C. Boas Professor of International Economics, Harvard University*

Discussants:

Shri Suresh P. Prabhu, *Member of Parliament, India*

Arvind Panagariya, *Professor of Economics and Jagdish Bhagwatti Professor of Indian Political Economy, Columbia University*

Yasheng Huang*, Associate Professor, Sloan School of Management, Massachusetts Institute of Technology*

Neil Hugues, *Consultant, World Bank*

Alice Amsden, *Barton L. Weller Professor of Political Economy, Massachusetts Institute of Technology*

1:00 PM-2:30 PM **LUNCH**
The Harvard Faculty Club, Rooms 2 and 3, 2nd Floor

Keynote Address:
Robert Mundell, 1999 Nobel Laureate in Economics, University Professor of Economics, Columbia University

2:30 PM-4:00 PM *SESSION 5* **– EAST EUROPE AND RUSSIA**

Artur Radziwill, *Vice-President, Center for Social and Economic Research, Poland*

Marek Dabrowski, *Chairman of the Council, Center for Social and Economic Research, Poland*

Discussants:

Alice Amsden, *Barton L. Weller Professor of Political Economy, Massachusetts Institute of Technology*

Christophe Chamley, *Professor, Department of Economics, Boston University*

4:00 PM-5:30 PM **GENERAL DISCUSSION AND CLOSING REMARKS**

Jorge Domínguez, *Clarence Dillon Professor of International Affairs; Director, Weatherhead Center for International Affairs, Harvard University*

Domingo F. Cavallo, *Harvard University; former Minister of Finance, and of Foreign Affairs, Argentina*

Carlos Magariños, *Director General, United Nations Industrial Development Organization*

WELCOME SPEECHES AND KEYNOTE ADDRESSES

Welcome Speeches

After **Jorge Domínguez** welcomed all the conference participants, **Domingo F. Cavallo** and **Carlos Magariños** provided a short insight as to how the project and the Conference itself had been envisioned.

Magariños stated that the United Nations Industrial Development Organization (UNIDO) believes that the multilateral system needs to be reformed; that the UN system needs to be revamped and updated to meet the new challenges faced by the multilateral community. While the reforms by Secretary General, Kofi Annan are highly acknowledged, UNIDO's position is that there is still much more to be done.

UNIDO was confronted with the challenge of reform several years ago when Carlos Magariños was elected for the first time to lead the agency in 1997. The concept of industrial development had to be refocused and modernized to deal with a context where new actors continuously emerge in terms of international cooperation, like civil society organizations, business associations and major companies with large budgets; many times larger than those of many countries in the world. To undertake the reform process, UNIDO needed an intellectual framework. It needed to convince its stakeholders that the agency's work was (and is) relevant to reduce poverty, reduce marginalization and improve living conditions.

And UNIDO was extremely successful. UNIDO managed to increase its volunteer contributions from developed and developing countries by 147% in the last five years. In terms of sales, these have increased 45% from 2000 to 2005. These are only some indicators illustrating how the Agency, after improving its bureaucratic performance, managed to increase the interest, involvement and participation of its stakeholders – three aspects UNIDO considers as true results of reform.

However, UNIDO recognizes that the problems the world is now facing cannot be solved with good bureaucratic performance alone. Thus, it wants to promote a substantive discussion to try to link the poverty agenda, the peace and security agenda and the development agenda. As the discussion on international public goods is extremely relevant, the agency has been following the developments on this topic very closely, and has looked into the framework of international public goods created by the United Nations Development Programme's (UNDP), Office of Development Studies, to think on the role of the multilateral institutions.

Carlos Magariños introduced this framework to Domingo Cavallo, who found it extremely interesting and very relevant. Domingo Cavallo suggested engaging other current or former policymakers, who had tried to or had implemented important economic reforms in their respective countries, into learning and discussing this framework, in order to obtain their perspective on the topic and to stimulate the discussion on the role of the multilateral system in the provision of international public goods. Carlos Magariños was enthusiastic to promote such a discussion through UNIDO. As a result, the Conference on International Public Goods for Economic Development was envisioned and organized. The Conference was organized in cooperation with the Weatherhead Center for International Affairs at Harvard University, lead by Jorge Domínguez, and with the Instituto Complutense de Estudios Internacionales, lead by José Antonio Alonso.

Keynotes

Keynote Address by Hon. Prime Minister of United Republic of Tanzania, Mr. Frederik T. Sumaye, September 7th, 2005, Harvard University.

First of all, allow me Mr. Chairman to thank the organizers of this conference: the United Nations Industrial Development Organization, in cooperation with the Weatherhead Center for International Affairs and the Complutense Institute for International Studies. Let me also seize this opportunity to thank the Director General of UNIDO, Mr. Carlos Magariños, for extending an invitation to me to attend this conference. In the same vein, let me thank in a special way our host the Harvard University for the warm hospitality accorded to us all since our arrival in this beautiful city.

Mr. Chairman, we are meeting here when part of this country, namely, New Orleans and its surrounding areas have been devastated by Katrina Hurricane, one of the worst natural disasters in the recent American history. From the scope of the disaster, many people have lost their lives, many more injured, properties lost and businesses virtually brought to a standstill. On behalf of the Government and the people of the United Republic of Tanzania and on my own behalf, I wish to send our heartfelt condolences to the President, the People of United States of America and specifically to those so affected by this tragedy. For those who lost lives, we pray for them to have eternal peace. For those injured and who lost property, we wish them quick recovery.

Mr. Chairman, in the recent years, UNIDO has made appreciable strides in guiding industrial development in developing countries. Our appreciation and gratitude go to the Director General, Dr. Carlos Magariños for his able and visionary leadership, and to all staff of UNIDO for the hard work and commitment they have put in. While I wish Dr. Magariños prosperity in his future undertakings as he is now winding up business with UNIDO, I wish to thank him for leaving behind a rejuvenated UNIDO and highly spirited workforce. I am sure most of you will agree with me that Mr. Magariños is leaving behind a transformed, vibrant, relevant and effective organization, as in few months to come after the approval by the UNIDO General Conference, the leadership of the organization will pass on to a new Director General.

Mr. Chairman, this is a special gathering of selected distinguished experts and World leaders, invited not only to discuss global issues of relevance today, but also to find solutions in our quest for achieving sustainable economic development of our countries. I am confident that this gathering will be a good forum to share ideas and find workable solutions on how we can move further through collaborations and partnership towards a prosperous world. It is in this respect that with all the experts around here I believe at the end of the day, we will achieve something very practical and concrete that will make important contributions towards changing the fate and lives of the World's poor.

Mr. Chairman, the theme of this conference is International Public Goods for Economic Development. As can be categorized, the major international and regional public goods critical for our global economic development may include among others the following: peace and security; international trade and market access; financial stability; knowledge creation and diffusion; and environmental management. I quite agree that these international public goods are of paramount importance to sustainable economic development. I am sure our experts will enlighten us more on the various parameters and the details of their research findings on these issues during the two days of this conference.

While all these international public goods are important to economic development, others have a more crosscutting effect. Peace and security are some of those goods that are so critical. Where there is no peace and security, there can be no development; and there can be no productivity even from within, let alone investment from outside. But one may ask why

there are so many disturbances and conflicts in many of the developing countries? Bad governance has almost always been blamed for such occurrences. While this may be true in some cases, in other cases, it can also be due to unbearable suffering arising from abject poverty. Where people can hardly have enough to eat, medical facilities are non-existent or inaccessible; water is not available, etc. good governance will be a luxury. After what happened in New Orleans, I think the rich nations can now better understand and appreciate the crisis of the poor. It is very difficult to govern a hungry person, who is of course always angry because he is hungry. Let us help the poor countries get out of the deep poverty trap so that we can demand from them good government. Good governance is a prerequisite for peace and security, which is also a prerequisite for sustainable economic development. Let me be understood, I am not in defense of those countries or leadership where the countries have been plunged into chaos and civil conflicts due to bad governance, or due to nepotism, corruption and similar vices.

Mr. Chairman, the rest of the public goods can be treated as a package and they support each other. For one to be an effective tool of economic development, the others must also be able to play a positive role. For example, if you want to talk of international trade, marketing, industrial processing and production, human resource development, and environment cannot be left out. They all together form an important package for economic development.

The most important challenge to developing countries is how to change from development patterns that rely on resource-based industries and move into higher growth patterns based on high industrial productivity and innovation through the optimal use of knowledge, technology, skills and opportunities arising from globalization, particularly on trade and market access. As you are aware, most developing economies are still predominantly agriculture-based, which is mainly at subsistence level, characterized by low productivity due to many constraints including use of rudimentary tools, obsolete technology, inadequate credits, lack of markets, inadequate agro-processing industries, vagaries of weather, etc.

In addition to this, most of the exports from developing countries largely comprise of primary agricultural commodities, while manufactured exports remain minimal. This is mainly due to lack of capacity to produce quality value added and competitive products that meet the challenges of competitive global markets. It is therefore my belief that, for these countries to industrialize and meet the challenges of poverty alleviation of the majority of their people, they need to modernize their agriculture to improve productivity and quality, process their primary commodities and sell the products in the international markets. It is in this regard that I call on the international community to support UNIDO initiatives of supporting agro-processing activities such as food processing, textile and clothing, footwear, etc. that have the advantage of involving many small scale producers in the developing countries. These processing industries create a lot of jobs and may become a base for future industrial development.

The experience of Tanzania through the support of UNIDO in this area of value addition like in food processing, has raised expectations among many of our people who are engaged in production activities, particularly the women. Many young people are now employed in these ventures and have steady incomes. The farmers are also enjoying better incomes from their crop sales through forward and backward linkages. This initiative can be expanded to a larger scale to include processing of primary commodities, if resources are made available to UNIDO. I believe the area of value addition can be enhanced and rural poor people helped, if assistance can be further extended in potential areas such as processing of cashew nuts, cotton, fruits, wood logs, minerals, etc.

Mr. Chairman, when I addressed the tenth session of the General Conference of UNIDO held in December, 2003 in Vienna, I emphasized the role of small and medium enterprises (SMEs) and its interlinkage to the achievement of the Millennium Development Goals, particularly in

poverty alleviation and helping developing countries to industrialize. Many experts agree that when we are talking of combating poverty through the process of industrialization, to many of the developing countries these involve the development of SMEs. In Africa, SMEs have a critical role to play in the development process. Apart from improving the private sector, it is expected to provide strong linkages within the domestic economy through job creation, increased income, transfer of technology and enhance production of products appropriate for large numbers of low-income people. Further, based on global experience, it has been observed that efficient SMEs are springboards to the development of a strong industrial sector. SMEs have the dynamism and flexibility that enable them to adapt more to market conditions. Hence, with technological development, SME products grow fast and may rapidly and more easily enter the local and international markets. Therefore, for industrialization to take place in developing countries we need strong support for SMEs. Many of our Governments have taken bold steps to support the growth of the private sector for it is through this process that we can also have a strong SME sub-sector. UNIDO has played a critical role in helping us towards that goal and we must appreciate those efforts. Other development partners and the international community need to give more support to developing countries in these areas, not only in the form of "Donor AID" but also through other avenues such as resources and technology transfers through Foreign Direct Investment (FDI).

Coupled with this, another important factor is that of scientific and technological innovations already available at the global level that can easily permeate to our societies through SME. We know that one of the key components for development of a strong and viable SME sector in most of our developing countries, especially those in Africa, is to build and nurture the entrepreneurship culture, which is still at its infancy stage compared to other continents such as Asia. The experience of East Asian Countries in information technology (IT) through continuous innovative development strategies is a good example of full utilization of technological revolution that has entered the more sophisticated industrial development. Hence, despite the current efforts, the international community has a role to play in this area to help poor developing countries acquire the required technologies.

Mr. Chairman, I believe that there is more room to assist the poor to attain industrial development, if we seriously want to address the problem of poverty in poor economies. FDI inflows to developing countries are low. As I pointed out earlier, UNIDO is doing a very commendable job in assisting the developing nations establish an industrial base starting with the mobilization of available resources of capital and labor. We all know that to enhance efforts for industrialization in developing countries as well as defeat poverty, marginalization and deprivation, UNIDO's effort alone will be far from being sufficient. However, UNIDO needs to continue playing its role in an effective manner to enable the international community to work in other fronts. Hence, I call on other Development Partners to work in partnership with UNIDO to achieve set targets. The promotion of SMEs in many developing countries like Tanzania is a success story that must be nurtured. For UNIDO to be able to do this, and bring further development into this important area, resources must be made available to it. This is where rich nations can help by making resources available to bodies like UNIDO. Let us work together and build healthy nations where we can enjoy and become partners and friends.

Mr. Chairman, in conclusion as I pointed out earlier, the deliberations of this conference will concentrate on the supply of International Public Goods mainly in the area of trade, financial stability, knowledge diffusion and environment for economic development. While the role of international organizations such as UNIDO, UNDP, World Bank (WB), USAID, etc. in these areas is to assist the developing countries (through credits, grants and technical assistance) in supplying these public goods, the major task is building institutions in the developing countries to cope with the nature and scope of this development. I would like to call on the United Nations specialized agencies to follow the example of UNIDO while undertaking

reform measures so that we may have rapid and sustainable development in the developing countries. While I know that the availability of International Public Goods provides only an enabling environment for economic development, at the end, the foundations for economic development must be laid at home. Therefore individual developing countries need to provide the political and social will to develop and undertake measures that have short and longer-term gains for all. For a faster and better success, it should be the effort of both partners in development. As we register success, we will create a better world for all of us. At the end of the day, we are all in the same boat.

Finally, on behalf of the Government of the United Republic of Tanzania, my delegation and on my own behalf, let me wish you Mr. Chairman and delegates, fruitful deliberations and a successful conclusion of this conference.

I thank you all for your attention.

Statement of acceptance for the appointment as Goodwill Ambassador of UNIDO by Hon. Prime Minister of United Republic of Tanzania, Mr. Frederik T. Sumaye, September 7th, 2005. Harvard University.

Carlos Magariños, on behalf of UNIDO, awarded Prime Minister Sumaye the position of UNIDO Goodwill Ambassador. As many UN organizations, UNIDO has developed its own program of Goodwill Ambassadors, which is slightly different than the ones developed by other sister agencies. UNIDO asks policymakers and business people to support and promote the idea that more attention should be given to the economic development functions of the multilateral system. Mr. Magariños explained that in the past, there had been quite a bit of tension and discussion on this topic. These functions were used to discuss whether market reforms or macroeconomic stability were needed in order to achieve economic development. In the future, in Magariños' view, the economic development functions of the system will have to be focused more on helping to complement the efforts made by those countries that have already achieved macroeconomic stability, have implemented macroeconomic reforms and have good records in government, to build and enhance their institutions in order to supply the necessary public goods that would enable them to participate effectively in the global economy. In this sense, UNIDO wanted Prime Minister Sumaye to be their Ambassador and help make leaders, business people and civil society organizations pay more attention to the importance of the subject of economic development and the linkage between the peace and security agenda, the development agenda and the humanitarian agenda.

Furthermore, Magariños recalled that Prime Minister Sumaye had been prime minister of Tanzania for ten years (two consecutive presidential periods), minister of Agriculture as well as having worked before in the private sector. Hence, it is UNIDO's belief that his background gives him the wisdom and the knowledge to combine public sector perception of problems and first-hand understanding on how to help the marginalized populations, the knowledge of the problems business people experience when they have to confront economic development and the comprehension of the challenges of participating in a global economy, faced by an underdeveloped country. Finally, UNIDO considered Mr. Sumaye's skills would help the agency in its plea for increased attention and contributions to its activities, in order to help developing countries meet the new global challenges.

Mr. Chairman,
The Director General UNIDO, Carlos Magariños,
Your Excellencies,
Distinguished Delegates,
Ladies and Gentlemen,

First and foremost, may I take this opportunity to express my deep and sincere gratitude and appreciation to the Director General UNIDO, Dr. Carlos Magariños for appointing me Goodwill Ambassador of UNIDO for a period of September to November 2005. This is obviously a big surprise to me and I thank you for that surprise.

Mr. Chairman, I come from Tanzania. During the last decade Tanzania has made big positive strides in economic development. The gross domestic product (GDP) growth has nearly doubled to 6.7 percent annual growth, inflation dropped from around 30 percent to 4.2 percent, foreign exchange reserves increased, FDI increased many folds, etc. During this period industrialization has shown a very clear positive trend in development and the SME sector that was almost non-existent has picked up very well. During this past decade, we have enjoyed very much the cooperation, assistance and guidance of UNIDO in the development of both the SMEs and medium to large industries. I wish to thank again the Director General of UNIDO, his staff and more specifically the Country Representative Mr. Felix Ugbor who has been working tirelessly around the clock, not only with the Government but also with individual groups that worked or established SMEs and the industrial sector in general.

UNIDO has not only helped the SME, but has also helped to link the industrialists from developing countries with those in the developed countries. People in the developing countries may have ideas and there may be lots of opportunities, but they may lack resources, technology, expertise and markets. When these two industrialists from two different worlds are brought together, the result is usually a big success for both parties. This is a very important role to assist industrialization in the third world.

Mr. Chairman, during this period when Tanzania realized positive economic development, I happen to be the Prime Minister of that country, from 1995 to October 2005, a period of ten years. I happened to have worked very closely with UNIDO and have enjoyed a lot of cooperation. We have made great strides and now the vision is clearer and opportunities broader. I will also be retiring from active politics just like my President Benjamin Mkapa, but we are leaving behind a safe, peaceful and progressive country and loving and progressive people. I hope it is this positive engagement that has made UNIDO pick me as Goodwill Ambassador.

I have always believed that for the economies of the poor countries to pick up, efforts have to be directed to some pertinent areas or sectors. Good governance, peace and security are the pillars of sustainable economic development. The developing countries have an obligation to make sure that their countries remain safe and give enough and unquestionable confidence to those who would want to do business with them or invest in their countries. Good governance, peace and security are also prerequisites for good production, even in the farms. After good agricultural production is attained agricultural processing has to come in. Hence any successful agriculture must be linked to industrial production, which in the long run is linked to economic development. Therefore, the importance of all these linkages cannot be over emphasized to anybody. Many countries that have become rich, managed these linkages. The poor countries, particularly of Africa must do the same.

Mr. Chairman, I have always realized the importance of industrialization to any economy in the long run. As Goodwill Ambassador I will do my respectful duty of advocacy for UNIDO and to advise various government leaders on the role of UNIDO and more importantly, the importance of industrialization process in the economic growth process. I will also perform my noble duty to advice the Director General as much as will be necessary and required. I can only say I appreciate this great honor bestowed on me, and I realize that it is also a honor to my country Tanzania. On behalf of my country and on my own behalf, I wholeheartedly accept the appointment and promise to do the dutiful and the needful; and promise my utmost cooperation.

The Director General, I once again wish to thank you wholeheartedly for this appointment. I thank you all for your attention.

Keynote Address by Professor Lawrence Summers, Foremer President of Harvard University, September 7th, 2005. Harvard University.

Thank you very much, Jorge for that kind introduction. Since I became an official at the Treasury Department and a university president, I find I'm introduced more generously than I used to be introduced as an economist. I am really glad to welcome all of you to Harvard, to thank Professor Domínguez, Professor Cavallo and their colleagues for organizing this conference on a topic that as I shall suggest, I think is profoundly important. One of Harvard's great strengths as a university, going back a long time, is that we are a worldly university. We are a university that is very much committed to the pursuit of knowledge for its own sake, but a place also of ideals as well as ideas. And a university that believes that knowledge, research, the teaching of students can in many, many ways all contribute to making the world a better place. And conferences like this one, which address real and major themes that bear on ongoing public policy debates, are one important way in which the university makes a contribution.

When I speak about these subjects, I find it useful, to at least raise some important questions and to state some judgments as a basis for discussion and argument. So in addressing the question of global public goods, I want not to address the question in its every aspect, which ranges from the global security system to the global financial systems to the ways in which harmonization is achieved across countries, but to address a rather narrower, and I think purer, but fundamentally important aspect of global public goods; the role of knowledge as a global public good. I start with a couple of premises. First, the question of global development and the reduction of poverty is the single most important challenge facing mankind. If one thinks about a billion people living in destitution, it is the single most important moral challenge facing mankind. If one thinks about the many parts of the world, particularly in Africa where a child is more likely to die before the age of five than to attend secondary school; it is a central humanitarian challenge. If one reckons, as I think the data supports quite strongly, that countries that are impoverished are less likely to be democratic, more likely to have very high levels of air and water pollution, and are substantially more susceptible to civil war; it is a security imperative as well. So as we think about global public goods, I'm going to focus on those global public goods that bear on what I think is the central challenge of global development.

The second basic observation I would make is that countries shape their own destinies to a very substantial extent that it is a mistake for any of us in the United States, in the international financial institutions (IFIs), in any of the industrialized countries to suppose that we can want prosperity and progress in any country more than the people who live there. There are to be sure great debates that will continue for a long time on the optimal development strategy within countries, on the appropriate pace of reform. But at some broad level I think there is agreement that countries that have three things - sound money, as reflected in their inflation, their government's fiscal position, the nature of their financial system; openness to the world, as reflected by the ease with which technology can be imported and the commitment to export goods and services; and where the exchange mechanism works, property rights are secure, contracts can be entered into, and the law governs transactions - countries that are able to achieve those three things, by and large, succeed economically. And countries that have great difficulty in achieving those things tend to have great difficulty in achieving great results in development. But, while that observation is right, I believe, none of us, none of us in the industrialized countries can afford to rest, and can afford not to do everything we can to create a global environment that is as conducive to prosperity as we possibly can.

And we of course do that in many ways. Our trade policies are surely profoundly important. And there are few things that embarrass me as an American, more than American trade policies that in the name of protecting United States (US) producers erect barriers that serve to impoverish hundreds of thousands of people involved in the production of textiles and other products. The process of trade liberalization (TL) has made progress, though not as rapid as one would like to. The focus of most discussions though, of what the industrial countries can do for development, is on the question of foreign assistance. And great effort is placed -- emphasis is placed, I think with validity, on the objective of increasing the flow of aid from industrial countries to developing countries. And in the last several years there has been considerable progress following the Monterrey Conference. And these are valuable and valid efforts that in my judgment should surely continue.

On the other hand, I think it is important to be realistic about the potential of aid, and to be realistic about some of the magnitude of what that potential is. Two calculations are, I think, instructive in thinking about this. If a hundred billion dollars of foreign aid are provided in a year, and that foreign aid earns a twenty percent rate of return, which would be a very high rate of return for any investment. It is a rate at which money doubles in three and a half years. That hundred billion dollar investment will earn -- will produce twenty billion dollars of extra gross national product (GNP) in the next year. It's a vast sum and it is much better to produce than not to produce, but it is seven dollars per capita per year for the two billion poorest people in the world.

Another way of making the point that the process is more complicated than simply providing cash assistance is to look at a kind of natural experiment that is going on right now, and that has gone on at various points in the past. Take Nigeria. Nigeria exports two and a half million barrels of oil per day. If you work it out, the developments of the last year in the world oil market are providing Nigeria with the equivalent of twenty to twenty five billion dollars in unconditional foreign aid for its government to devote to development. If one looks at the history of natural resource windfalls in the developing world, which represents a kind of experiment in the fact that is financially very similar to foreign aid, the benefits are clear. Countries with natural resources do better in years when natural resource prices are high than years when natural resource prices are low. But the impact on human development is not what we would like it to be.

None of this is a reason why given the prosperity in the industrial world, given the attractiveness of projects in the developing world, given the potential role of conditionality and dialogue, there is not a compelling case for increasing aid flows; for using aid in the most productive way possible. But it leads, I think, to a natural kind of reflection about whether there are other ways in which industrial countries can invest resources that will have an extremely high rate of return in jump-starting the development process. And part of the impulse behind the discussion of global public goods is the notion, which seems to me to be a valid one in at least some areas, that investments in global public goods may have extraordinarily high rates of return. And that there are very good reasons to suppose that markets or even political processes without very conscious efforts will under-produce global public goods.

Let me share with you the results of one set of calculations by Bill Nordhaus for the United States and I have not seen the comparable calculation done for the developing world, but I suspect it would have a comparable result. Nordhaus explored the following question, using both cost benefit analysis and a set of surveys. He asked people which would they prefer: to have a 2005 standard of living; actually a 2002 standard of living and 1952 health care, or to have a 1952 standard of living and 2002 health care? The answer is that most people, even when they think about it, they look at the data, they can't quite decide. If anything, people would prefer to have a 1952 standard of living and 2002 health care. And if you work out the

value of a life in a variety of kinds of statistical calculations, lost income, all of that; it corroborates that judgment. And,think about what a remarkable judgment that is. What that is saying is that about less than half percent of GNP, that the United States has devoted to medical and healthcare research over this period, has contributed as much to well being as all of the economic growth that has taken place in the United States over that period. And similar calculations by Murphy and Topel establish a similar kind of idea. They estimate the benefits of the medical research that has been spent over the last thirty or forty years as being well into the tens of trillions of dollars.

Why is it that this could happen? Well, the answer is pretty obvious. The answer of course is that research is a public good. That if I use knowledge - if I use what Watson and Crick found out about DNA - it doesn't subtract from anybody else's ability to use it. And so knowledge is a classic public good, and therefore, will be under-produced. It will be under-produced if people cannot exclude others from the benefits. And it will be under-produced even if they can, because if they can, they will exclude people from the benefits and then people will not be able to take full advantage of the benefits. And that is why, as I am sure you have discussed earlier in this conference, research is treated as a classic public good. If one looks at the problem of global development, it seems to me there is every reason to suppose that global public goods - knowledge that could be effective for development is under-produced. To start with, they are all the same considerations that militate against basis research being produced within industrialized countries. Second, many of the benefits will flow outside of the country where they are produced. Third, the benefits of research play out over the long term, and governments invariably think in the short term. Fourth, the benefits are abstract. How does one think about feeding a hungry child versus doing research that may lead to a better nutrition supplement that will feed a hundred children for the same price five years hence. So there is, it seems to me, every reason to believe, that our system will naturally under-produce global public goods.

Here is another corroborating fact. The pharmaceutical industry in recent years has spent more money on pet disease than it has on tropical disease. And you can see why. If there is not a large market, there is not a large incentive to do it. To try to create a large market would be to establish a pricing regime that would make it impossible for those most in need, to take advantage of the product. What can be said about pharmaceutical products and vaccines, it seems to me can also be said about research on agricultural varieties that will be productive in equatorial climates. It can be said about technologies that will support carbon sequestration at a very small fraction of the price of emissions devices. It can be said in a somewhat different way about evaluation research that looks carefully at what works and what does not. Of all of the medical innovations of the last hundred years, I would suggest to you that the double blind clinical trial is surely among the ten most important. And, yet, as we think about development policy and everything from family planning to the Internet and education, it is still a complete rarity to do careful and rigorous evaluation. Why? Because the benefits all go to the person doing the next project. And the costs in pecuniary terms and the risks of looking bad all go to the person doing the last project.

And so it seems to me that in these areas, medical research, agriculture, the global environment and evaluation research - and I am sure there are many more - there is every reason to believe that the world is missing opportunities where rates of return are vastly higher than those associated with the normal kinds of physical and even human investments that we talk about. And it seems to me that the challenge, the challenge in many ways for politics is to find the way to mobilize the resources and overcome the barrier that comes from the fact that the benefits are long run; that the benefits are dispersed and hard to capture and that the benefits are intangible. But I find it close to inconceivable that if one looks at the magnitude of the global aid budget and one asks if three percent of that were devoted to fundamental research on tropical disease, tropical agriculture, new environmental technologies and evaluation that would be huge relative to the research efforts in each of

those areas. And it is hard to believe that the benefits would not very substantially exceed any costs; Which is not to say that that is the preferred path. The preferred path is surely to find three new billion dollars or five new billion dollars for these kinds of research. And I think the question for those of you who still have policymaking responsibility is how one can mobilize the constituency and make the case in that way.

We at Harvard are certainly going to be trying to do our part in the years ahead. We have launched a major initiative in global health. We are focused on carbon saving technologies in our center for the global environment. Professor Kramer in our economics' department has been a pioneer in various kinds of village level evaluations of different types of interventions to judge which ones can succeed. And as we think about the university strategies in these areas, we are very much aware of our responsibility as a prosperous institution committed to the development of knowledge, to do our part in filling this gap. But it seems to me that it is a very important global challenge and I think I would be prepared to defend the proposition that there is no single act involving several billion dollars, no debt relief, no direct provision of assistance that would be as likely to have as high a rate of return over time, as resources properly focused on the global public good of knowledge.

Thank you very much. I would be happy to respond to anybody's questions or comments about anything I said, or anything I should have said, or any other subject.

Q&A Session

During the Q&A Lawrence Summers disagreed with a comment that multinational corporations are the primary locus of innovation, and argued that funding of research by governments, which needs to take a kind of global basis, is an equally important priority. To prove his point he mentioned how research in health care in the US has been driven primarily by the National Institute of Health, the Internet is a result of defense related research done by the US Government or how the development of agricultural technologies in the US has important roots in universities, but public universities funded with government grants.

With respect to providing incentives to corporations, Summers believes in the notion of so-called pull incentives. He acknowledged that corporations that invest in, for instance, health-related or agricultural research might be worried they will not be able to recoup the costs if they get a breakthrough. He considered that guarantee purchase funds from the government are a way to guarantee a market that would not exist otherwise, so as to have corporations doing research on things that are necessary in the developing world.

Regarding property rights protection, Summers believes that the kind of intellectual property protections that the United States and other industrialized countries reached for in the Uruguay round, were probably excessive. Hence, it is necessary to strike a balance between protecting intellectual property rights (IPRs) and preventing people from using the fruits of intellectual property. This balance will vary from sector to sector. However, he also believes it is important to preserve markets, and that this especially applies to the pharmaceutical industry. He pointed out, for instance, that it is not easy for pharmaceutical companies to sell drugs at lower prices in developing countries, because they fear that people will question why Americans should pay higher prices than those paid by people elsewhere. This would then lead to price controls in the US and companies will thus, not be able to reap the benefits from their innovation.

On a question related to health and safety regulations associated with products, Summers argued that countries should establish whatever rules they think are appropriate to protect consumers. However, he also stressed that it was necessary to separate the question of what the appropriate regulations are from the question of what the right international trade regime is. He argued that rules should be equally applied to domestic and to imported goods. In other words, that that there should be a level playing field between domestically produced goods

and imported goods, and hence, no discrimination with regards to where the goods were produced.

Finally, Summers acknowledged the importance for developing countries of preparing people to lead, and hence to foster higher education. He considered that whereas investing in primary and secondary education is a matter of equity, investing in higher education can make a greater difference in the creation of jobs and in development.

Keynote Address delivered by Professor Robert Mundell, 1999 Nobel Prize in Economics, September 8th, 2005,Harvard University.

It's a great pleasure for me to be here and to talk to you about this subject. A few years back - I guess it was in 2000 - I was invited to talk at an economic development conference for the World Bank in Paris. I asked why I had been asked to talk at an economic development conference. Of course I believe that international monetary arrangements have a great deal to do with economic development, but I had never seen it on the agenda of the World Bank. And the answer I got was that they would like to have it on the agenda. It's been a subject that has been swept under the rugs in large part and it is strange, because if you look at the countries around the world and the problems that lead towards big halts to their development, the cause has often been some kind of macroeconomic instability. Clearly the issue should be an important thing that we should take into account.

What is a little bit of a puzzle, is why the economics profession about thirty five years ago, leaped onto the bandwagon of flexible exchange rates, as if flexible exchange rates were some kind of antidote to problems of monetary stability. There was this movement, which started out in the 1950s and 60s and gathered force in the 1970s and held the roost to the point that it captured the International Monetary Fund (IMF). The IMF makes a point of praising countries - or used to until something I heard recently - for moving onto flexible exchange rates, as if that was a solution to the problem. When in one sense, it is the opposite of a solution; it's the removal of a solution that may not have been working. The movement to flexible exchange rates is not a monetary rule; it is the removal of a monetary rule. The fixed exchange rate is a monetary rule, which keeps a kind of monetary stability. Whether it is a good kind of monetary stability or not is one thing, but it is a way of getting a kind of monetary stability. If a country fixes its exchange rate to the world economy, that country gets more or less, in the long run, the price level of that world economy. If the rest of the world is not unified, but has separate currency areas as it has now, and a country fixes an exchange rate, it gets the monetary stability of the currency to which it is fixing. It may or may not be perfect, but it is a kind of monetary stability. But if a country is keeping a fixed exchange rate to an anchor currency and removes that, it is abandoning that version of monetary stability. Hence it is a great mistake for the IMF to praise countries for moving to flexible exchange rates, because it is really important not to. It may be necessary to give up a monetary rule, but it is not a good idea to abandon a rule without replacing it by an alternative. The alternative could be inflation targeting, or it could be fixing to another currency area, but it has to be something that gives people confidence in the stability of the currency somehow defined.

I look for example at China. China up until 1995 did not have a monetary law. Then in 1995 they decided they needed to have a monetary rule and they decided that they wanted their central bank to have the basic function of achieving monetary stability. But then they went on to a long discussion after going around the world and looking at what the word monetary stability means. It could mean stability of the price level, or it could mean stability of exchange rates. China opted in 1997 to fix the exchange rate when the international monetary authorities in the US were sort of pressuring China to devalue; they have to devalue. All of the other countries in Asia had devalued too. However, the prime minister of China said there would not be any change in the exchange rate policy in the foreseeable future; they would

keep the exchange rate, which is still a basic rule China has been following. And this was a particular kind of monetary stability given by a fixed exchange rate to the US dollar, and that is not perfect. During the period of the late 1990's when the dollar was very strong, China actually suffered some negative inflation, some deflation in 1998 and 1999, as did every single country in the world that fixed its currency to the dollar, including Argentina, Panama and all the Gulf States. That was a major problem. Then, during the global recession, the dollar depreciated and these countries suffered more inflation than they wanted.

China also suffered a little more inflation because China had gone from slightly negative, about half of one percent inflation rate, to about one percent in 2003, and then to one point three percent in 2003. Then in 2004, people started saying, that China was going to have too much inflation and that it had to appreciate its currency for its own sake. Well the peak inflation rate that China had in 2004 was in August and it was a 5.3% annualized rate of inflation. Then it went down and then it stopped, and since 2004 – around December or November - it's been going down. It went down toward 1%, 3% in March and now it is around one and half percent. So all that was nothing! Yet the IMF came out with their consultations paper claiming China has to appreciate its currency or float for the sake of its internal stability otherwise it is going to have too much inflation. Now, a month or so ago China changed the exchange rate policy and everybody in the international community gave a sigh of relief and China was praised by the US and praised by the IMF. But the fact is that China has not changed its policy. It still believes that its anchor to the dollar is the best anchor. And it may be that every six months or so there might be some change; it might go up or down 1% or so. You do not know. But basically that anchor to the dollar proved to be the best thing for China and despite the difficulties when the dollar gets too strong or the dollar gets too weak, it is better than anything else. And why is that? Because the Chinese realize that the basket of goods that China has in the world economy, is three and a half percent to four percent of the world economy. And China fixing its basket of RMB or Yuan to 3 or 4% of the world economy is not nearly as good in the long run for the stability of the RMB as fixing its currency to a basket of 30% of the world economy which it is when it fixes to the dollar; the dollar plus the Gulf States and Panama and a number of other countries that stabilize their currency to the dollar. It is far better to have the RMB fixed in the long run, stable against 30% of the world economy than it is against 3% of the world economy, which is China's own basket. This is true not just for China but for every country in the world. Now, for China it would be much better, if China could stabilize its currency to a basket, not of 30% of the world economy, but 60% or 80%, if the rest of the world were stable. If the dollar were stable against the Euro Zone and Japan, then this would be the best thing of all for China. But as a second best policy what China does is not such a bad idea. And this is the basic theorem that you might have for any country in the world.

Well, this covers many different aspects and the one that has been fixed upon by economists has been the asset aspect of money, the medium of exchange. To finance people, money is an asset like any other asset, and you do portfolio management. . Too many economists have picked up the idea that in the modeling of money, money is part of a general equilibrium system; money is a commodity like any other commodity. Milton Friedman when he wrote his famous paper for flexible exchange rates in the 1950s said that the exchange rate was a price like any other price. This was an astonishing thing because he was treating money just like any other good. This is different from what great economists had done in the past. They always treated money as something separate. What is it that makes money separate? It is that money is a unit of account. Keynes, in the opening bars of the treatise on money, says the unit of account is the most important property of money. Keynes said that the purpose of the General Theory was to introduce money into the theory of production. But it has never been and still is not done. But Keynes's messages here were all lost on the developments that came about in economics. Very different from the past treatise, Walras, Ricardo, Smith, where you find that they were all written as if there is a ngle money; Paul Samuelson's 1939 article, "The Gains From Trade". How many monies are there? Once you relax the idea that there is a

common money, all those propositions in economics do not hold. You try to write the gains from trade, but relax the assumption there is a single money and nobody has done it. Nobody talks about what the gains from trade would be.

I was at the Asia-Pacific Economic Cooperation (APEC) meeting in Shanghai in 2001, where I gave a speech. People were talking about having a free trade area (FTA) in APEC by 2015, but nobody was talking about what would happen to the monetary system. No economic theorist has dealt with the costs of fluctuating exchange rates within a free trade area. Nobody has even touched on that. So this is a major defect. It's a major hiatus in our economic development.

Well, the unit of account idea of money goes back in the economic history. The dominant unit of account in the ancient world was the cow, or ox as the cow was the main production machine in an agricultural society; the main instrument. So the ox was the unit of account, but never a medium of exchange. (You can just imagine trying to go to the metropolitan opera with a cow and paying). Thus, the ox was always the unit of account, but the medium of exchange came to be the precious metals. While, there were seven of them that were widely used, gold was the best of those because platinum had not really been developed yet. The most important unit was the talent, which was an old weight standard as well as a currency. One talent was equivalent to about sixty pounds, which was the weight a man or a slave could carry. Thus the talent of gold was the value of an ox in terms of gold, which was about a hundred and thirty grains of gold, or about eight and a half grams of gold. Not so very different from what came to be the pound sterling. So that is a unit of account that has gone on through history. Well, as you go along, you come to the Roman system. The Roman gold coin was the aureus, and the unit of account in Ancient Rome was the libre. The Romans had two words for pound, libre and pondus. But libre and pondus were the units of account in the Roman system, and always meant five gold coins, or five aureui. That was the origin of the pound sterling; five gold coins. It was never a pound weight of silver divided up into some way. That was a myth of historians. Now, I won't go into the details of this. I gave a speech once of the British museum on the origin of the pound, so I know more about this than I want to tell you right now.

In the early age of history, the priesthood dominated the money supply. Then came the empires: the Roman Empire, the Persian Empire, the Islamic Empires, etc. which dominated the money system. Now we move to the nation state, and every nation state has its own money. They are not optimum areas by any economic criteria; they're political areas. It may be that in the ancient empires when people traded in a large extent, it was more efficient than the idea that the money should be controlled by the nation state and that every currency in the world would fluctuate one against the other. Think about this. The law of economics. You can think of a hundred currencies in the world. How many exchange rates are there? Well, formally there is a half times n times n-1, and that comes to a ridiculous amount of exchange rates. Now, you can cancel out the cross exchange rates, and you can reduce that to a hundred or ninety-nine exchange rates if you can find a numerator. What do you do if you do not have a numerator? Well you can see it would be in our world of a hundred and eighty four countries of which, about a hundred and seventy currencies are relevant there. This would be tremendous chaos.

So, we would never have moved to flexible exchange rates when the international monetary system broke down in the early 1970s, had it not been for the fact that everybody knew the dollar would be the currency of the world. And the dollar has been the currency of the world since 1971. You never got into four thousand or ten thousand exchange rates in the world. Nobody even thinks of it. Markets would not think of it. When we look at the exchange rate in the major papers, headlines in maybe the Herald Tribune or the Wall Street Journal, we see three, four or five major exchange rates. So it is power that rules out. But what it means is that the power configuration of the international economy determines the efficacy of an exchange

rate system. Which is never talked about in the arrangements well. We get to this world that we have, and the world is not nearly as bad as it could be, because if the world is composed of two hundred independent countries about the same size, this would be the tremendous chaos. No individual, no head of the IMF, no secretary of the treasury would ever have suggested flexible exchange rates in that framework.

We moved to flexible exchange rates because we already had a dominant currency in the world that became the nominal, the integer or numerator for all these other countries. If the dollar could be the world currency today, if we all used the dollar in the Federal Reserve System, it would be a wonderful system. You'd never have any currency crisis as there would only be one currency. It would lead to a great increase in trade and payments and everything else. But you could not do it right now because politically nobody would agree to it. You could have done this back in the 1920s. In the 1920s there was a very good monetary system. It was like a dollar standard. But then Europe wanted to go back under the gold standard because they did not like the kind of dollar standard that had developed after the dollar took over the pound sterling in World War I as the dominant currency in the world. Hence, the world went back to gold, and that created a tremendous excess demand for gold and created the great depression; a great 30% fall in prices that came about three years after 1929. That was devastating and people blamed the gold standard instead of recognizing that the mistake was having gone back to it.

But in 1925 you had a monetary system that was like a dollar standard, and it was exactly like the Bretton Woods system that was created in 1944 because the dollar was the only currency convertible into gold. And the other countries were fixing their currencies to the dollar. It was a very good system. That broke down, not because there was anything inefficient about fixed exchange rates, but simply because after the World War II, Korean War and Vietnam War inflation, the price level went far beyond the gold price. While the gold price stayed the same, the price level tripled and there was an excess demand for gold as in 1929, 1930. This time there was no big deflation because at this point the US went off the gold standard and created flexible exchange rates.

Well, I want to get to the current issue that we are in a world where the dollar, if it could be the world currency, would be a great currency in my opinion. But the world will not accept it, and even if the dollar became the major currency, you would have the problem of who would control it. You could put international authorities to control it all but the US would never allow that. The US citizens would never want to have international management of the dollar for the sake of the rest of the world. The US does not think they would have any gain from this. What could be done though, would be to create a kind of DEY: a dollar-euro-yen basket and use that as the anchor, the unit of account for the world economy. It could be linked to gold or it could be divorced from gold; that is a separate kind of issue. A lot of people would just say, you are better off without gold. A lot of others would say gold would give it long run stability. But the opposition to it would be very high.

Since the last three years I have had a conference on global money in Siena, Italy and Paul Volcker has been a pretty regular attendant. At this conference in June 2005 I presented a proposal for a world currency, and we had a discussion about it. Volcker wrote me a letter; a little sheet of paper with all the problems in coping with this issue. I think it is a very instructive piece of paper because you have the questions you need to ask: First, if you have a world central bank, what is the problem of having a world central bank without having a world government? The problem of governance! This is a key issue. Second, if you have a world currency(ies), what is the long run objective? Are they going to stabilize prices; what price list, etcetera? The third question he asked was: Who decides; who makes the decision? Another big issue. And who is the authority for it? Then he has a little comment circled over here: immaculate conception. What that brings me to view is that the best way you could move toward a better international monetary system would be to move toward it informally

through an agreement of the major countries - primarily the big issue is the United States and Europe. If the United States and Europe could link together to agree, I believe Japan would not object and would be part of that agreement. And politically, it might be useful also to add a few other countries in the management of the board: Britain - the fourth largest currency area and China - the fifth largest currency area. It might even be useful to add India, Russia and Brazil. Thus, have a board that would manage this currency area, and not a blue print for it made up and sewn with a formal treaty, but a practical working arrangement that would be beneficial to all countries. Where the three major currency areas - and this could include the five or six currencies, could try to keep their exchange rate stable in some fashion that would not be inimical to their major economies. And this would be a way of getting back to the stability of a core in the world economy.

At the final meeting we had at Santa Colomba in Siena, Domingo Cavallo said, "Well, if the major countries fixed their exchange rates, everybody would want to fix to that zone". And why wouldn't they? You have the dollar, euro and yen area, which have no inflation problems. So if you could stabilize the exchange rates for most of the countries why would these countries not come together? And it is through that process, after you have got a workable arrangement you could then start to reconstruct and create a global monetary system. It would be based on self-interest and it would have this great property that would last as long as there is basic peace in the world. If a big war broke out, then it would not be war-proof, just as none of the international monetary systems in the past at the global level have been war-proof. Still, it would be a process that would be worth doing. It would be forming a group of countries, analogous to the proposal by Kofi Annan and others of widening and changing the Security Council. You could create a monetary council that would have the responsibility for the monetary sphere; something that could also have payoffs and side effects, spillover effects in the other areas of cooperation. Peace would be one of those things.

Thank you.

Q&A Session
At the end of Professor Mundell's presentation, Eduardo Aninat and Marek Dabrowski posed the following questions:

Eduardo Aninat, first questioned what the accompanying fiscal policies would be when Mundell called for tying the currency to a big currency like the dollar. While he had talked a lot about monetary policy, Aninat wondered what the fiscal counterpart would be to that. Aninat also questioned why Mundell had extended the currency compilation, to include a Brazilian, Indian and Chinese component, wondering if it would not be better to have only one or three currencies of the universal currencies rather than five or seven.

Marek Dabrowski posed a similar question, on how much coordination of national macroeconomic policies (fiscal, banking regulations and others) was needed to follow this kind of new fixed exchange rate arrangement?

Mundell responded that he had been a little bit imprecise on the question of adding the countries, and that he meant adding other countries to take part in the decisions; not adding other currencies in practice. He mentioned that the IMF had created its first basket in 1974, with sixteen currencies, and that this sort of basket later proved to be useless. Hence, a few years later they reduced it to five, and now it is down to four currencies. Moreover, Mundell mentioned that if the United Kingdom (UK) entered the Euro zone it would then be three. So, Mundell agreed that it would not be good to have a lot of currencies in the basket as it would make it more complicated. He further added that with the dollar and the euro it would probably be enough, although it would be better to add the yen. However, regarding the board of consultations, he considered it would be important to represent other countries to reach consensus. In his view this could also mean collective groups - instead of individual countries

- from the different regions like Latin America, Africa and so on. Moreover, he believes it would be more satisfactory in the long run to have the equivalent of executive directors representing groups of countries with rotating leaders.

Regarding fiscal policy he responded that there could be any kind of reciprocal commitment on the part of the central bank to assist the countries, such as a guarantee of their currencies. Something following along the lines of what the French did during their CFA franc area period of almost fifty years, which he considered a very good arrangement. There would have to be reciprocal commitment, which would certainly have to involve balanced budgets or some slight variation. Mundell believes that the European Union (UE) lesson clearly demonstrated that you cannot let countries go on their own running their own budget deficits posing this threat to the other members. If countries do not keep the commitment then the membership should be ended. If the membership cannot be kept, then the reciprocal commitment from the central government would have to be ended.

SESSION 1
State of the Art and Relevant Issues

Chair:
Domingo F. Cavallo*, Harvard University and Former Minister of Finance, and of Foreign Affairs, Argentina*

Panelists:
José Antonio Alonso, *Dir*ector, *Instituto Complutense de Estudios Internacionales, Spain*
Inge Kaul*, Director, Office of Development Studies, United Nations Development Programme*

Discussants:
Lawrence Kotlikoff, *Professor and Chairman, Department of Economics, Boston University*
Jeffrey Frankel, *James W. Harpel Professor of Capital Formation and Growth, Harvard University*
Carl Dahlman, *Luce Professor of International Affairs and Information Technology, The Edmund A. Walsh School of Foreign Service, Georgetown University*

Jose Antonio Alonso opened the session with general statements on International Public Goods, and focused on nine issues he considers to be the most controversial and that deserve greater attention.

According to Alonso, the interdependence between countries and markets has increased to degrees previously unknown, leading to new problems that transcend national borders and call for international cooperation. These interdependences form the basis for IPGs, which as a whole constitute a determinant factor of aggregate welfare.

As goods of a public nature, IPGs are subject to allocation problems. Non-excludability and non-rivalry complicate the expression of consumers' preferences and encourage opportunistic behavior. Consequently, as unfettered markets will result in undersupply or overuse of public goods with respect to the social optimum, collective action is needed to guarantee the optimum supply.

Based on the hypothesis that the international system has thus far been unable to define the institutional framework and the set of incentives required in order to achieve efficiency in the provision of IPGs, and in particular, assessing the shortcomings in the supply of IPGs more relevant for economic development (trade integration, knowledge diffusion, environmental

sustainability and financial stability), Alonso presented the following nine aspects as the most controversial:

1) *The ambiguity of the IPGs boundaries:* No clear line can be drawn between private and public goods. Rather, it would be more appropriate to consider publicness and privateness as two features that are present in different proportions in most goods. The non-rival and non-excludable features are just as difficult to define. Non-rivalry is to a great extent a technical problem, whereas non-excludability can be determined by ethical or socio-political considerations. Therefore, where are the boundaries of IPGs to be set? Whereas some authors rely on technical aspects, thus limiting IPGs to those cases where externalities make it very difficult for the market to operate properly, others take a different perspective and propose expanding the concept of IPGs. However, not even this distinction is entirely clear because the degree of publicness of the goods will always be conditioned by the institutional response adopted to supply them. Choosing either criterion notwithstanding has important consequences not only due to the scope that would be given to the publicness concept, but also because of theoretical reasons. Firstly, a broad definition of IPGs implies a distributive dimension. Secondly, there is a close relationship between the scope of public goods and the concept of citizenry. The latter will be shaped by the set of public goods people can have access to because they belong to a certain political community.

2) *The definition of IPGs:* Alonso proposed three fundamental dimensions to classify IPGs: the shaping of the social order, the protection of life, and the fostering of progress. These three basic goals are present in various degrees in IPGs hence making it possible to classify them accordingly. The first group would include the existing international normative and institutional architecture. The second group would include the fostering of international peace and security, the promotion of health and environmental sustainability, and the fight against drug trafficking. Finally, the third group would include trade integration, financial stability, and knowledge diffusion.

3) *Efficiency and equity in the provision of public goods:* Equity and efficiency are intertwined when addressing the provision of public goods. This relationship can be analyzed from different perspectives. Equity can be considered an intrinsic component of the efficiency with which these goods are supplied, and also as a means to achieve it (instrumental relationship). The intrinsic relationship relies on the very definition of a public good. Once the good is produced, exclusion from its enjoyment carries a cost in terms of efficiency. As the marginal cost of the good is null or very low, having one more person enjoying the good will result in an increase in aggregate welfare. Naturally, this will be limited by the degree of rivalry in the consumption of the good: the lower the rivalry, the higher the efficiency gains resulting from increasing the number of consumers. On the other hand, the instrumental relationship implies that promoting equity will in turn contribute to improve the efficiency in the supply of the public good. Alonso offered three arguments to support the case.

i) When a weakest link is present as is the case of goods related to security, it would only be possible to enhance the provision of the public good if the contribution of those that are lagging behind improves. Therefore, there is a strong case for the correction of international inequalities.

ii) Core and complementary activities are needed to supply an IPG. Whereas the former are mainly dealt with in international settings, the latter are mainly carried out domestically. Therefore, strengthening the ability of poorer countries to deliver complementary activities may be required.

iii) Extreme inequality prevents effective cooperation, as it may result in lack of trust, increased heterogeneity and transaction costs. Besides, it may also weaken the institutions needed to articulate such collective action.

Finally, not less important is the fact that extreme poverty can be considered a global public bad that affects governance, and hinders the legitimacy of the international system that

accepts it. In sum, it seems unlikely that the provision of IPGs will be enhanced if there is not a simultaneous effort to correct international inequity. By the same token, the supply of IPGs can be a means to achieve that goal.

4) *The opportunities for cooperative action:* Alonso claimed that the provision of IPGs does not necessarily have to rely on the previous definition of property rights or the action of the State, but rather that efficient responses can also be the outcome of voluntary action. Therefore, the set of possible responses goes beyond the typical prisoner dilemma results. Relying on a broader set of assumptions with regards to the nature of the public goods, the cost-benefit structures, the institutional rules of the game, and asymmetric preferences and information, increases the likelihood of cooperative responses. Moreover, this possibility is further enhanced if the assumption of simultaneity is abandoned, and games developed over a certain timeframe are considered. Alternative strategic games may, thus, emerge such as assurance game; chicken game; or coordination game. Cooperative actions may also result based on reputation concerns or the fear of counteraction.

5) *The institutional framework:* The current international institutional framework faces a double challenge: the quest for operative efficiency and political legitimacy. In Alonso's view the multilateral system is inadequate to manage IPGs efficiently due to a low degree of internal coherence, an overlapping of activities, a questionable specialization and a lack of coordination between agencies. Therefore he called for the revamping of the system's structure and functions along the lines of the issue-leadership approach suggested by Magariños (2005)[328] (i.e., clusters of institutions for each IPG with a shared work plan and task specialization based on the expertise of each institution). Along with an efficiency problem, there is also a problem of legitimacy. Globalization has broken the correspondence among political structures, political space, and democratic community. Alonso suggested the following courses of action based on three identified problems: First, rebuild the basis of the political community in order to address the lack of a normative framework to support a new multilevel concept of citizenship, which would not be based on the definition of territory, but rather on norms and principles to be applied in different environments. Second, reestablish the principles of coherence and symmetry within the international organizations by fostering an international order more inclusive, effective and accountable, which could solve the lack of correspondence between those, who make the decisions and those who are affected by them. Third, enhance participation by promoting better access of the citizenry to the decision-making process.

6) *Economic IPGs as club goods:* Most IPGs related to economic development are actually impure public goods. Whereas environmental IPGs are the closest to pure public goods, economic integration, financial stability, knowledge production and diffusion can be more easily made excludable. Therefore most economic IPGs have become club goods allowing for a certain degree of exclusion. The club dimension depends negatively on the transaction costs and positively on the benefits derived from the consumption of the good. According to Alonso, the formation of clubs in the realm of IPGs could be considered an efficient response taking into account that the high international heterogeneity, amplifies the transaction costs, and that the presence of weighted sum (international trade and financial system) or best shot (innovation) arrangements reduce the costs of excluding the poorest countries. Nevertheless, the cost of exclusion is becoming increasingly relevant, in particular, when there are network externalities (international trade, international capital markets, benefits derived from innovation diffusion). Not less important is the fact that in an increasingly integrated world, exclusion has a cost in terms of the legitimacy and governance of the international system. Thus, Alonso pointed out that there is a benefit to be reaped from expanding club

[328] Magariños, Carlos. 2005. Economic Development and UN Reform: Towards a common agenda for Action. A proposal in the context of the Millenium Development Goals. Available at http://www.unido.org/doc/33228

accessibility. Nonetheless, heterogeneity among club participants would on the other hand increase transaction costs. Thus, it would be possible to increase the benefits rendered by the international system in the provision of IPGs by reducing international heterogeneity. This could be achieved by supporting the efforts of the less developed countries to meet international standards and by improving their capacities to access the provision of IPGs.

7) *Environmental IPGs:* As these are quasi-pure public goods, and therefore non-excludable, it is difficult to sanction opportunistic behavior or create effective incentives. However, some lessons may be learnt based on the international response to two relevant environmental IPGs (the protection of the ozone layer and preserving climate stability). Alonso considered the relative success on the conservation of the ozone layer can be explained by four factors, not present in the case of climate change: awareness of the high cost of inaction; a cooperative response with acceptable costs; international leadership (by the US); and the support offered to the poorest countries to comply with required technological change. According to Alonso, international leadership is a key element for efficient action, in particular in the case of quasi-pure public goods.

8) *Think globally, act locally:* In order to improve the supply of IPGs, it is necessary to take actions at various levels, especially at the local level (easier to carry out activities related to the provision of IPGs) and the regional level (easier to encourage cooperative responses). There is a close relationship between national public goods (NPGs) and IPGs. On the one hand, in order to adequately supply IPGs complementary actions at the national level are needed. On the other hand, the access to IPGs will be unlikely if indigenous capacities to absorb them are not present. Capacity building is particularly relevant in the case of club goods, as a means to overcome exclusion.

9) *Sources of funding of IPGs:* The provision of IPGs involves three types of cost: production costs; transaction costs emerging from collective action; and costs incurred to access the goods. For instance, in order to apply World Trade Organization (WTO) agreements, a developing country would incur a cost as high as U$S 150 million. Given that the price system does not work well when it comes to public goods, other sources of funding are needed. Alonso highlighted the following four mechanisms. A first alternative would be to rely on the creation of quasi-markets, which in turn would make it necessary to assign property rights, to establish both a system to reveal preferences and a transparent regulatory framework. Secondly, Alonso pointed to the use of public funding, including international sources, but acknowledges the shortcomings of this mechanism: first, based on the limits imposed by the country's development level, thus, making it necessary to help the poorest countries so as to guarantee their contribution and access to the goods. Then, in terms of development aid, its growth is also constraint, but in addition, it is advisable to maintain a degree of differentiation between the IPG agenda and that of development aid, based on their different goals. Another alternative is voluntary funding, which although important would not warrant an efficient provision of IPGs. Hence Alonso argued for the need to develop new global finance arrangements, such as global environmental taxes; Tobin tax; special drawing rights for development (SDRs); International Financial Facility; private donations; global lottery and premium bond; and remittances. Nonetheless, none of them would be free from criticism as they could cause crowding out, be insufficient, and also present allocation problems. Therefore their implementation should also be carefully studied.

Alonso concluded that whereas there may be other controversial aspects, these nine issues clearly show the importance of giving the topic of IPGs further analysis and debate.

Inge Kaul focused her presentation first, on clarifying the misconceptions surrounding the nature of international public goods (IPGs) both regional and global. Then building on her clarified definition, she suggested ways to enhance the contribution of IPGs to development, particularly for developing countries.

According to Kaul, there are four common mischaracterizations of TPGs, especially in the case of IPGs, that may lead to policy conclusions and advice that actually hinder development:

1. IPGs are enjoyed by, and benefit all equally. However, it is more appropriate to define TPGs as goods that are there for all to consume and in many cases are highly contentious, precisely because they are in the public domain and affect all. Moreover, in a world of wide disparities and diverse preferences, different countries as well as population groups may not derive the same utility from the same provision of a public good. Thus "publicness in consumption is not equal to publicness in utility". Kaul suggests two methods for measuring utility: contingent valuation or a simpler way, by estimating the cost/benefits of the current provision of a good and the net benefits that would accrue if investments were made to enhance the current provision status.

2. IPGs are often perceived as far away and foreign. However, for the most part IPGs are being consumed and even produced locally and nationally. For example the ozone layer may be "out there" but the effects of its thinning are consumed locally, in fact extremely locally on people's skin. Moreover, many IPGs emerge through the globalization of national public goods. For example to control the spread of communicable diseases across borders, public health conditions and behavioral patterns may need to change in many if not all countries. IPGs in most instances therefore are also public in production: every country has to contribute to provide these goods, through a summation process. Moreover, in Kaul's view the core provision must occur nationally and that international action should play a complementary role. Thus "globalness is not equal to foreigness or remoteness" and Kaul stressed that more and more public goods have assumed or are in the process of assuming a global dimension, creating the need to harmonize the public domain.

3. IPGs are perceived as provided by states or intergovernmental organizations. However, the provision of many public goods is in fact a multiactor process, with inputs both from state and nonstate actors and with more voluntary and private participation. The private sector recognizes that preferences for public goods vary, and it also presses for those goods that could best help it achieve its goals (e.g., more effective market integration).

4. The resource transfer from richer countries to poorer countries to assist them in the provision of IPGs, is often viewed as an aid distribution issue. However, in many cases -like biodiversity preservation- the transfer constitutes a payment for services rendered: "trade instead of aid". Moreover, industrial countries are many times the primary net beneficiaries of addressing international issues. Thus cost-benefit analyses can give a better sense of who actually are the donors and recipients of the benefits.

Based on these clarifications, Kaul suggested the following steps to enhance the role of IPGs in economic development:

1. Undertake comprehensive country studies to identify "key" global public goods most beneficial to developing country national interests and concerns. For example, the provision of climate stability can be expected to benefit mostly, small island developing countries at risk from rising sea levels. Or, the control of HIV-AIDS would be most beneficial to African countries where the disease burden is highest. All developing countries, however, are expected to benefit from a reform of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS),

improving developing country access to development-enhancing technologies. The aim is to identify those goods that promise a relative high national-social return, if investments are made to enhance their provision. To conduct proper studies, the costs of inaction and of corrective action, and the distribution of net benefits have to be considered, as well as possible cross-bargaining and other types of side payments to encourage participation of all countries in the required collective action.

2. Understand the provision of the national building blocks of GPGs (i.e., how the globalization of national public goods takes place). As governments are increasingly acting as intermediaries between external policy demands and domestic policy preferences, there are important questions to be answered about the optimal or adequate provision of public goods within the national context.

3. Select the best actor/s to provide GPGs, recognizing the importance of multiactor cooperation (partnering) and competition. The emerging cooperation (as well as competition) between governments and markets on issues that were conventionally handled exclusively by intergovernmental institutions, suggests the need to rethink the role of these institutions. Kaul for instance suggests leaving emerging markets to set the price of a carbon ton in emissions trading instead of bureaucratic institutions as the Global Environment Facility (GEF). The selection of the right actor, the right institutional entity and the right tool can lead to significant efficiency gains.

4. Clarify the link between foreign aid and GPGs to avoid that an enhanced provision of GPGs, comes at the expense of reduced aid. While in GPGs, resources are allocated to a good, and primarily motivated by efficiency concerns, in the case of aid, transfers are made directly to a group, and are motivated by equity concerns. According to Kaul, the main reason aid money is siphoned to the provision of TPGs is that in many industrial countries the technical ministries are barred by existing budgetary rules from spending money abroad. So for example, an environmental ministry plans and adopts resolutions on global issues that an aid agency or foreign affairs department pays for. Thus, ways to overcome this obstacle should be explored. Finally, another issue deserving analysis is the meaning of "fair provision of GPGs" and why a payment is being made (e.g., is it aid or is it trade for a service?).

Kaul concluded that the greater openness of national borders and the porosity of borderlines between public and private, have both changed the way in which public policy outcomes may be achieved. Recognizing that many major policy issues are TPGs – i.e., goods that potentially affect all and in many cases need contributions from all to be adequately provided– can help to better understand and manage globalization. It might help bring the "local/national" into clearer focus and promote a more gradual, context-specific approach to globalization.

Lawrence Kotlikoff advanced a specific proposal on public goods. He proposed to take advantage of the existing technology and connect the people in developing countries to the developed countries in a very real way, through income accounts.

Kotlikoff pointed that aid and loans to the developing world have not had significant impact on development. He believes that corruption has played a role in that outcome. Therefore, he called for new institutions and new mechanisms for aid to be more effective. Together with James Henry, he elaborated a proposal published by the Wall Street Journal, on aid channeled through individual accounts. According to Kotlikoff, the World Bank or the UN system for that matter could set up individual accounts in developing countries. The money would be made available through special talking-ATMs, which would work via fingerprints. Aid would be deposited directly in those accounts. Part of the money would be unrestrictedly available

and another part would be restricted to purchases for specific goods like mosquito nets, or medication, also made through the same ATM. The World Bank would establish with the providers a discounted price for those items. Whatever money the person does not withdraw, would remain in a savings account and would be invested in the world capital market at no cost to the investor. Thus, a person in the developing country could have a checking account and an investment account.

Kotlikoff argued that this way, there would be an alternative to a potentially corrupt local banking system in developing countries. By offering an alternative to people, Kotikoff believes local banks would be forced to act responsibly. Moreover, people would be shielded from banking crises, which are a major source of financial and economic instability in the developing world. He considered that a system like this can also facilitate the transfer of remittances, and reduce transaction costs associated with them. He envisioned that these accounts could also be a means to channel donor's money to people in the developing world, even if the donors are individuals either in developed or developing countries. The World Bank could create "merit good account" funds to channel donor's money to well-behaving developing countries, which would then be distributed equally among all the people in the country, via these individual accounts. The money would be channeled to the restricted portion to be used only for those specific goods, aforementioned. Finally, although he acknowledged that the idea could seem crazy, he pointed that is what revolutions are all about.

Jeffrey Frankel expressed his pessimism with regards to the prospects for expanding the provision of public goods internationally or even maintaining it at the level of the post-war period. He recalled Charles Kindleberger's idea that in order to provide public goods internationally an enlightened hegemony should be present in order to cope with the free-rider problem. Only this way, would it be possible to provide the IPGs the world needs at the very least such as a stable international currency; a free-trade regime; and some sort of lender of last resort in the event of a financial crisis. For Frankel, this need is even more evident if public goods related to environment, human rights, the proliferation of weapons of mass destruction, stabilizing failing states, or fighting terror or poverty, are to be provided. Following Kindleberger, Frankel argued that before 1914, the UK was that hegemonic power which had the ability and the will to lead the system and provide public goods like a stable currency, a free-trade regime, and an international lender of last resort. However, the UK lost this ability in the interwar period, and US, which had the wealth and resources to take UK's position, did not have the will to become an international provider of public goods. Nonetheless, after the WWII, the US overcame its isolationism and acquired the will. The US-led system characterized, according to Frankel, by being multilateral through institutions like the IMF, the World Bank, the UN, and the General Agreement on Tariffs and Trade (GATT) among others, and by leaning on a national security argument: the fight against communism.

Frankel argued however, that in 1991 with the end of the cold war, this architecture fell apart. In that new international political environment, it became very difficult or impossible for the US Administration to get fast track authority, to pay UN dues; or to get treaties approved. Frankel claimed that after September 11, 2001 the US government missed the opportunity to recover the national security argument, and get the will of the American people to assume some of the costs that may stem from providing necessary international public goods. As examples, Frankel mentioned, to tax fossil fuels, reduce domestic consumption of energy, free-up textile and apparel imports, save more, and support and expand multilateral institutions. On the contrary, the government promoted consumption and lost the opportunity to exert international leadership in areas like trade, the management of emerging market crises, the management of the dollar, the energy policy, the multilateral agreements, and the twin deficits.

In the area of trade, Frankel argued, the US lost credibility by increasing protectionism, and by not recognizing - along with Europe - that developing countries need to have an equal vote in designing a new trade round as they are being asked to undergo important liberalization efforts. He pointed out to the hypocrisy on the issue of bailouts and moral hazard, as well as on the management of exchange rates. He argued that, for instance, when Chinese exchange rate policy is discussed, China should have a seat at the table. Thus, he asked for shifting away from G8 and moving towards G20 or so, as part of a larger movement to include important emerging markets in this powerful forum.

In terms of energy policy, Frankel considered that the US should be reducing their consumption of fossil fuels instead of accelerating it, not only due to environmental concerns, but also due to security motives. In general he is also wary of how the US is not only opposing new international agreements, like the Kyoto Protocol on climate change, or agreements on landmines, but also undermining existing agreements like the Montreal Protocol, the Geneva Convention and the Treaty on Non-proliferation of Nuclear Weapons (NPT), to mention some. He also considered that the US government mistakenly combined tax cuts and rapid increases in expenditures, which have led to twin deficits, a large budget deficit and a current account deficit (CAD). Thus, according to Frankel, the US may lose the ability to exert global leadership. As a consequence, Frankel is very pessimistic on the prospects of increasing the supply of international public goods.

Carl Dahlman agreed with Jose Antonio Alonso regarding the need for systems of international governance to deal with a fragmented world. He, then, focused on the matter of knowledge. He pointed out that knowledge is key for development but not only technical knowledge, but also organizational and managerial one, for instance, how to organize an effective school system or an adequate health care system. He stressed that knowledge is an imperfect public good, which has elements of both public and private goods. On the one hand, basic knowledge can be considered more of a public good, but on the other hand, when it comes to applied knowledge, there are ways to make it excludable either by keeping it secret or by resorting to institutional regimes of intellectual property rights. Although, he acknowledged, exclusion is not always complete, as there may be ways to get around these devices.

Dahlman, stressed five points. First, economic development is largely about harnessing knowledge for productive activities. Second, although knowledge can be considered a public good, a lot of it is produced because it can partly be appropriated. Nonetheless, sometimes the problem is how to get the knowledge to the people who need it but cannot access it due to, for instance, lack of information or lack of capacities to absorb it, or to apply it, or lack of access to complementary assets needed to apply it. Third, there is a matter of resource allocation and problems of policitcal economy. For instance, he argued, the MDGs can be achieved with existent knowledge, except for areas where additional knowledge and international efforts are needed (HIV/AIDS, malaria, and the environment). He claimed that it is necessary at the international level to generate better knowledge of how to minimize environmental damage or use resources more efficiently. Fourth, he pointed to today's fast pace in knowledge creation and dissemination, and the fact that countries compete in availability of skills and ability to innovate. By the same token, to take advantage of this state of affairs several prerequisites are needed which, according to Dahlman, are missing in poorest countries. Therefore, these countries are falling further behind. Thus, the need to have good education systems, or research centers determines that the knowledge gap is growing. As a result, the income gap is also growing. In 1983 the per-capita income of the richest country in the world was higher than that of the poorest one by a factor of hundred and thirty-six. That ratio today increased to four hundred and eighty two. Nonetheless, Dahlman stressed, inequality is not only increasing among countries but also within them, like in the US or in China. This gap makes it more difficult for everybody to participate in the global system. Fifth, he pointed to the actors that are called to take action with regards to the creation of knowledge and more importantly to

the creation of capabilities to use knowledge, such as multilateral institutions, governments, and multilateral corporations. To Dahlman, the latter are the biggest actor in innovation and knowledge dissemination. He pointed out to the case of China, where foreign investment was leveraged in such a way that helped the country move forward in terms of development. According to Dahlman it is necessary to think more carefully how their many capabilities can be put to work in favor of providing the basic things poorest countries need. Finally, he agrees with Alonso's paper that more important than international efforts is how to create domestic capabilities, high level human capital, in developing countries in such a way that they can participate advantageously in international dialogues and contribute to reform the whole world governing structure, where to Dahlman, roots the basic failure.

Open Discussion and Comments

Frederik T. Sumaye commented on the proposal by Kotlikoff, of opening individual accounts in poor countries that receive loans from the World Bank. He considered that the proposal is built on two false premises. First, that developing countries are not developed because their leadership is always corrupt, and second, that these countries are not capable of running their own affairs. Although he is by no means defending corrupt governments or leaders, he considered that it is necessary to mention that there are poor countries that can exhibit good governance.

Sumaye wondered what kind of projects could channel money to individuals' accounts, other than for giving people a salary. Nonetheless, he stressed that this in itself would be a bad project because once the international support is gone; the country would be left with a frustrated workforce. A project of this sort was proposed for Tanzania, but they refused to implement it given its disadvantages. Loans from multilateral organizations are directed towards specific projects, and this money is not supposed to be given to individuals. How could money for immunization programs, educational development, or building a road be given to individuals? If the country is getting financing for a school improvement program, or an immunization program it would not be possible to channel funds to individual accounts. Furthermore, he also pointed out that many times the donor agency has a stronger say in the projects than the recipient country, and questioned who would run the business of delivering money to people in poor countries, and who would decide and supervise the allocation of resources. Would it be a World Bank team?

Sumaye also highlighted that international development is not only about donor money, but it is also about many other factors. The donor funds are just supportive funds that can support other efforts and other parameters. But if these parameters are not the right ones, development will not be possible, regardless of the availability of donor's money.

SESSION 2
Regional Focus: Latin America and the Caribbean

Chair:
Daniele Archibugi, *Director of the Italian National Research Council (CNR), Rome, Italy*

Panelists:
Laura Bocalandro, *Chief, Regional Technical Cooperation Division, Inter-American Development Bank*
Joaquín Cottani, *Latin Source, USA; former Undersecretary of Finance, Argentina*

Discussants:
Roberto Dañino, *former Prime Minister, Peru*

Eduardo Aninat, *Ambassador of Chile to Mexico; former Minister of Finance, Chile*
Rodrigo Botero, *former Minister of Finance, Colombia*
Ricardo Hausmann, *Professor of the Practice of Economic Development, Harvard University; former Minister of Planning, Venezuela*
Gonzalo Sánchez de Lozada, *former President of Bolivia*
Domingo F. Cavallo, *Associate, Weatherhead Center for International Affairs, Harvard University; former Minister of Finance, and of Foreign Affairs, Argentina*

Paper:" The Case of Latin America" *by Joaquín Cottani Claudia Silva, Ivanna Bandura*

DISCUSSION

Maria Laura Bocalandro presented an innovative program started in 2004 by the IADB to finance the production of regional public goods (RPGs). The program emerged from the demands of its member countries and was fostered by a 2002 joint conference with the Asian Development Bank (ADB). The IADB "Initiative for the Promotion of Regional Public Goods" is a US$10 million-a-year program based on collective action by the participating countries to address a common problem or opportunity with cross-border spillover effects.

Bocalandro argued that there is a two-way relationship between RPGs and development. On the one hand, RPGs are the required infrastructure to open up markets and enhance efficient cooperation, on the other hand, countries will not absorb RPGs if a development benefit is not evident. Bocalandro stressed the role of regional financial institutions in the provision of public goods. She pointed to economies of scale and scope, and in the case of Latin America and the Caribbean, to a 40-year history of integration and cooperation in the region with the support of the IADB.

Specifically, the IADB program promotes the production of regional public goods where the participating countries themselves identify the problem or opportunity, design the solution, implement it, and commit to sustain the production of the public good. Thus, the program is demand-driven, competitive, aims at focusing on RPGs with public interest, in particular, on the weakest link or summation types of RPGs, and seeks to build capacity and ownership in the countries through this collective action. As a consequence, the program does not have a sectoral focus, rather the countries identify the areas of involvement. Through its financing, the IADB addresses potential challenges faced by the countries, such as institutional weaknesses, coordination problems, and free rider issues.

As of the presentation, the IADB had funded eight projects in the social, environmental, education, and modernization sectors. Bocalandro explained in more detail three projects. The first one aims at knowledge sharing. It is a network of education portals where the Ministries of Education of fifteen countries working together are producing quality educational content that can be used by any country in their education curricula. The second project is a joint effort to better protect biodiversity in the Amazonian basin and to better manage this resource. In the third project, eighteen countries pull together in an e-government initiative. The IADB will has a second call for proposals in 2005 and provide another U$S 10 million for the winning proposals. Finally, Bocalandro indicated that there is a sense of enthusiasm in the region for this incipient initiative that promotes collective action and the production of RPGs in Latin America and the Caribbean.

Roberto Dañino highlighted two circumstances related to the role of multilateral agencies. Firstly, he stressed that the role multilateral agencies play in the international financial scenario should not be overstated as it is actually a complementary one. He pointed to the fact that, nowadays, private financial flows are much more important than the total amount of aid, both bilateral and multilateral. Dañino moreover highlighted that, as a matter of fact, in the

last fifteen years private sector financing worldwide reached five hundred and forty billion dollars a year, whereas the total amount of aid, both bilateral and multilateral, was no more than seventy billion dollars a year. In relative terms, whereas the World Bank accounted for one percent of total financial flows, the regional multilateral organizations two percent and bilateral organizations three percent, private sector financing accounted for ninety four percent of such flows. In the case of Latin America, for instance, whereas the IADB and the World Bank provide less than fourteen billion dollars a year, remittances from residents in the US reach forty billion a year.

Secondly, Dañino considered that multilateral organizations, in particular those that lend to Latin America, are redefining their mission as most LAC countries are now middle-income ones. This situation is challenging the role of multilateral organizations in such countries because they can borrow from commercial markets at a lower cost and much faster than from multilateral organizations. Dañino recalled that when he was in office, he compared borrowing from the World Bank or the IADB and from private sources, and determined that in the case of the multilaterals it would take between eighteen to twenty four months to disburse whereas a private bank would disburse funds in six or eight weeks. Regarding costs, he pointed out that in the case of multilaterals, while the financial costs were certainly lower than those of private sources, the country also needed to assume compliance costs. Thus, taking both costs into account, the cost of borrowing from multilaterals would be almost the same or even higher than from taking a loan from private sources. As a consequence of this commercial factor, the World Bank lost market share in middle-income countries worldwide. Therefore, Dañino considered multilaterals could direct their efforts to areas where the private sector is not yet going, for instance, sub-sovereign lending, in other words, lending to municipalities or provinces. Nonetheless, Dañino was wary of such lending taking into account how much damage the over-borrowing by the provinces caused, both in Argentina and Brazil.

Dañino also highlighted that not only the relative importance of the World Bank in middle-income countries has changed in the last twenty years, but also what it does, its comparative advantage. The Bank has switched from hard lending to soft lending, from infrastructure projects to health, education, and institutional reform. He stressed however, that this trend has began to change in the last couple of years, as shareholders would like to see more investment in infrastructure. He pointed out that the adjustment of the nineties was mostly done at the expense of public investment in infrastructure. Thus, in LAC in the last fifteen years it has gone down from 3.2% to less than 2%, on average. On the other hand, LAC would need investments for as much as 4% or 6%. As a consequence, he considered that multilateral organizations could play a facilitating role in this respect, but not one of lending.

Finally, he also pointed to the bad performance of private investment in infrastructure, the frequency of non-performing contracts, and the need to create a conducive environment for private investment to flourish. In this regard, he stressed the need of having rule of law, a legal framework and a well-functioning judicial sector. In particular, he highlighted that foreign investors are not satisfied with the judiciaries in LAC region, and called for action that not only would engage multilateral organizations but more importantly the private sector, which he considers a far more relevant player.

Eduardo Aninat agreed with the Regional Study on LAC's point on the semi-dismal growth and development performance of LAC in the last two or three decades - looking both at GDP growth and per-capita income - and despite the many reforms the region underwent. However, he departed in that the undersupply of IPGs does not make up for the differences in growth among regions in the world and, in particular, it does not explain the bad performance of Latin America. Rather, he proposes that the undersupply of NPGs be analyzed further. He considers that it is necessary to focus on the supply of public goods at home, on local institutions, on governance, on transparency, and on corruption.

He acknowledged the good accounts the regional study provides on how the visible hand of government acting in the macro and microeconomic scenarios as well as in other important sectors would explain errors and mistakes and as a consequence, the bad results of the region. He claims however that this has nothing to do with NPGs or IPGs but rather, with a lack of accountability, nepotism, monopoly, monopolistic behavior, and a protective and protected environment for major private agents. Hence, in order to understand LAC's poor economic performance, it is necessary to focus on how sheer economic and social distortions impact the region's national economies.

Aninat proposed a framework to focus the discussion of the regional study by establishing a divide between a critical examination of the commitment of societies to growth and to the rules of the game, vis-à-vis other aspects related to the supply of IPGs. Hence, it is important to examine the incentives and distortions of the domestic political and social game, how institutions have been built in Latin America, what the rules for cooperation, if any, are in the society, the rule of law and its links to financial, economic and social stability, and to property rights. Aninat claimed that these elements are mostly non-tradable and cannot be established from afar. Whereas the supply of some IPGs, such as a leveled playing field in trade, or financial stability are really important, their undersupply is only a partial element that has prevented a better performance of the region. Nonetheless, Aninat underscored the importance of fighting non-tariff protectionism as well as agriculture protectionism by the developed world, the EU, US, and Canada; and also the need for a new international financial architecture that addresses issues of consistency, openness, overseeing, access, volatility, safeguard, and surveillance. Furthermore, he points to the misgivings of the Bretton Woods institutions, and in particular, the excessive conditionality the IMF imposes to even very small countries.

Finally, Aninat addressed policymakers by making three points. Firstly, he considered that in order to improve the provision of domestic governance and NPGs, reformers and party members should be loyal to their constituencies; secondly, they also need to exercise their voices louder; and thirdly, they have to take the risk of saying "no more", to leave rather than accept and withstand distortions. According to Aninat, this will be a signaling device of the nature of public goods at home.

Rodrigo Botero highlighted that the common element of the past thirty years in LAC has been the persistence of external shocks. According to Botero, these international public bads stemmed from terms of trade problems, financial instability, and sudden changes in energy prices, interest rates, or key exchange rates. Although better international cooperation would contribute to mitigating some of these shocks, the efforts to achieve it have not prospered. Hence, policymakers in middle-income developing countries have to cope with the macroeconomic volatility resulting from external shocks. Botero highlighted the Colombian experience in copying with such shocks, which led to a set of guidelines for policymaking. A) Design adequate shock absorbers in order to minimize collateral damage; B) Increase overall economic resilience by improving the international integration of the country, namely, increasing and diversifying exports; C) Control firmly external borrowing at all levels, national, regional, and local, including SOEs; D) Avoid a financial crisis; F) If volatility is inevitable, accept it in the nominal exchange rate. Finally, develop strong technical capacity in key government agencies, along with strong analytical capacity in universities and independent research centers. Building strong economic teams would enhance the capacity of the country to interact with international financial organizations and to benefit from external technical assistance and cooperation.

Ricardo Hausmann pointed to the international aspect of IPGs, highlighting that international means that there is a border. According to Hausmann putting a border in an economic space means loosing the possibility to undertake economic activities on the other

side of the border (sell, work, borrow, enforce contracts etc.). Hausmann claimed that there is a tension between two trends: globalization and more global markets, on the one hand, and the proliferation of independent states and the creation of more borders, on the other hand. This translates into a tension between having common rules and sovereign rules. The EU, for instance, is about giving up sovereignty in order to adopt common rules that facilitate such economic activities.

Hausmann pointed to the huge economic effects of borders, as identified by the economic literature. Economists discuss whether borders reduce trade by a factor of three or of twenty. In either case, a border has significant effects on the size of markets, and on the options people have. He distinguished LAC from the US in the fact that the latter held together into a one federation of fifty states, whereas LAC split into more than thirty pieces, each with its own sovereign rules. Thus, he underscored the impact borders may have on LAC, as well as Africa, in terms of opportunities for division of labor, and economic activities. Therefore, one element to take into account is the tension between sovereign rules and common rules, and the fact that common rules would facilitate a deeper integration.

The other element Hausmann highlighted is the issue of missing markets. He claimed that Latin America is very vulnerable to external shocks because it is very fragmented. As a consequence, there is no risk-sharing, for example like natural disasters risk-sharing or financial risk-sharing. Hence, there is under-provision of a risk-sharing market. On the other hand, there is also a failure in the market for government technology, which reflects on the lack of convergence in educational quality or in health care quality. Thus, the kind of traditional cooperation, as the program the IADB is promoting in order to foster the provision of regional public goods, may help boost the movement of ideas across borders.

Gonzalo Sanchez de Lozada built upon Hausmann's remarks on borders, indicating that borders are among LAC's biggest problems. He compared the Mississippi River in the US with the Parana-Paraguay and Rio de la Plata systems in South America. Sanchez de Lozada argued that during the Civil War, Abraham Lincoln understood that the United States could not exist, if there were two countries on one river. The Mississippi River system was the "backbone of the US" at the time. If Lincoln had not kept the union together, there would have been two countries on the same river and as a consequence the Middle West would not have been developed. He believes Lincoln understood what Latin Americans did not: hence, Latin America divided into many countries.

He referred to a situation he underwent twice as President of Bolivia regarding the Parana-Paraguay Rivers system. Bolivia has to channel its exports through Argentina,and according to Sanchez de Lozada, Argentina prevents Bolivia from using a different port, for instance, in Uruguay. Thus, he considered that international organizations could play a role in trying to break down boundaries, especially by developing the Parana-Paraguay Rivers system as a backbone of LAC, and that this would be an international public good. He also pointed to several problems that have to do with multilateral organizations, such as the increase in Bolivia's deficit caused by switching the pension system deficit from below to above the line after it was reformed, or the debt forgiveness that prevented Bolivia from borrowing money from different sources other than from international agencies, which on the other hand, could not lend to Bolivia because they did not have concessional funds. Moreover, Bolivia suffered greatly as a result of external shocks such as the crises in Asia, Russia, Brazil, and then Argentina. Given the high unemployment, Bolivia needed much investment in public works but could not borrow "cheaper" money from the private sector. Only after a major social revolt, was Bolivia given permission to borrow from the private sector.

Sanchez de Lozada, argued that the problem with international agencies, specifically the IMF is that it has not realized that the world has changed and that the main economic problem is not inflation but rather the ability to maintain stability and create jobs. Hence, public goods

like the question of the Parana River system, or the environment could be handled by institutions that are attuned to the problems the countries have. According to Sanchez de Lozada, education is the backbone of the economy. However, first it is important to overcome borders. In this context, the IMF, the IADB and the World Bank could help to deal with this issue.

Open Discussion and Comments

Arvind Panagariya agreed that borders have an effect on trade, but he believes that there would not be a border effect on growth. He pointed how small-sized countries like Singapore, Taiwan, and Korea have managed to grow rapidly. In the case of India, while its large size was considered a problem in the past, it is now considered an advantage. He thus stressed that what really matters and makes a difference, are the policies that are applied.

Ricardo Hausmann acknowledged that the existence of borders does not mean that countries do not have market access. Singapore is for instance particularly open and has access to a big market. However, Latin American borders impose restrictions that make them a problem. As a matter of fact, LAC countries have different sets of domestic policies that restrict trade among them. In order to overcome this problem, some kind of international framework is needed because it is not the sovereign decision of each one of the thirty-four individual states.

Michael Braungart called for a clearer definition of public goods. He considered that whereas it is clear that a river is a public good, it was not too clear whether oil or Chilean copper are public or private goods.

Eduardo Aninat pointed out that Chilean copper is a commodity, and has no correlation to public goods. He also explained that forty percent of the output per year is produced by a public corporation and sixty percent is in private hands, both national and foreign.

Domingo Cavallo further explained that copper and oil are private goods, because people may be excluded from their consumption and because they can be priced in the markets. The fact that they are owned by the public sector does not make them public goods.

Michael Braungart considered that from a scientific perspective however, raw materials should be labeled as public goods that can be used privately. Copper, for instance, provides nutrients that may not be available for future generations, as the recycling rate of copper is the lowest in history.

Inge Kaul found the discussion on the removal of borders very interesting, given that in the UN and in other international conferences, there is a tendency to complain about too much centralization and harmonization. Then she pointed out that NPGs are now being globalized or regionalized, and even sub-regionalized so that markets can get together. Thus the border discussion is really calling for a trans-nationalization: the same public good, the same way, harmonized in different countries. Kaul suggests agreeing upon the correct terms to be used, so as eliminate any confusion.

Eduardo Aninat in response, highlighted the issue of standardizing codes and norms. Whereas harmonization can lead to economies of scale and access, poor countries lack capabilities in their public and financial sectors, in education, and in trading. This, then, can lead to the question of what standards should be imposed.

SESSION 3

Regional Foc us: Middle East and Africa

Chair:
Hon. Prime Minister of Tanzania, Frederik T. Sumaye
Panelists:
Jean-Claude Berthélemy, *Professor of Economics, Université de Paris 1 (Panthéon Sorbonne), France*
Samir Radwan, *Managing Director, Economic Research Forum, Egypt*

Discussants:
Michael Braungart, *Professor, University of Lüneburg, Germany*
Carlos Garcimartin, *Lecturer, Economics Department, Universidad Rey Juan Carlos, Spain*
James Henry, *Founder and Managing Director of the Sag Harbor Group*

Paper: "The Case of Middle East and North Africa (MENA) Region" *by* Samir *Radwan*

DISCUSSION

Michael Braungart took the opportunity to thank Carlos Magariños for his efforts as Director General of UNIDO during his eight years - an activity he considered a real public good. Recognizing UNIDO's achievements, Braungart stressed that it would be important for the United States to increase its support to UNIDO, and that in a sense it was the responsibility of "elitist" universities like Harvard to foster this support and more productive dialogue.

Braungart commented on how not only the quantity but also the quality of public goods matter, when highlighting the importance of environmental goods. To illustrate this point he presented the example of production of computer monitors in Malaysia, which produces toxic chemicals that are released into the environment and which would be illegal in the US, but are permitted in Malaysia due to poor occupational health standards. According to Braungart, these are chemical weapons, weapons of mass destruction that affect people. And there are plenty of additional examples, for instance, the chemicals found in children's toys. Braungart mentioned that the indoor air quality in the United States households was now about five times worse than outside urban air because of all the toxic imports accumulating within households. His main message in this sense was of a world facing a "chemical harassment".

Third, he concluded that the key issue in Africa, was poverty and that if certain human rights were not guaranteed such as access to drinking water, for example, the rest of the public goods become irrelevant, as does the debate. In this context, he highlighted as very positive, a new development in Saudi Arabia, aiming at building universities and educational programs focused on the fight against poverty and sustainable development, among others. Therefore, in Braungart's view Africa is not the weakest link but rather the biggest opportunity to reestablish basic human rights and to guarantee the protection of the planet. Braungart claimed that among the reasons the world does not do enough for Africa, is the misconception that overpopulation is a problem for the planet. To illustrate this misconception, he referred to the biomass of ants on the planet and how while ants are approximately four times as numerous as human beings, they are supportive of the planet. According to Braungart, a key issue is to understand and treat everything as nutrients, which have to be placed back into the corresponding cycles. Thus, he claimed there is no overpopulation problem. Moreover, if children are seen as an over population problem, the world is giving up human rights and common goods for all the people.

Braugart concluded that, in this sense, Africa is key to the world's future – not only because of its potential natural resources that can be exploited in the future, but most importantly due to its cultural contribution.

Carlos Garcimartin presented a more negative and pessimistic view on Africa's future, based on the ideas of Professor Paul Collier, at Oxford University. According to Collier, the developing world is splitting up in two groups: one that is catching up with the developed world, and the other, Africa, which is not catching up at all. While in the past Africa had opportunities to develop and integrate into the world economy through export promotion policies, this is currently not possible given that Africa has no advantages in terms of production costs and all the external factors that affect competitiveness, are underdeveloped.

Following up on Berthelemy's theory, that Africa's main problem is not the underprovision of international public goods but rather the capacity to take advantage of them, Garcimartin further concluded that Africa's problem is even deeper and is basically that it is not integrated into the world economy. Thus, to solve this problem Garcimartin proposed implementing some kind of Marshall Plan for Africa. According to Garcimartin, the plan would have to be focused first on developing domestic capacities for Africa to be able to consume international public goods, and second on fostering international rules that would be less costly for Africa to implement. Hence, in his view, international institutions could play an important role in the design of rules that are easier to implement in African countries. He also stressed however, that the Plan would have to be designed considering the region's heterogeneity.

Finally, with respect to the MENA region, in Garcimartin's view the problem is not so much related to the capacity to consume the international public goods, but rather a problem of implementing bad policies. Given the difference between the two regions, Garcimartin concluded that the diagnostics and solutions would thus be quite different in each case.

James Henry provided his view on development from a private sector perspective. Touching upon the concepts of capital flight from developing countries as a negative public good and payment systems, he presented his idea of providing low cost banking services for the poor. According to Henry, the fact that approximately 2.5 to 3 billion people are completely "unbanked", has serious consequences for development. While he acknowledged the work of micro-finance institutions (MFIs), (as Grameen and Accion International), they only cover approximately 130 million customers from the potential pool. Moreover, he mentioned two limitations faced by MFIs: first, not being able to obtain the authority from governments to take deposits and second, having to fund their lending activities with equity, which is very costly. Henry also mentioned that the idea of e-commerce that had emerged in the late 1990s, failed due to the difficulties people faced not only of paying but also of receiving income.

As a result of having people outside the banking system, Henry mentioned several problems: First, as payments tend to be made in cash, transaction costs are high; Second, remittance fees are extremely costly and are operated basically by a cartel dominated by a few private companies, and third, the poor have very few, undiversified and insecure savings and investment vehicles. The latter, according to Henry, contributes to recurrent financial crises in the macroeconomic context.

Henry explained that these problems, coupled with a series of other factors motivated the idea of providing low cost banking services for the poor. A first motivation was the recognition of the significant inequality in the distribution of wealth in the world and in the accumulation capacity (i.e., the capacity that individuals have to save and accumulate wealth over time). Henry proposed thinking about wealth as a target indicator for development activities as opposed to current income. He based this suggestion on data from a private sector report on the world's distribution of liquid assets, indicating that 0.001% of the world's population

owns approximately 19.2% of the world's liquid assets, which is almost the same percentage held by 6.4 billion people. Moreover, most of the wealth is concentrated in the first world countries. Henry also mentioned how estimates of poverty would vary according to the measurements used.

A second motivation was the misbehaviors generated by having various kinds of payment systems. Henry commented for instance on how most US currency, in the range of approximately 700 billion dollars, was held offshore by people in countries with no secure currencies of their own.

Thus a third motivation was the issue of capital flight from developing countries, which according to Henry, is an example of a negative public good on the part of the international economy. There is a tendency of elites to take their money abroad, speculating against their local currencies while the poor have no option but to keep their savings and assets in local currency. Henry estimated that the cumulative wealth retained offshore, owned by the elites of developing countries exceeds the total gross debt of the developing countries, net of reserves. Thus he claimed these countries have an asset problem, rather than a debt problem, as their assets are abroad and out of reach. He also claimed that a similar story applied to human capital. In his view, the world created a system, in which people from developing countries find too many incentives to move to first world countries, especially if they are educated. Hence, first world countries are concentrating the world's share of skilled labor, and therefore increasing their share of research and development.

A fourth factor Henry mentioned was the problem of corruption and lack of transparency in many developing countries. While Henry acknowledged that some countries may achieve development even with corruption problems, and others may solve their corruption problems and still be poor, transparency is a necessary condition – although not sufficient – for achieving high rates of growth and development. Henry provided several examples of how corruption related to payment methods was combated through banking, and transparency. For instance, when Abbas became the head of the Palestinian authority he established bank accounts to pay the different security agencies, which previously received their payment in cash and had all sorts of corruption schemes associated to them. Soros' "Publish What You Pay" initiative was intended to introduce transparency by publishing the payments made by western companies to national oil companies in developing countries. However, many refused to do it.

All these factors together, led to the concept of helping poor people enter the electronic age with the help of wireless banking technology and to provide them with very low cost savings, investment and payment vehicles that could help solve the problems aforementioned. The idea consists in setting a branchless banking system, where retailers and merchants in the countryside such as gas stations act as a bank through wireless connections, and thus limit the trips and time it would otherwise take a "villager" to reach a major center and make a microfinance payment or deposit. Henry highlighted the fact that the technological side is moving quickly, through the expansion of cellular phone coverage, the reduction in the cost of mobile access devices such as smart cards, fingerprint readers for people who cannot read, and cashless ATM machines. Henry provided examples of several pilot projects underway: in Uganda, involving gas stations; in South Africa where more than 550 thousand accounts – called "Mzanzi" accounts – have been opened since October 2004 and in Brazil, where several leading banks are showing interest in the idea of micro deposits. Henry highlighted that in the case of Africa, if Coca Cola - the largest private employer in the region, dealing with over 200 thousand bodegas – were turned on to this system, Africa could benefit from this very low cost, branchless system for the poor.

As a final comment, Henry claimed that the key issues would be more organizational and getting multilateral support for additional pilot projects, to try and scale the system, because

once the service is offered to millions of people, there are all kinds of scaling problems that have to be addressed.

Open Discussion and Comments

Michael Braungart stressed that public goods are not primarily about finance, rather there is a wider spectrum, and if this is not understood efforts focus on economic development models that do not work because they do not deal with the real reasons.

Henry James responded to Braungart's comment saying that they were not treating finance as being the quintessential public good, but rather as one concrete example in that there are public good aspects regarding the payment system insofar as they may facilitate capital flight, corruption, and other problems.

Joaquin Cottani welcomed proposals that aim at giving the poor access to the banking system; as such he considered that Henry James's proposal deserves attention. He also argued that the cash economy is the result of corruption, the financing of terrorism, and tax evasion, and thus there is a need to change the incentives. Therefore, he presented a proposal that he elaborated with Domingo Cavallo in order to deal with those problems. They propose that nations sign a tax agreement whereby all signatory countries would tax money inflows and outflows from or to non-signatory countries, which according to Cottani, are likely to be tax havens. This way, he argued, their incentive to be tax havens would be reduced, and, by the same token, the mere expectation of such a system would motivate people to bring the money to their home countries and avoid tax evasion in the future.

Domingo Cavallo added that the use of electronic money, like in Henry's proposal, even for small transactions by low-income families facilitate tax compliance control especially regarding value added tax or income tax.

James Henry built on this comment pointing out that the estimate value of offshore capital from developing countries deposited in tax havens is in the order of five trillion dollars. Hence, a one-percent tax on such assets could fund the development efforts mentioned throughout the discussions.

Marek Dabrowski was wary whether the problem of capital flights could be addressed in the way proposed by Henry. Capital flight, according to Dabrowski, is caused by deeper problems such as insecure property rights, business-unfriendly tax regimes and tax administration, or instability of the domestic currency. Furthermore, to Dabrowski, the proposed scheme would stimulate capital outflows in case those services were provided by a foreign firm.

Samir Radwan following Hernando de Soto argued that what should be done is to give the poor an identity, as they do not exist as far as the banking system is concerned.

James Henry responded that one of the merits of his proposal is that it aims at establishing a level playing field for the poor, by providing them with a saving vehicle, with the alternative to save in international reserve currencies. This way poor people would have the same right to defend their wealth against irresponsible behavior of the local banking system or the central bank, as the elite has. Besides, he believes that this scheme would stimulate wealth generalization.

Regarding the role of the World Bank in his proposal, Henry pointed out that first, the World Bank should get involved in regulatory changes to make it easier for MFIs to take deposits. Second, given that microfinance institutions would be taking deposits from the poor at a broader scale, a lender of last resort may be needed. Thus, it could play that role.

Furthermore, it may assist the MFIs with pilots of technology to make sure technology is ready and scaleable.

Yasheng Huang considered that some times what regulators may view as tax havens are in reality property rights havens. He argued that sometimes entrepreneurs use the offshore sites as a way to protect their property rights that are not safe in their home countries. He mentioned that China has a high level of capital flight mainly because whereas business opportunities are in China, property rights assurance is offshore. Thus, Chinese entrepreneurs would not have another alternative than sending money abroad. The intent by the Chinese government to tax these financial flows caused an immediate reduction in private equity to fund private sector activities. Furthermore, in a previous study he demonstrated that in the 1980s and 1990s governments in developing countries favored foreign firms and as a result local firms were motivated to acquire foreign legal identity and one of the ways to do that was to deposit money in tax havens. Therefore, he suggested being very careful before taxing these financial flows and thinking deeper what purposes they serve whether benefiting the reach or providing property rights if they do not exist in the home country.

Richard Cooper contended that as people (including poor people) like to protect their wealth, they will not accept a vehicle by which what they consider a dishonest tax authority, will appropriate their wealth. Therefore he stressed it is important to define whether tax authorities will have access to the records or not. Hence, he considered that the authors of the proposal need to sort out this issue when thinking of its implementation.

Joaquin Cottani in his response emphasized the need to distinguish the concept of capital flight from allowing more financial intermediation by the poor. Also related, but different is the issue of how to promote a reduction in tax evasion through international cooperation. The movement of money for tax evasion purposes or related to other illegal activities that may be penalized, tends to be towards countries where the chances of cooperation from authorities are lower. In these cases, it is not protection of financial wealth that is being sought. Hence, the money is not sent to the United States or Europe for instance, where property rights are ensured and authorities are likely to cooperate, but to places like the Cayman Islands.

Yasheng Huang asked for empirical evidence to demonstrate whether the money sheltered in the Cayman Islands finances illegal activities in higher proportion than money deposit elsewhere.

Joaquin Cottani acknowledged that he did not have empirical evidence, but also stressed that money moved for tax evasion purposes, for instance, is likely to go to countries where cooperation from the authorities is less likely.

SESSION 4
Regional Focus: Asia

Chair:
Carlos Magariños*, Director General, United Nations Industrial Development Organization*

Panelist:
Richard Cooper, *Maurits C. Boas Professor of International Economics, Harvard University*

Discussants:
Shri Suresh P. Prabhu, *Member of Parliament, India*
Arvind Panagariya, *Professor of Economics and Jagdish Bhagwatti Professor of Indian Political Economy, Columbia University*

Yasheng Huang, *Associate Professor, Sloan School of Management, Massachusetts Institute of Technology*
Neil Hugues, *Consultant, World Bank*
Alice Amsden, *Massachusetts Institute of Technology*

Papers:
"Global Public Goods: A Role for India and China", by *Richard N. Cooper*
"International And Regional Public Goods And The Economic Development of East Asia" *by Chia Siow Yue*

DISCUSSION

Carlos Magariños supported a point made by Cooper, by stating that all "who work in multilateral institutions supporting economic development in developing countries, would like to see the economy adopting more transparent rules with regard to the provision of financial stability worldwide". He stressed that this would be especially important for institutions like UNIDO working on disseminating knowledge and skills, as the work achieved along several years, could be destroyed in weeks by a financial crisis.

Shri Suresh P. Prabhu, highlighted five issues he considers must be looked at seriously, especially considering the case of Asia. A first issue is the ability or capacity to provide the public goods. In many countries in the region, the absence of a vibrant private sector or an efficient civil society leaves the state with the role of providing these goods. As many states are "failed" states, they lack the capacity and have thus failed in the provision. Civil societies are increasingly playing important roles in some countries in Asia. However, the challenge is to clearly define their role in providing public goods.

According to Prabhu, the incapacity to adequately provide public goods also extends to the global level, reflected by a failed multilateral system. He pointed to the need of developing a new global system that acts as a regulator and provider to ensure and monitor the provision of public goods, especially in the targeted areas. In some cases, the use of force or coercion may be needed to ensure that provision reaches the areas in most need of this provision.

This raises the issue of how the new global system must be composed and organized. Would it necessarily have to be intergovernmental or could organizations, other than governments, fulfill the role? Public private partnerships are, for instance, one possibility. Prabhu considered it would be relevant to assess whether a new world organization can insure the provision, taking into account that the whole world represented by heads of state has now agreed to provide minimum development goals, which if implemented, would actually amount to the provision of global public goods.

A third issue is the intellectual property rights regime. Prabhu pointed out that a public good is one that once produced, can be made available to all at zero cost. However, intellectual property rights restrict the dissemination of knowledge, and therefore increase the costs to provide these goods.

A fourth issue is the environment, specifically global climate change. While Prabhu acknowledged that global action is required - as the global environment is an integrated ecosystem - he stressed however that developed countries must take the lead. According to Prabhu, poverty is among the biggest threats to climate change and therefore development must be an overriding priority. As developed countries have reached certain standards of living at the expense of the environment, they should be expected to do more. While many developing countries like China, India, Brazil, South Africa and Mexico are potential contributors to climate change (Prabhu labeled them as the P7 countries – Polluting Seven

countries) when considering per capita emissions, their emissions will still be lower than some developed countries. Providing for climate stability is an important issue as climate change affects those countries that are unable to deal with it, the most.

To attain global environmental cooperation, Prabhu considered a new fund would be needed to promote the use of renewable energy, where the research and knowledge remains within the public domain. This way, cleaner energy is made affordable and available to everyone, especially to countries that possess large fossil-fuel stocks and hence are likely to resort to these dirtier, but currently more affordable, sources for their energy security (e.g., China, which relies on coal-fired power stations).

The fifth issue is the stability of the global financial infrastructure. As most financial crises are triggered domestically, the global infrastructure must be protected by all countries through domestic action. However it is also important to consider what triggers the crises. While money flows in through FDI and portfolio investments, it is the latter which deserves more attention as it is more volatile. Prabhu suggested exploring the option of taxing portfolio investments when they are withdrawn (just as cars are charged a parking fee) as a way of inducing more stable inflows.

Finally, on the issue of trade liberalization, Prabhu acknowledged its importance but stressed the need to ensure that global public goods in development agendas do not get confined only to trade liberalization but encompass all the other issues as well.

Arvind Panagariya focused his discussion on trade - his area of expertise - by first commenting on Cooper's paper and then offering some personal thoughts on the topic. Panagariya believes that Cooper overstates the timeframe for discerning results from the current trade round. While there is no certainty about the form the agreement will take, Panagariya is optimistic that the round will wrap up in 2007, and therefore that investments will start to respond to this early on, in anticipation of the liberalization that will happen as part of the round. Thus he believes the response will not be so far out in the future as 2017, as projected by Cooper.

Overall, Panagariya concurs with Cooper's predictions on India's economic growth. Panagariya does not believe general overoptimistic predictions of India passing China in the next 15 to 20 years. However, he suggests Cooper's projections may be a little too conservative as India's growth will also depend on any policy changes that the country introduces during the following 5 to 10 years. According to Panagariya, India's economic growth during the last 15 years, has been conditioned by policies, which have resulted in constant, unchangeable participation of industry in GDP, of approximately 25%. Within industry, the labor-intensive industry has done most poorly. However, if these policies are corrected, the industrial share could rise more rapidly and hence, India could grow more rapidly. By the same token, Panagariya believes that Cooper's assumption of imports rising by one and a half times the rate of GDP will understate that. India could potentially become a much larger importer than reflected in Cooper's predictions.

Panagariya believes that when it comes to IPGs from the viewpoint of developing countries, national policies are crucial. Their ability to consume the available IPGs will highly depend on the policies adopted nationally. To illustrate this, he presents India's performance in the global trading system during the 1950s through 1970s, as an example. According to Panagariya, India was not trading because it chose to be autarchic, just like China. Thus, contrary to Cooper's view, India was not free-riding the system, but by choice was actually not riding the system at all. In the mid to late 70s, the import to GDP ratio was approximately 4% - 5% (not considering food grain and oil imports). Even today India's share in world exports is below 1% and therefore, according to Panagariya the country is still not "riding" the global trade system. However, he is more optimistic than Cooper that this context has

changed and is moreover, changing rapidly. Panagariya believes that the current leadership, now understands that it is more of a political problem to sell trade reform or liberalization to its public. However, there are signs of reform. For example, tariff rates on industrial goods, which were approximately 350% in the 1990s, have now come down to 15%. The agricultural sector however, remains more protected. Panagariya strongly believes that protection in developing countries remains on the whole higher than developed countries and that their own liberalization, is just as important for developing countries to be able to benefit from access to the multilateral trading system.

Another issue, presented by Panagariya is that of regionalism. Panagariya believes that regionalism will continue to take place even if multilateralism evolves, and that regionalism has turned into a public bad, especially from Asia's perspective. Not only is Asia not part of most regional agreements, but also trade diversion has played against it. Moreover, the entire trading regime has become fragmented. He exemplifies this point with the European Union. According to Panagariya, the numerous side deals and arrangements have actually led to only five countries paying the EU's MFN tariff, thus turning the MNF into a LNF or Least Favored Nation tariff. Furthermore, all these regional arrangements lead to a "spaghetti bowl" of tariffs; an overlap and crisscrossing of preferential trade agreements and hence, to a fragmented multilateral trading system. Additionally, the expectations of forming free trade areas or signing PTAs, has led many countries within the participating regions, to a standstill on unilateral trade liberalization. For example, while Latin America experienced an important amount of unilateral liberalization during the 1980s and early 1990s, this process practically halted with the advent of NAFTA.

As a final point, Panagariya presents his concerns on the future of the multilateral trade system due to the threats posed by regional trade agreements. He fears there is a risk of the United States establishing a template of its own, and of the multilateral system actually serving as a forum to promote this template. According to Panagariya the current template of PTAs consists in a baggage of TRIPS and intellectual property rights, coupled with labor and environmental standards, and restrictions on the use of capital controls, to name a few – leading to an excess number of long agreements that countries have signed and even ratified. His greatest concern is that in one-on-one bargains, smaller and poorer countries have little or no say because the US is so important to them in terms of trade. Thus, regarding the last regional trade agreements as having been "pushed" by the US, Panagariya cautions developing countries to be on the lookout.

Yasheng Huang provided a brief presentation on the financing of primary school education in China. While he recognized this as a specific domestic public good, he considered that, given its magnitude and implication for a sustainable growth in countries like China and India, the issue deserves special attention.

Huang believes that in China, certain activities are deliberately favored at the expense of others. More specifically, for instance, while there is currently a tremendous building boom in China, Huang considers it is coming at the expense of primary school education, especially in the countryside. The fact that between 1987 and 2004, the number of primary schools in rural areas fell by 55% is one sign of this. While the process of urbanization and falling birthrates may be two possible variables, according to Huang they do not explain this decrease. Urbanization would have likely caused the number of schools in cities to increase during this same period, while falling birthrates would have caused a similar decline in the number of schools both in the cities and in the countryside. However, there are no signs of either of these effects taking place. This leads Huang to argue that there has been a deliberate decision by the government to reduce the provision of education in the 1990s. What puzzles him however, is why the government would want to systematically reduce this provision, when it had already achieved a fairly high level of primary basic education during the 1980s and 1970s, which was key for the country's success and growth during the 80s. These high levels of provision

in rural areas were achieved during the Cultural Revolution, partly deliberately but partly by default as the urban education infrastructure was destroyed and resources were shifted to rural areas, were the political environment was more stable.

Huang further argues that China's economic success in the 1980s was created essentially in the countryside, thanks to the basic education system and particularly due to China's high level of human capital investment in rural female population. According to private sector surveys conducted in the 1980s, more than 60% of the entrepreneurs in China resided in rural areas. Thus, in this sense he disagrees with a point made by Lawrence Summers stating that countries like China and India, need to devote more resources to engineering and higher tiered education as opposed to primary education. First, he argued that for instance, the creation of approximately 500 jobs due to having more trained engineers as suggested by Summers, in countries the size of India and China would have negligible effects. Then, when comparing China and India, Huang argues that while India is able to create jobs in high-tech sophisticated industries, it does not have entrepreneurs able to create jobs in labor-intensive and basic industries. In his view, this is partly due to India's underinvestment in the primary school education system, especially in rural areas and particularly in rural female population. This contrasts with the situation in China. When comparing for instance garment factories, while in India factories are likely to have 50% of their workforce composed of females, in China this percentage can rise up to 100%.

He acknowledges however, that the educational quality level was a necessary but insufficient condition to explain China's economic success. A combination of internal liberalization, land reforms, broad financial reforms in rural areas and an increase in the security of property rights, helped pave the way for the educational benefits to take effect. Finally, to strengthen his view on the importance of primary education in rural areas, Huang argues that poverty reduction during the 1980s was not the result of FDI and foreign trade as often cited by the World Bank, as 80% of the reduction occurred during the first years of the 1980s, when China had no FDI and very little trade. Thus, the reason must have been in his view, the combination of the aforementioned factors. Moreover, Huang argues that since the WTO there is evidence that the costs of rural education increased whereas the rate of attendance decreased. Huang is therefore concerned about the implications this decline in primary education in rural areas will have on China's sustainable growth in the future.

Neil Hughes commented on China's relationship with the multilateral trade system as it acceded to membership in the WTO. Hughes agreed with the view that the accession process consisted in a process where rich countries imposed their requirements on the poorer nations, with the requirements becoming tougher with time. In the case of China, Hughes emphasized two conditions imposed upon the country. First, that China is to be treated as a market economy by other WTO members in any accusations of dumping. As the country bringing the accusation can use a proxy country, which has a market designation as a substitute for China, it makes the accusation process easier. Therefore it is not surprising that China has more dumping accusations than any other WTO member. Second, Hughes mentioned the safeguard quotas established at the end of the thirty-year multilateral textile agreement. The quota system was basically reestablished under the old agreement for China up to a limited period, to the end of 2007. Both the EU and the United States are pushing for China to adhere to these quotas. However, while the EU is more flexible with China, the United States is not. Moreover it has imposed safeguard quotas on thirteen categories of textile imports, and is in the process of expanding these categories.

However, Hughes brought to the attention the fact that when it comes to imposing conditions it is not only "rich versus poor", but also "insiders versus outsiders". Some developing countries are also involved in the dichotomy between who makes the rules and who accepts them. In this sense he agrees with Cooper (and disagrees with Panagariya) in that India as one of the original signatories to GATT, has had a free ride. To illustrate this he compares India's

average import tariff at 31.4% (among the highest in the world) to China's tariff set at 12.4%. Hughes also believes that this type of discrimination significantly denies other developing countries from exploring market opportunities and moreover, limits the credibility of the multilateral trade system.

Another concern raised by Hughes, is how China handles the accession to the WTO. Specifically Hughes is concerned about China opening up its very weak financial system to allow foreign banks to operate in local currency in China. Currently the major banks, which comprise most of the deposits, are state banks and therefore have a security system backing them up. Thus, while the level of bad loans exceeds the bank capital, it is presumed that government will intervene and support the banks. The issue however, is what will occur when these banks start competing on a level playing field with the major banks of the world. Moreover, there is also an issue of allocation of the resources. Bank lending and credits in China, as in many other East Asian countries, has been growing since 1978, faster than the growth of GDP - almost three times as fast. Therefore, it raises the issue of where the money is going, as was brought up by Huang.

Hughes also commented on the East Asian miracle, as presented in Chia Siow Yue's paper. While, he agrees that the high levels of sustained economic growth were due to political stability, security, law and order, macroeconomic stability and economic environment conducive to high savings and high investment, he also believes that in the case of China two key components were the country's economic openness, and its stability and continuity, provided by a polity and system of values that have survived along time and have managed to hold together a very large and geographically diverse country. These values and traditions have given the Chinese people a unique sense of purpose and continuity. However, there is also a downside to having some unchangeable values. In this sense, Hughes specifically refers to the judicial system, which is highly dependent on government, and has been this way since the Qing dynasty. Judges are appointed, paid and removed by the government and hence, are not strictly independent.

As a final thought related to national unity, Hughes believes that unlike China, many developing countries throughout the world, are divided along ethnic and religious lines, or have indigenous populations not fully integrated into the economy. As this presents enormous economic and political costs, as well as great spillover effects, Hughes suggests adding the concept of nation building to the list of international public goods.

Alice Amsden centered her comment on the belief that Asia's position, influence and role in the world today has been highly underestimated. Throughout the years, Asian countries have grown rapidly, have unified and have become increasingly connected through intraregional trade, intraregional FDI and through new political organizations among each other. For instance, while in 1970s the US was their major market, now East Asian countries have each other as their major market. Moreover, new active political and economic organizations among East Asian countries that preclude the United States have also emerged. Even countries like China and Japan, with a history of contention, have become each other's best trading partners in many respects. Amsden pointed out however, that the intense trade among these countries was not always based on free trade.

An additional aspect that according to Amsden, distinguishes China and other East Asian countries from many developing countries (Latin America for instance), is how they are allocating resources to combat poverty. Amsden strongly argues for the creation of jobs through investments in new plants and equipment for industry, rather than investing resources on poverty alleviation as carried out by the World Bank. While education and water systems are important and necessary, they will not on their own create jobs. Thus, based on the idea that people want jobs, East Asia and India are targeting their investments towards industry.

According to Amsden, this holistic set of aspects will make East Asian countries and India, analogous to Europe, in terms of their distance from the United States.

Open Discussion and Comments

Eduardo Aninat disagreed with Alice Amsden on the issue of allocation of resources for development. He pointed that in Latin America, the approach towards industrial plants and engineering for development was prevalent and widespread during the 1950s, 60s and 70s but proved to be a failure. It was however, the investment in primary and secondary education during the 1980s and 1990s in Latin America that was crucial to get some results in terms of development.

Aninat also commented on Cooper's remarks on the international financial system and the proneness to financial crises. First he suggested that it would be good to look into the scenarios that build up to a crisis, and some of the signaling and consequences when they are detonated. This way, the role of the international financial institutions - the IMF or World Bank among others, and the dialogues between governments could be reassessed and debated, to verify the actions of IFIs during crises and whether they contribute to minimizing their length or the contagion among countries. Among the examples, he mentioned the dialogues between Paul Volcker (former Chairman of the Board of Governors of the U.S. Federal Reserve System) and Mexican authorities during the 1980s during the Mexican crisis, and later the tequila crisis.

Then, he built upon Cooper's proposal of a common currency to ease the externalities caused by the exchange rate policies of large developed countries on developing ones. As a former finance minister of Chile, bearing testimony of these externalities, he agrees with Cooper. However, he made an alternative proposal, whereby developing countries that behave well or try to behave well in a macroeconomic sense, be assigned a seat at the institutions that dictate exchange rate policies, such as the US Federal Reserve and the US Treasury. This would allow developing countries to have some input into the shaping of policies that affect them.

Daniel Archibugi questioned how China had come to move away from an authoritarian communism to an authoritarian capitalism, without ever managing a move towards a liberal social democracy. As a tentative explanation for the change in China between the 80s and 90s as presented by Huang, Archibugi suggested that the country at some point decided to return to the first stages of economic development, industrialization and building boom, something which could have required to artificially create inequality within the country.

Hughes answered Archibugi's question by emphasizing his point on China's largely unchanged system of cultural values. A movement towards a liberal democracy would imply a radical change in the value system, which he does not see happening in the foreseeable future. Moreover, he believes this change is not a high priority at least among the majority of the Chinese people.

Richard Cooper however, was more skeptical on making generalizations from values. To illustrate his point he commented on the case of South Korea. From an economic point of view, the country was seen as a basket case in the 1950s, in part due to the its Confucian values, with a reverence for the past and a resistance to change. However, South Korea actually embraced change, proving this argument wrong.

On Huang's presentation on primary school education in rural China, Cooper offered his interpretation. Considering that between 1980 and 2005, the agricultural labor force in China fell from 70% to 50%, Cooper argued that three factors explain the drop in rural schooling: rural urban migration, a very sharp decrease in birthrates and an increase in economic

opportunities since 1980. His understanding is therefore that China is having trouble keeping and paying competitive salaries to rural schoolteachers.

In response to Aninat's comment, Cooper explained that while he agreed IFIs could do more to help countries in crises, particularly in preventing contagion from one country to another, he wanted to emphasize the notion that financial crises were not the fault of IFIs. He argued that crises arose during the nineteenth century, when there were no IFIs and that they arose, in his view, from the same dynamic that is currently being observed in developing countries: a mismatch in the development of the real economy and the financial structure that supports it. The required regulatory framework is not always clearly understood and hence mistakes are made. However, Cooper also argued that many times these mistakes are willful.

Huang, in response to Cooper's comments, agreed that the issue of education in rural China deserves further study and that there are many drivers for the decline in rural schools. However, he emphasized that migration and demographics do not explain much of the reduction. He pointed to the need of separating policy factors from economic factors, but especially of paying attention to this issue.

Huang believes China took this path based on the events of 1989. The government faced protests from urban elites, but was supported by the peasants, in part due to the prosperity of countryside. However, this support reversed as of 1990 and currently, rural protests have increased dramatically. In the 1980s, growth was driven by consumption. Rural residents became rich and spent on furniture, home appliances and the GDP/consumption ratio on average was 65-63%. This ratio declined to 55% in the 1990s. Investment increase dramatically, and China, according to Huang, for some reason made the decision to rely more on investment as a driver of growth rather than consumption.

Suresh Prabhu considered that the fact that China's Cultural Revolution preceded the opening of the economy is one reason why the country enjoys better social development than economic growth alone can render.

SESSION 5

Regional Focus: East Europe and Russia

Chair:
Domingo F. Cavallo*, Associate, Weatherhead Center for International Affairs, Harvard University; and former Minister of Finance, and of Foreign Affairs, Argentina*

Panelists:
Artur Radziwill, *Vice-President, Center for Social and Economic Research, Poland*
Marek Dabrowski, *Chairman of the Council, Center for Social and Economic Research, Poland*

Discussants:
Alice Amsden, *Barton L. Weller Professor of Political Economy, Massachusetts Institute of Technology*
Christophe Chamley, *Professor, Department of Economics, Boston University*

Paper: "Regional Vs. Global Public Goods: The Case Of Post-Communist Transition" *by Marek Dabrowski and Artur Radziwill*

DISCUSSION

Alice Amsden presented her experience and views on the restructuring of Eastern European countries, particularly that of Poland after its transition to an open economy. During her visit to Poland in 1991, Amsden observed that firms were experiencing a tremendous difficulty in restructuring their functions to enter global markets (i.e., improving managerial functions, product selection and capacity adding etc.). Thus, she was taken by surprise when, ten years later, she continuously reads about Poland brilliant progress and performance. However, she realized that in part, Poland's image of good performance was based on the ambiguity of the data used, related to employment. Given the country's significant informal sector, and viewing the little progress achieved in this sector, Amsden thus questioned Poland's success as far as employment was concerned. She acknowledged however the country's vigorous growth rates. Based on information on the restructuring of many factories, Amsden concluded that factories were able to become globally competitive through the support provided by the government; through the collaboration between the government and the emerging private sector.

Amsden does not share the alternative view that external factors, particularly the relationship between the companies and the former European Community (EC – currently the EU), drove these economies. In her view, the EC did not help much in the much needed physical restructuring of plants and equipment, other than maybe contributing through trade, subcontracting and outsourcing of jobs to Eastern European countries. The causality and the success of the restructuring process were internal, involving the countries' governments and business sector. Thus, the EU's role should be regarded more as one of contributor to the process - through incentives, guidance, monitoring and maybe through corporate governance - rather than of driver of the restructuring process.

Christophe Chamley first commented on what he considered was one of the key messages in Dabrowski and Radziwil's paper, and then offered his views and suggestions on two issues he reckoned had been lacking during the conference.

Following up on Amsden's comments, Chamley disagreed that the EU had little intervention in countries in Eastern Europe, emphasizing that the EU's approach to intervention is precisely what contrasts it from that of the IMF. Moreover, based on his understanding of the paper, the EU's approach was more successful compared to the IMF's intervention, at least in the sample of studies considered. Chamley believes that intervention does not necessarily have to be through detailed policy and direct to be beneficial. In the EU approach, there are no short-term cash benefits or detailed policies as in the case of the IMF, and while the conditions for accession to the EU, are both vague and burdensome (as underscored by the authors for Eastern European countries), the rewards however are significant and for the long-term.

Chamley also disagreed with a comment made by Sanchez de Lozada and Hausmann that borders are bad, based on the example of Slovakia and the Czech Republic, which first created a new border - thus forming a new country – then joined the EU, and was actually better off. These led Chamley to question whether it would not have been a better move for East Germany for instance, to remain divided and then join the EU.

A first issue Chamley believed was lacking in the conference is history, which he considered plays a critical role. History provides extraordinary examples and lessons on reform. According to Chamley, reform cannot be carried out without pressure of some sort. The French and English reforms of the eighteenth century, for instance were carried out under pressure and many of the reforms today, for example in developing countries are also under pressure. Moreover, pressure – and particularly external pressure - is good. Hence, in Eastern

European countries, the pressure was to seize the opportunity to join the EU and do it as quickly as possible.

A second aspect he considered deserves attention is that of political economy. According to Chamley, the key issue for achieving any type of public good is collective action. Hence, having to deal with different interest groups, the political economy process is important. In this sense the country border and the country size are extremely relevant issues, and can play important roles in decision making processes. For example, according to Chamley while England during the eighteenth century had the right size, France was too big. Hence, building on this, Chamley cautioned that in the case of Africa, for example, the country size and the number of groups within countries could affect the possibility of reform.

Open Discussion and Comments

Radwan asked what the costs of the transition were and to what extent the EU or the IMF were helpful in providing advice on how to deal with the costs of reforms during the transition in the Eastern European countries.

Michael Braungart highlighted UNIDO's role and achievement in Eastern Europe, especially in the success of the whole transformation process. Then on a general note, he cautioned not only to focus on monetary issues but to take a more holistic approach to the provision of public goods, including other relevant issues that contribute to the quality of life, such as environmental protection.

Frederik Sumaye asked the authors what they considered was the reason for the difference between the EU's stricter approach and the IMF's softer approach? He believes that the IMF is not strict with those countries that fail to comply with the agreed requirements, and wonders whether the IMF deals with "sick" partners (i.e., developing countries) and therefore cannot be strict with them, or whether it wants to maintain some sort of good business relationship.

Marek Dabrowski first clarified that many international agencies, other than the IMF were involved in the progress of Eastern Europe, such as the World Bank, WTO and several UN agencies. He argued, however, that these agencies are less effective than for instance the EU. Dabrowski believes the reason for its relative effectiveness is that the EU is an integrated political block; some kind of confederation. Hence, member countries voluntarily surrender a significant portion of their sovereignty to the union. This integration block, based not only on economic but also political integration, facilitates the resolution of problems, such as those related to borders, free riding and collective action and provides more opportunity for international cooperation by its member countries.

In response to the question of costs, Dabrowski considered two different phases within the process; an initial transition phase and a subsequent transition phase related to the accession to the EU. The initial phase, while influenced by the perspective of a future integration to the EU, derived basically from an autonomous decision of each individual country and therefore was mostly national in design. After 15 years of transition, the different strategies may be compared and while all strategies proved costly, those of fast reforms appear to be cumulatively less costly than any strategy of gradual transformation. Regarding the subsequent accession phase and adoption of EU *acquis*, Dabrowski acknowledged the difficulty in estimating these costs. While he believes that EU membership will be beneficial for all countries when balancing long-term gains and costs, he does not yet have enough empirical evidence to adequately support this view.

FINAL SESSION

General Discussion & Closing Remarks

Chair:
Jorge Domínguez, *Clarence Dillon Professor of International Affairs; Director, Weatherhead Center for International Affairs, Harvard University*

Panelists:
Jorge Domínguez, *Clarence Dillon Professor of International Affairs; Director, Weatherhead Center for International Affairs, Harvard University*
Domingo F. Cavallo, *Associate, Weatherhead Center for International Affairs, Harvard University; and former Minister of Finance, and of Foreign Affairs, Argentina*
Carlos Magariños, *Director General, United Nations Industrial Development Organization*

Jorge Dominguez opened the last session with three brief comments and suggestions related to the regional papers presented at the conference. As a first comment regarding the Regional Studies, Dominguez raised the question whether the papers were about the economies of various countries with some reference to international public goods, or whether they were about international public goods, with some reference and necessary background about the economies of the countries. As presented, the papers ranged somewhere in between these two directions. He then suggested defining what the general thrust of the papers would be.

As a second comment, Dominguez suggested presenting a range of issues or actions that a practitioner (e.g., a prime minister, a finance minister) could or should take within the country's boundaries, as well as a list of issues that a government alone will not be able to achieve and thus require collective action, either as club goods or more generally as international public goods.

The third and final comment was based on a point made by Joaquin Cottani, who argued that the most successful set of trade policies in Latin America arose from unilateral trade liberalization – from the action of individual governments and not from collective action. Hence, according to Dominguez, this presents an alternative interpretation of the supply of international public goods: the deliberate action of individual governments may generate international public goods as positive externalities. This also leads to a different interpretation, by which the supply of these positive externalities or international public goods is achieved not so much by doing new things or something jointly or individually, but rather by not doing the bad things.

Inge Kaul followed in similar lines, stating that there was a choice of either starting out by declaring certain issues such as climate stability or financial stability as public goods and then discussing the issues as if they were not public goods, or deliberately working from the concept of public goods and pointing out the additionality in terms of analytical insight and new policy ideas. Kaul believes the debate in the international agenda could be advanced by exploiting the concept of public goods in a rigorous way. For instance, the concept of poverty in Africa is more an aid issue rather than a global public bad issue, as it has very few spillover effects. Hence the proposal of a Marshall Plan to help Africa never worked or will work. Kaul suggests exploiting the additionality of the concept of public goods, which in turn will imply considering the political economy dimension – determining the costs and benefits, and defining the decision-makers and the different stakeholders.

A second point made by Kaul, is her belief that the world is currently undergoing a phase of very intensive collective action in the production of new public goods, like harmonized legal frameworks or changes in trade or taxation regimes. And what is new about this cooperation,

is its orientation towards a competitive world order. The world cooperates to compete. However with the creation of some of the new global or regional public goods, others have to be abolished, which is not always an easy task. For example, while the exports of developing countries now reach the European shores, Europe tries to block them. Or labor from Poland crosses the non-existing border. Hence, it will be important to consider what the consequences of this new competitive world order will be.

Michael Braungart brought to the attention the fact that the conference had focused primarily on financial and economic topics, and very little had been discussed on the global environment, an aspect he considers as the first public good that should be talked about. And while there was some talk on climate change, Braungart considers that the biggest "climate change" is the current politics of the United States, especially as it relates to the environment and the world's common heritage. He believes this "climate change" is disastrous for the world and that it is time for public responsibility to interfere with these harmful political decisions. According to Braungart there is a time window of approximately twenty years where at a certain point the costs to repair environmental damages will be so high, that there will be no room for new inventions. In this context he believes the work of many United Nations institutions (like UNEP, UNDP and especially UNIDO) in this field in the past, must be recognized and celebrated as a success story. Braungart especially refers to UNIDO's work in Poland and how Poland followed the advice of UNIDO's experts, because it was independent and fostered a truly facilitating process. Thus, Braungart concluded by thanking and acknowledging Carlos Magariños for all his work as Director General of UNIDO during his eight-year term.

Fernando Riquelme Lidón, following up on Inge Kaul's remark on the competitiveness of public goods, believes there is also a whole class of public goods that do not fall within the space of competitiveness but in the space of efficiency, of risk sharing. Globally pooling risks – both individual and national – to prepare countries for the opportunities and uncertainties in the future would open up more efficient possibilities as well as providing protection against risk for future generations. When a crisis, a shock or a delicate situation occurs, the policies that are applied are redistributive, ex-post policies, which are competitive: some lose, some gain. While, the markets for this do not exist yet because of the problem of moral hazard, the world has the technical and statistical capabilities to organize such a market.

Joaquin Cottani began by stating that unilateral action in the case of trade liberalization is the best policy. Sometimes a country cannot wait for things to take place at the international level. The elimination of distortions is beneficial to countries, while retaliation policies are not – not only collectively, but for a country itself. However, as the Argentine situation demonstrates, a series of shocks can force the economy to go into crises that sometimes reverse the good policies. In this sense, global commitment technologies matter. According to Cottani, the European Union is a commitment technology: countries commit to certain things and in return receive benefits. Thus, Cottani proposes extending this model globally. For instance, United States and Europe could come together following the experience of the European Union, and start with an arrangement to reduce volatility of their exchange rate; euros versus the dollar as Professor Mundell suggested. Then go further towards a voluntary club of nations: countries can choose to be a part of this global union or remain outside of it. Countries that choose to join would have to comply with certain conditions – just like countries aspiring to EU accession – but would also receive benefits and support. There would be mobility of capital, labor, goods, technology and knowledge within the union.

However, Cottani acknowledged that this idea of extending the current regional model to the globe would make many – especially those who propose less exchange rate instability – hesitate because of the issue of moral hazard. Moral hazard could jeopardize the situation, given the increased difficulty presented by a more numerous context without geographical

proximity. While Cottani does not have a defined opinion on this idea, he believes the issue deserves to be raised.

Felix Ugbor expressed his concern about what he felt was a general impression that Africa is a lost case. He acknowledges Africa has serious problems, particularly in the area of international trade and international financial systems, but it is not an issue of shortage in the supply of international public goods, but rather the capacity of African countries to consume them. Many attribute this to bad governance, conflicts in many countries, issues of corruption, greed by the elite and poor policies, especially macroeconomic policies. However, according to Ugbor the main reason for Africa's current situation is that it is not receiving adequate advice from the IFIs or from the donor community. As examples Ugbor referred to the structure adjustment program imposed on many African countries in the mid 1980s that caused a lot of disequilibrium in certain countries – many of which are still recovering. He also referred to poverty reduction strategy created by the Bretton Woods Institutions. This strategy is very emphatic on issues of health and education, which while extremely important, cannot generate growth on their own. If there is no economic growth, that can support social systems, then Africa will always depend on aid. And even international aid is tight, not always transparent but most importantly it is not being targeted primarily at building the local capacity.

Finally Ugbor touched upon the issue of foreign investment in Africa, a topic he considers crucial and that merits closer attention. Investment would help acquire technology, promote industrialization and allow Africa to export processed goods. It would help link SMEs currently operating at the subsistence level, to the global economy. However, countries like Tanzania for example, which is a stable, peaceful country, with plenty of resources and sound macroeconomic policies, is not receiving enough investment. Ugbor, therefore points to the need of assessing the reasons why investment is not flowing into Africa as it should be.

Shri Suresh P. Prabhu praised the quality of the conference, and stressed the importance of moving forward and not letting the good work end with the conference. Hence, he raised the following issues. First is organizational issue of who would do the follow-up. While he recognized UNIDO would be an excellent vehicle for promoting the idea, he believes there is a need for more global action. Building upon Braungart's comment, climate change is an area that Prabhu considered as deserving increased worldwide action. As the world usually needs a trigger to react, such as a major catastrophe, maybe the recent natural disasters that struck the United States could help as a starting point for action. If the world joins into action, the question then is whether countries would be competing against each other. As the world tends to evolve form one state to another, Prabhu presented his belief that the world would move eventually towards a phase where all countries harmonize with one another.

A second issue is the cost of providing the global goods to all the citizens in the world. Prabhu considered a global system, such as a global tax or a global levy had to be conceived. In this context, the organization undertaking the move from the present situation to a future ideal must be an organization of committed people. It does not necessarily have to be intergovernmental, but formed by people who are willing to voluntarily place their efforts towards this cause. Prabhu also concluded that market-based mechanisms were the best instruments for tackling global issues such as climate change.

Olga Memedovic, UNDO Project Leader provided a brief description on the UNIDO project on Public Goods for Economic Development and its objectives, and highlighted future steps and ultimate goals.

The project was formulated around the idea of exploring the public goods, which are critical for economic development, starting within the national borders. When assessing the literature, Memedovic found it hard to find any publication taking into account this perspective. One

paper explicitly divided public goods in two categories: a) market-supporting, concerning laws, regulations, transparent legal systems, enforcement mechanisms; rules and regulations of trade; and intellectual property rights, and b) market-augmenting public goods, including health, education, knowledge, science and technology, and environment. Starting from this perspective, and assessing the spillover effects of lacking these public goods, goods can be further classified into international (regional and global). Hence, the general term of "international public goods" was decided upon.

Memedovic explained that UNIDO Research Programe on public Goods for Economic Development comprised several components. First was the state of the art on public goods. Second was the identification of those national and international public goods most critical for economic development with a focus on market integration; environment; knowledge and financial stability. Third component comprised Regional Case studies. And the forth component was this conference, aimed at providing a discussion on the issues raised by the regional studies.

The ultimate goal of the Research Programme would be a Sythesis Report and various papers accompanying it and structured most probably in two prts. In response to Prabhu's comment, Memedovic emphasized the fact that all the critical aspects were being considered and that the ultimate goal of the project was the presentation of conclusions and a summary of findings and recommendations for national governments, for international organizations, and the role of multilateral systems particularly in UNIDO in the Synthesis Report.

Domingo Cavallo provided a brief insight of his experience as a policymaker in Argentina, and his views on the subject of IPGs. Having been first foreign minister, and then economic minister during three different presidential terms, Cavallo acknowledged his significant influence both on foreign policies and economic policies, particularly in the reforms related to Argentina's relationship with the world as well as the reforms in the economic and social spheres.

He began by explaining how he approached his responsibility as foreign minister, of the new government in 1989. President Menem decided that Argentina had to completely change its attitude vis-à-vis the world. Until then, the prevalent view of the Argentinean leaders from different political parties and also from the militaries that had governed Argentina during many years was one of seeing the rest of the world as a source of danger, as an enemy. Most of the nations were considered adversaries in every respect. Argentina had been close to a war with Chile on border problems in 1978, had gone into a war with the British over the Malvinas Islands and then, almost underwent a civil war with violation of human rights during the last dictatorship. Argentina was thus seen by the rest of the world, as a failed state; a state with no destiny and hostile with its neighbors and with the world. Additionally, Argentina was engaged in a nuclear race with Brazil to develop the nuclear bomb and was engaged in secret programs to produce and export middle range missiles to Iraq, violating the corresponding international agreements. Argentina was outside the world, against the world, confronting the world on every front. Thus, Cavallo welcomed the president's decision of integrating Argentina into the world in every possible sense.

As a first step, Cavallo decided it was crucial to learn about the rules of the world and it was then that he discovered the value of international law. While, at that time he did not identify it as an international or global public good, Cavallo now considers that international law - in other words, the set of treaties and rules that have been reached through negotiations, and that provide guidance on how to solve conflicts and how to organize every aspect of the relationship among nations - is one of the most valuable international public goods. For example, the NPT and a system managed by the international agency on atomic energy provided a framework under which Brazil and Argentina could find safeguards, mechanisms and agreements to then ratify this treaty as well as the Tlatelolco treaty - Treaty for the

Prohibition of Nuclear Weapons in Latin America. In the same context, the middle range missiles project which violated an international agreement was canceled. International law and the international arbitration system helped put an end to the border problems with Chile, and helped to restore diplomatic relations with the United Kingdom after finding a system to protect Argentina's rights on the Malvinas Islands (as well as for the British; or what they consider to be their rights). So Argentina, decided to become a member of the club of nations of the world, by accepting the rules of this club.

This in a way had actually begun to take place sometime before, when in the 1960s Argentina decided to enter the GATT. During the two Peronist Administrations, Argentina had not signed the GATT, and conducted bilateral negotiations with many countries. Argentina began to benefit from the expansion of trade through the different rounds of the GATT, especially during the Uruguay round. Thus Argentina realized there were benefits of being a member of the GATT - then of the WTO - and of accepting the rules and disciplines of this institution. The same applies to the Kyoto Protocol and Montreal Protocol, and every international agreement that was reached.

In this sense, Cavallo believes that during the early nineties, many countries - not only Argentina - saw the combination of the Brady Plan (a framework for restructuring the public debt), the US leadership in pushing for the good conclusion of the Uruguay round and the negotiations like the NAFTA, and FTAA, as a way of enlarging and enriching the rules of the game of the world, in areas like trade and finance, that would benefit each one of the nations. That is why Argentina was enthusiastic in becoming a member of that club – just like Poland in Eastern Europe, had become enthusiastic in joining the European Union and that pushed them towards the necessary reforms to become members.

Cavallo believes there is currently a lack of leadership globally, especially from the United States and other developed countries, to perfect and extend the multilateral system and the rules of the game, that could offer a good opportunity for nations to become members of a civilized and peaceful world. Nevertheless, Cavallo believes that it is crucial for policymakers and leaders in each nation to know what the rules of the game in the world are and to push for negotiating these treaties that eventually create the international rules that will help to solve problems. According to Cavallo, this would be the best way of supplying the most valuable international public good.

In this sense he disagrees with a statement made by Richard Cooper, that Kyoto was simply a waste of time or a waste of negotiating efforts because it would not solve the problem. For Cavallo, the protocol proves that there are many nations - unfortunately, not all the nations and especially not the United States - that are willing to enter into negotiations to cope with a global problem like climate change. He believes that if there is no willingness to accept the very timid mechanisms of the Kyoto Protocol and the limited restrictions the Kyoto Protocol imposes on nations, it will be even more difficult to reach an agreement on a carbon tax or on some tougher solutions. According to Cavallo, negotiating and reaching some sort of agreements, even if in the beginning they are not perfect and they are not complete, is a very good way to push for the improvement of this system of international rules and disciplines that he considers the world actually needs.

Carlos Magariños closed the Conference by first thanking all the participants and then providing some concluding remarks. He began by commenting on the MDGs, and how this agenda for the twenty first century was embodied in almost all the Conference presentations, interventions and discussions.

According to Magariños while the agenda is bold and it is broad, it fits the twenty first century and moreover, the knowledge and the resources exist to achieve its goals. He claims the important issue is to transform all the goodwill and the good intentions and objectives into

practical achievements, through a people-centered approach. This is why UNIDO was so keen in organizing the conference; to listen to policymakers and scholars, to benchmark their opinions.

Magariños expressed his gratitude to Prime Minister of Tanzania for accepting to come, representing the focus region of UNIDO and one of the focus regions of the international community, sub-Saharan Africa. Magariños believes Tanzania could probably reach some of the MDGs in health and education, as a result of the important contribution and aid flows the country received bilaterally, and as a result of the good policies implemented by the government. However, as also acknowledged by Prime Minister Sumaye, the MDG related with income poverty will most likely not be achieved by 2015, in spite of the country's exemplar performance in fighting corruption; achieving financial and macroeconomic stability; opening its markets and working towards improved education and health. Thus, according to Magariños, this is why UNIDO began to look very carefully at the pioneering work of the Office of Development Studies at UNDP when Inge Kaul triggered the discussion of global public goods. UNIDO recognized that many public goods such as peace, security, education, health for all, financial stability and trade integration, are extremely relevant to achieve the first MDG, which is to reduce poverty by 2015 by one half.

Magariños highlighted that between 1990 and 2000, the number of people living below one dollar per day, declined by approximately two hundred million people (from about 1.4 billion to 1.2 billion). However, the region contributing to the bulk of this poverty reduction has been Asia, given that poverty grew in Africa, inequality in Latin America, and East and Central European countries were undergoing transformations from centrally commanded economies to market oriented economies. Magariños attributes the steady growth rates of China and India of around ten percent for several decades, to the process of integration, investment in trade flows and additional investments in health, education and political stability. Hence, understanding and learning from the Chinese and Indian experiences could assist UNIDO in its quest to promote sustainable achievements in poverty reduction. Magariños claimed the conference in this sense was very inspiring and that a follow-up on the recommendations and interventions would be conducted.

Magariños claimed that understanding the connection between the different public goods was necessary to better shape the multilateral system. As an example he commented on the evolution of hunger in Africa and its connection to peace and security. He mentioned that while at the beginning of the1990s, hunger was diminishing in Africa, during the second half of the nineties it started to increase again due to the regional conflicts in many countries of sub-Saharan Africa. Thus, as in many other fields, particularly in areas related with public goods connected with economic development, the lack of one good can hamper the progress of another. To further this idea, Magariños mentioned unilateral trade liberalization, which increased the benefits for developing countries, particularly in Latin America more than negotiating schemes of tariff reductions. According to Magariños, this unilateral trade liberalization scheme could likely benefit from additional support in areas like standards, quality and metrology, or related institutions.

In this context, Magariños highlighted that UNIDO wants to contribute with more reports with specific calculations that show the relevance of working on this connection and the opportunity cost of investment for the multilateral community. Finally, he expressed that while UNIDO believes that the economic development functions of the United Nations have a very important role to play in supporting the achievement of the MDGs, to do so, these functions need to be reshaped. He believes the capacity and resources are present. To illustrate this point, Magariños mentioned the fact that if all the regional economic commissions of the UN such as UNIDO, UNCTAD/ITC, the United Nations University, were grouped their yearly budget would amount to 1.3 billion dollars, four thousand staff members and about three thousand professionals - comparable to the size of the IMF. Thus, in his view

it is just a matter of putting them to work on the issues that are relevant to understand the dynamics of development in a modern globalized world for developing economies. As a final thought to conclude the conference, Magariños expressed how discussions as the ones that had just taken place, could contribute to UNIDO's call for creating a kind of "OECD" of developing countries in the coming future.

	Participants	**Affiliation**
1	Jose Antonio Alonso	*ICEI*
2	Isabel Alvarez Gonzalez	*ICEI*
3	Alice Amsden	*MIT*
4	Eduardo Aninat	*Ambassador of Chile to Mexico*
5	Isabel Aninat	*Pontificia Universidad Catolica, Chile*
6	Daniele Archibugi	*ICEI*
7	Ivanna Bandura	*Harvard University Research assistant*
8	Jean-Claude Berthelemy	*Sorbone University, France*
9	Laura Bocalandro	*IADB*
10	Kwesi Botchwey	*Tufts University*
11	Rodrigo Botero	*Former Minister of Finance, Colombia*
12	Michael Braungart	*University of Luenenburg*
13	Domingo Felipe Cavallo	*Harvard Univeristy*
14	Eduardo Cavallo	*Harvard University*
15	Christophe Chamley	*Boston University*
16	John Coatsworth	*Harvard University*
17	Richard Cooper	*Harvard University*
18	James Cooney	*Harvard University*
19	Joaquin Cottani	*Latin Source, USA*
20	Marek Dabrowski	*Center for Social and Economic Research, Poland*
21	Carl Dahlman	*Georgetown University*
22	Roberto Danino	*Former Prime Minister, Peru*
23	Andrew M. Daraja	*Ambassador of T. to the USA*
24	Jorge Dominguez	*Harvard University*
25	Jorge Dotto	*Yale University*
26	Jeffrey Frankel	*Harvard University*
27	Carlos Garcimartín	*Universidad Rey Juan Carlos, Spain*
28	Ricardo Hausmann	*Harvard University*
29	Haruko Hirose	*UNIDO*
30	Doris Hribernigg	*UNIDO*
31	Sam Hoborn	*UNIDO*
32	Yasheng Huang	*MIT*
33	Neil Hughes	*World Bank Consultant, VA*
34	Inge Kaul	*Director, Office of Dev. Studies, UNDP*
35	Sirkka Korpela	*World Monitors Inc.*
36	Laurence Kotlikoff	*Boston University*
37	Arnoldo Listre	*Ministry of Foreign Affairs, Argentina*
38	Carlos Magariños	*DG - UNIDO*
39	Olga Memedovic	*UNIDO*

40	Eliyuko Y. Mmbaga	*Economic Adviser to the PM, Tanzania*
41	Robert Mundell	*Columbia University*
42	Rabbie Nasser	*D.G. of Macroeconomic Planning Dept., State Planning Commission, Syria*
43	Suresh Prabhu	*Member of the Parliament, India*
44	Arvind Panagariya	*Columbia University*
45	Artur Radziwill	*Center for Social and Economic Research, Poland*
46	Samir Radwan	*Economic Research Forum, Egypt*
47	Beth Rattner	*Origo, Inc. , USA*
48	Jorge Raventos	*Journalist, Argentina*
49	Frederic Richard	*UNIDO*
50	Fernando Riquelme	*UNIDO*
51	Dani Rodrik	*Harvard University*
52	Ghislain Robyn	*UNIDO*
53	Iguaraya Saavedra	*UNIDO*
54	Angel Saenz-Badillos	*Real Colegio Complutense, Harvard University*
55	Aziz Salem Sheween	*Deputy Chief of Protocol, Tanzania*
56	Gonzalo S. de Lozada	*Former President of Bolivia*
57	Sulle M. Salle	*Private Secretary to the PM, Tanzania*
58	Francisco Sercovich	*UNIDO*
59	Claudia Silva	*Harvard University*
60	Joseph Sokoine	*First Secretary, Embassy of Tanzania*
61	Frederik T. Sumaye	*Hon. Prime Minister, Tanzania*
62	Lawrence Summers	*President, Harvard University*
63	Jacob G. Tesha	*Press Secretary to the PM, Tanzania*
64	Felix Ugbor	*UNIDO*
65	F. N. Tapgun	*Minister of Industry, Nigeria*
66	F. O. Igbokwe	*Ministry of Industry, Nigeria*

Printed in Austria
V.08-58537—December 2008—500

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Telephone: (+43-1) 26026-0, Fax: (+43-1) 26926-69
E-mail: unido@unido.org, Internet: www.unido.org