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THE GLOBALIZATION OF INDUSTRY:  
IMPLICATIONS FOR DEVELOPING  
COUNTRIES  
BEYOND 2000



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BEYOND 2000**

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**  
Vienna  
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## FOREWORD

A number of emerging industrial development imperatives - including the need to promote industrial growth and competitiveness in developing countries in an increasingly globalized international economy; to create jobs for an expanding population; to add value to existing natural resources with due protection of the environment; to overcome the challenges of a new technological revolution - prompted UNIDO to organize the *Global Forum on Industry - Perspectives for 2000 and Beyond* in October 1995. This document represents a follow-up to the Forum, which provided a unique occasion for an extensive review of the leading issues of industrial development by a distinguished gathering of policy makers, industrialists, academics and other key decision-makers. In updating the conclusions and recommendations of the Forum, the document also assesses more recent developments in the world economy and highlights the firm measures taken by UNIDO in response to these developments.

In particular, this document addresses the growing concern that the increasing globalization of industrial production poses not only an opportunity but also a potential threat to developing countries, who will be faced with mounting international competition in both their export and domestic markets as a result of the liberalization of world trade provided for in the Uruguay Round Agreements. In order to respond effectively to these challenges, the developing countries will have to focus increasingly on the issue of competitiveness in formulating and implementing their industrialization strategies. In many cases, however, the achievement of the required high levels of international competitiveness will be hampered by a variety of capacity constraints at the policy, institutional and enterprise levels, including the unavailability of suitably skilled human resources and the inadequacies of the available physical and institutional infrastructure. The least developed countries, most of which are located in Africa, are especially at risk from these developments, and this document contains a special chapter assessing the particular risks posed by the changing international economic environment to their industrial development.

Recognizing these risks, UNIDO has taken several specific measures to focus its activities on helping developing countries overcome the capacity constraints inhibiting their ability to establish globally competitive industrial structures. These are discussed in detail in the final chapter of this document, which highlights the fact that the Organization is concentrating its efforts on the promotion of efficient and competitive industries and on the development of the institutional and infrastructural capacities needed to ensure their sustainability. In a particularly important new initiative, UNIDO is launching the *Alliance for Africa's Industrialization* aimed at fostering a partnership between public and private sector agencies and enterprises inside and outside Africa to accelerate the industrialization process in the continent, and enable its people to enjoy their share of the fruits of industrial development.



Mauricio de María y Campos  
Director-General

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References to dollars (\$) are to United States dollars, unless otherwise stated.

Dates divided by a slash (1994/95) indicate a fiscal year or a crop year. *Dates* divided by a hyphen (1994-1995) indicate the full period, including the beginning and the end years.

In Tables:

Totals may not add precisely because of rounding.

Two dots (..) indicate that data are not available or not separately reported.

A dash (-) indicates that data are not applicable.

The following *abbreviations* are used in this publication:

ACP	Africa, Caribbean and Pacific
APEC	Asia Pacific Economic cooperation
ASEAN	Association of South-East Asian Nations
EU	European Union
FDI	foreign direct investment
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
IMF	International Monetary Fund
ISI	import-substitution-industrialization
LDCs	least developed countries
MFA	Multi-Fibre Arrangement
MVA	manufacturing value added
NAFTA	North American Free Trade Agreement
NEC	non-equity cooperation
NIEs	newly industrializing economies
NTBs	non-tariff barriers
NTMs	non-tariff measures
OAU	Organization of African Unity
OECD	Organisation for Economic Co-operation and Development
SMEs	small and medium enterprises
TNCs	transnational corporations
TVEs	township and village enterprises
UNCTAD	United Nations Conference on Trade and Development
URA	Uruguay Round Agreements
US	United States
USA	United States of America
VERs	Voluntary Export Restraints
WTO	World Trade Organization

## **CHAPTER I. INDUSTRY AND DEVELOPMENT**

### **INTRODUCTION**

Industry, especially manufacturing, is the driving force of the development process. Rich countries are more industrialized than poor ones, and all major economies have followed the industrialization route to prosperity. Living standards are highest and social development greatest in highly industrialized States, while at the other end of the spectrum, the least developed countries (LDCs) are those where manufacturing value-added (MVA) accounts for less than 10 per cent of GDP.

Industrialization is more than the engine of economic growth; it is also the catalyst for the technological, financial and socio-economic transformation of the developed-market economies of North America, the European Union and Japan. Economic growth, driven by industrialization, has multiplier effects across and within economies, and contributes not just to improved living standards but also to cultural change and reduced rates of population growth. Technological development is most rapid in manufacturing and related service activities; countries that neglect their industrial sectors run the risk not just of being left behind technologically, but of being vulnerable to the vagaries of commodity price fluctuations and, for much of the past 25 years, deteriorating terms of trade.

Over the past 50 years, industrialization has transformed the economies of the OECD countries socially as well as economically, and in the past two decades the same process has reached an advanced stage in some newly industrializing economies (NIEs), especially, but not only, in East and South-East Asia. While the developing countries' share of global MVA has more than doubled since 1960, rising from 8.6 per cent to an estimated 20 per cent in 1995, progress has been uneven. The main gains have been confined to a relatively small handful of mainly Asian economies, including China (see Chapter II).

At the same time, industry's catalytic role in the development process is changing in response to the new global patterns of rapid and accelerating technological change, sweeping trade liberalization, far-reaching deregulation of markets, privatization and commercialization of State-owned enterprises, and the globalization of international business. In response to these developments a number of both old and new issues, such as job creation, environmental protection and equitable development, have gained increased attention in relation to the pursuit of industrial development in a globalized world. The need to reconcile so many objectives inevitably poses a number of policy dilemmas.

### **The impact of globalization**

Between 1950 and 1980, industrial growth in developing countries was driven by:

- the exploitation of natural resources, energy, minerals, and agriculture;
- industrialization for the domestic market, invariably behind tariff or non-tariff walls set up to protect national manufacturers;
- the use of low-wage labour to perform relatively low-skill manufacturing and assembly processes in order to penetrate export markets, and
- the gradual, but progressive, upgrading of technology.

By the 1980s, the development of new technologies and new materials, the declining raw material-intensity of manufacturing production, and the growth of skill-intensive and capital-intensive manufacturing techniques had turned the terms of trade against late starters. Today, it is becoming ever-harder to build - and especially to sustain - competitiveness on the basis of "lower order" advantages like "inherited" natural resources or low-wage labour.

The nature of competitive advantage has changed. In the twenty-first century, countries will be forced to reduce this reliance on inherited factor-driven comparative advantages as the launch pad for industrial development. National entrepreneurial capability, and the development of innovative skills, technology and market access, often reinforced by external linkages through foreign direct investment (FDI) and non-equity forms of crossborder business cooperation, have become key sources of competitive advantage for developing countries and a number of transition economies.

Globalization - the restructuring and transformation of the world economy - is changing the rules of the game for all participants, but in the process the gap is widening between those nations that have achieved the industrial critical mass necessary to become competitive globally, and those left behind. Revolutionary technological developments, particularly in informatics, biotechnology and new materials (see Chapter V) are having a major impact on products and processes, and on industrial organizations and management.

As a result, the skills and technology entry barrier to becoming an industrial economy has risen substantially and is continuing to do so as the pace of technological advance accelerates and as skills- and knowledge-intensive industry branches build market share relative to "mature technology" and relatively labour-intensive industries.

#### **Exports - the key to industrial growth**

The Uruguay Round Agreements (URA) and the liberalization of investment and technology flows herald a new era of increased global economic integration. The policy response of developing countries and countries in transition from centrally-controlled economies has, almost without exception, taken the form of increased market orientation and greater emphasis on private-sector development. The interplay of economic, technological and other factors in this new setting has enhanced global interdependence as new partnerships and relationships evolve between enterprises in different countries.

In the post-Uruguay Round era, economic decision-making, at national and firm level, is increasingly influenced by crossborder considerations. Rapidly growing interdependence means that decision-makers cannot ignore trends and developments beyond their national borders.

Production for the domestic market, which was at the heart of industrialization strategies in the 1960s and 1970s, has lost much of its meaning in the single market of the European Union and in the North American Free Trade Agreement (NAFTA). National markets are being regionalized, and the national firms are increasingly being challenged by foreign rather than domestic competitors as the progressive implementation of the Uruguay Round Agreements means that trade barriers are lowered.

#### **Re-engineer and upgrade**

The global search for new markets, new opportunities for investment, new ways of cutting costs and of sourcing inputs emphasizes growing interdependence in the world economy. Today, few governments, enterprises or labour unions make important strategic decisions without first taking explicit account of events and developments beyond their national borders.

As their "traditional" sources of comparative advantage - access to rich natural resources and to low wage labour - are eroded, developing countries must either re-engineer these advantages, or find new ways of competing in global markets. The re-engineering of lower order advantages has little attraction for policy makers when it means substituting capital and skills for unskilled labour, and/or holding down real wages while improving productivity.

A small handful of East and Southeast Asian countries have gone a different route. Having exhausted the low-cost labour industrialization path, they managed to climb the technological ladder to the point where they are able to compete successfully without resort to "sweated labour". In 1996, wages in the Republic of Korea are higher than those in Wales in the UK.

But for the vast majority of developing countries, there is no real choice between re-engineering on the one hand and technological upgrading on the other. Path dependence - their history, their scarce technical, managerial and professional skills, their weak infrastructure, and the absence of the industrial linkages and clusters so crucial to modern industrial development, has restricted them to the low-wage, low productivity growth path.

Technological upgrading, today's preferred route to dynamic comparative advantage, implies:

- The more effective transfer of technology from industrialized to developing countries; and
- Institution- and capacity-building to create the skills base necessary for technology absorption, diffusion and adaptation.

Competition intensifies as industries and firms are stripped of their protective barriers, highlighting the need for enhanced competitiveness at both enterprise and national levels. Business is responding to this new order by globalizing many of its activities, seeking locations where costs are lowest, where sourcing is most efficient, where labour is most productive, where skills are readily available and where market access is guaranteed.

The new challenges are all the more difficult to meet because the pace of change has accelerated - and in the case of technological progress continues to quicken (see Chapter V) - while product, strategy and policy life-cycles shorten.

### **A WIN-WIN FORMULA**

The implications of the changed industrial environment for developing countries are obvious; those States that fail to lock into the global integration process risk being left behind socially as well as economically (see Chapter III). The implications for the developed economies are no less stark. No nation can isolate itself behind tariff walls or other barriers. Even if it were feasible, prosperous nations cannot afford to disregard the plight of the developing countries. The increased proportion of the global aid budget earmarked for emergencies in the developing world is a reminder that where problems are left to fester and spread, one country's crisis soon takes on a regional, if not an international, dimension. Funds invested now in industrial projects that generate jobs and alleviate poverty help prevent subsequent economic, social and humanitarian crises.

Unemployment, political instability, civil unrest, drought and disaster in Africa, Asia, Latin America, the Middle East or the countries in transition quickly translate into social problems in Europe or North America. National boundaries do not block the crossborder migration of the unemployed, the dispossessed, the refugees and the sick. Drug trafficking and money laundering is as much - if not more - a crisis for the industrialized countries as for the developing world.

### **A game with many winners**

Fortunately, globalization is not a zero-sum game. Enhanced global competition and the growing cross-border mobility of capital, technology and skills heighten interdependence by forcing firms to consider new and different ways of carrying out value-adding activities in different countries where labour, transport, production or marketing costs are lower. Because production - and service - costs are frequently considerably lower in developing countries and the economies in transition than in the industrialized world, there are often substantial cost savings to be made from outsourcing activities.

For their part, the developed economies benefit from increased market opportunities generated by rapid *per capita* income growth in developing countries and economies in transition. Growth in the developing world accounts for roughly half the increase in exports from industrialized countries to that area since 1985. Projections suggest that growth in developing countries could account for up to three-quarters of the increase in their imports from industrialized economies over the next decade.

Precisely how industrialized-country firms penetrate such markets - by direct export, licensing technologies and product brand names, joint ventures or FDI in wholly owned subsidiaries - will depend on a whole host of considerations, including the policy environment of the host economy, its location *vis-à-vis* the main markets, its skills and technological capability and the pattern of its resource endowment. Some of these options - such as non-equity links - might benefit developing countries considerably more than direct imports from industrial countries. Industrial policy - in the very broadest sense of appropriate macroeconomic strategies and targeted selective industrial interventions - has a major role to play in ensuring that developing economies exploit these opportunities to the full.

### **Global integration as a vehicle for growth**

The most vulnerable countries will be those whose "interdependence coefficient" is low (see Chapter III); those least integrated with the global economy in terms of exports, FDI and non-equity links; and those for whom manufacturing accounts for less than one-tenth of GDP. The challenge for the next decade is how to integrate small, technologically backward economies with no industrial base to speak of with the developing-world high flyers. A failure to do so would not just perpetuate and exacerbate the widening gap between third world haves and have nots, but expose the global economy to the negative aspects of interdependence. If this is allowed to happen, a potential win-win situation could all too easily degenerate into a lose-lose scenario.

## **THE NEW PATTERN OF GLOBAL INDUSTRY**

While the new global business order has its origins in the reduced role of the State - embodied in trade liberalization, deregulation and privatization - many other influences are also at work. These include:

- The accelerating pace of technological progress - possibly the most important single determinant of competitive advantage (see Chapter V).
- The new emphasis on core competencies in large businesses giving rise to the "de-layering" and "rightsizing" of manufacturing industry, and the outsourcing and externalizing of many activities that were previously conducted in-house, with adverse repercussions on the level of direct employment in industry. General Electric of the United States of America reports that it has trebled output since 1980, while halving its workforce (see Chapters I and VIII).

- The quickening pace of globalization is reflected in the explosive growth of FDI over the past decade, the emergence of competitive national enterprises and industrial groups in newly-industrializing developing countries, and the widening range of non-equity links, especially crossborder coalitions and strategic alliances, as well as joint ventures, licensing and technology agreements (see Chapter III).
- The shifting centre of gravity of global industry as the East Asian cluster - comprising Japan, China and successive waves of newly industrializing Asian countries - builds market share at the expense of the developed economies. The share of global MVA of the latter declined from 88 per cent in 1970 to an estimated 80.3 per cent in 1995 and is expected to fall further in the coming decade. The share of the countries in transition has fallen from more than 4 per cent in 1970 to 2.3 per cent in 1995, while developing countries have raised their share from 12.0 per cent to 19.7 per cent in the past 25 years. Most of these gains were achieved by the South-East and East Asian economies, including China, whose market share rose from 4.2 per cent in 1970 to 11.1 per cent in 1995 (see Chapter II).
- With the exception of East and South-East Asia, the service sector has grown faster than any other sector of the economy. Manufacturing industry's share of global GDP fell from 29.0 per cent in 1960 to 23.0 per cent thirty years later. The major declines occurred in North America (a fall of almost 10 percentage points to 18.5 per cent), Western Europe (down 5.9 points to 23.9 per cent) and Japan, where manufacturing's share in GDP fell 5.5 points to 29.1 per cent (see Chapter II).
- The rapid growth of financial markets in the developing countries and the countries in transition associated with the liberalization of capital flows, giving rise to substantially enhanced crossborder flows of portfolio investment channelled through emerging stock markets (see Chapter III).
- The political and economic revolution and subsequent far-reaching industrial restructuring in the countries in transition in eastern and central Europe.
- The resurgence of regionalism, most apparent in the deepening and widening of the European Union (EU), but also in the development of NAFTA, the creation of the Asia Pacific Economic Cooperation (APEC) forum and the period of intense activity since 1990 in developing new regional economic integration agreements (see Chapter IV).
- The disillusionment with the strategy of import-substitution-industrialization (ISI) and subsequent widespread adoption of export-oriented policies emphasizing trade liberalization, deregulation and privatization, often under pressure from donor countries and the multilateral institutions (see Chapter VI).
- The enhanced emphasis on export-driven industrial growth which, in turn, underscores the need for development of technological capability and upgrading and improved competitiveness in manufacturing industry (see Chapters IV and VI).
- The increased urgency of measures to achieve environmentally sustainable economic growth.
- The growing role of small and medium-sized enterprises (SMEs) in industrial development, exporting and, specifically, job creation (see Chapter VI).
- The role of rural industry both in creating jobs and contributing towards greater gender equality and social integration.

## THE CHANGING NATURE OF INDUSTRIAL DEVELOPMENT

Taken together, these forces and developments mean that over the next two decades the pattern and nature of industrial development will be very different from that of the past, although industrialization will continue to be the driving force of the development process. Industry's dynamic role in generating economic growth, employment and social progress cannot be separated from that of the service sector, with which it is closely integrated.

A striking feature of recent industrialization is the externalizing and outsourcing of activities by manufacturing industry proper to subcontractors supplying industry-related services. Through these linkages with services, and also with agriculture and construction, manufacturing has substantial multiplier effects across the entire economy.

Global industrial growth has slowed markedly over the past 30 years, falling from an annual 6.2 per cent in the 1960s to 3.6 per cent in the 1970s, 2.9 per cent in the 1980s and 1.9 per cent during the 1990-95 period. The slowdown has been most marked in the industrialized economies - where growth has slowed from 5.8 per cent a year in the 1960s to 0.9 per cent per annum in the early 1990s - and in Eastern Europe, where output fell by 9.6 per cent per annum in the first four years of the 1990s having registered growth of more than 7 per cent annually in the 1960s and 1970s (see Chapter II).

Developing countries fared better; MVA growth held above 6.5 per cent a year throughout the period, except for the 1980s, when it averaged 4.7 per cent annually. However, growth rates varied widely across regions, with Asia (including China and the Indian subcontinent) performing far better than Latin America and Tropical Africa. In this latter region, MVA growth has not kept pace with population expansion since the 1960s, while in Latin America and the Caribbean, strong growth of more than 5.5 per cent a year in the 1960s and 1970s - the heyday of import substitution - was followed by falling output in the 1980s and modest 2 per cent annual growth in the 1990-1995 period. Growth in South-East and East Asia has also slowed - from more than 11 per cent per year in the 1960-80 period to an average of 8.5 per cent in the 1980s and 7.4 per cent in 1990-95.

The declining share of manufacturing in GDP has been confined mainly to the developed economies of North America, western Europe and Japan. In North America, the contribution of manufacturing to GDP fell from 27.9 per cent in 1960 to 18.5 per cent in 1990, while in western Europe and Japan, industry's share declined from 29.8 per cent to 23.9 per cent, and from 34.6 per cent to 29.1 per cent respectively.

These data must be interpreted with some caution, since the outsourcing of industry-related services implicit in much of the recent restructuring of industry distorts the 20-year comparison. Because such services are heavily dependent on output growth in manufacturing and because their reclassification as tertiary services rather than manufacturing activities is more a matter of definition than of structural change, there is a danger of so-called deindustrialization being exaggerated. This danger is enhanced by the fact that these declines in industry's share in GDP, despite an absolute increase in output, reflect the impact of structural change both within manufacturing itself, and between industry and other sectors, which have resulted in the growth rates of some other sectors overtaking the rate of manufacturing growth, even though the latter has remained positive in almost all cases.

One region - sub-Saharan Africa - has been left behind; its tiny share of global MVA fell from 0.6 per cent in 1970 to 0.3 per cent in 1995, and there is some evidence to suggest that structural adjustment programmes, few of which include explicit industrialization strategies, have contributed to the lacklustre performance of manufacturing in the region since the mid-1970s. In ten out of



18 countries for which data are available, the share of manufacturing in GDP fell between 1970 and 1993 (see Chapter VII).

The challenges now facing industrializing and restructuring countries are heightened by four trends:

- The slower growth rate of "early" industry, in which developing countries have a comparative advantage, relative to the expansion of high technology, skills- and capital-intensive manufacturing;
- The rapid, accelerating pace of technological progress, which is affecting all industries, including those traditionally classified as technologically mature (labour-intensive) sectors. This has raised the spectre of technological unemployment, although there is little evidence of this as yet (see Chapter V);
- The increasing importance of labour quality in the attraction of FDI, joint ventures and non-equity links with international companies. There is mounting evidence that the availability of higher quality personnel is a more significant determinant of industrial potential than many other physical attributes (see Chapters III and VI); and
- The growing realization that industrial development is not to be achieved only from the outside by foreign TNCs, or foreign aid/investment. All the evidence points to a major and increasing role for indigenous enterprise, often at the small- and medium-enterprise level, emphasizing clusters and industrial districts, through technology transfer, technological and skills upgrading, and the development of competitive and sustainable indigenous industrial capacity.

It has been projected that developing countries will account for 38 per cent of world output growth during the 1995-2010 period, up from 22 per cent in the 1980s. Their share of global output will rise from 21 per cent in 1994 to 27 per cent by 2010, when they will account for 56 per cent of global consumption and 57 per cent of worldwide capital formation.<sup>1</sup>

## INTERDEPENDENCE AND INTEGRATION

Foreign trade and increased integration with the world economy through FDI, joint ventures and non-equity cooperation are the main forces driving industrialization in the 1990s. Those countries that have globalized the most by opening up their countries to foreign trade, investment and non-equity external links have also achieved the fastest industrial and GDP growth. Some of the stagnation experienced by countries and regions that have not yet participated significantly in the globalization process, such as sub-Saharan Africa and some less-developed countries, is explained by their failure - or inability - to integrate more fully with the world economy by increasing and diversifying their exports, and mobilizing investments including portfolio and FDI inflows.

Globalization reflects growing crossborder interdependence and cooperation driven by trade and capital flows. Increasingly, TNCs are adopting global and regional strategies, and their offshore investment and location decisions are driven by three crucial considerations: cost reductions, efficiency gains and market access. This has meant that the bulk of FDI and non-equity cooperation (NEC) is attracted by those countries that are part of a strong regional cluster (such as the EU, NAFTA or South and South-East Asia), or have large fast-growing domestic markets and/or a resource endowment and policy framework that makes them profitable locations on cost and efficiency grounds (see Chapter III).

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<sup>1</sup> World Bank, *Global Economic Prospects and the Developing Countries*, 1996.

### **Technology drives competitiveness**

Contrary to many optimistic predictions, industrial automation has not yet lowered entry barriers to, or scale economies in, many industries. In mechanical engineering, for instance, automation has led to greater concentration and oligopoly rather than enhancing the activities of SMEs. However, while the retention of conventional technologies may be more appropriate for developing countries with a weak skills base and large-scale unemployment, such a strategy could well act as a brake on technological advance. Developing-country competitiveness depends crucially on technological upgrading and skill formation, with the more advanced developing countries moving upmarket into higher-tech activities (see Chapter V).

For developing countries, the greater scope for crossborder vertical integration is an important, positive aspect of globalization. Globalization helps to promote subcontracting and offshore manufacturing activities. However, for this to happen, developing countries need to open their economies to enterprise-level linkages of different kinds, including links with TNCs and medium-sized firms in the developed economies. The latter are more likely to prefer a subcontracting or licensing relationship than the TNCs, who usually prefer FDI with majority ownership of foreign affiliates.

### **IMPLICATIONS FOR INDUSTRY OF THE URUGUAY ROUND AGREEMENTS**

Developing countries as a whole will benefit from tariff cuts implemented by industrialized countries and, to a lesser extent, by developing nations, while also gaining from the reduction in tariff escalation, which currently discriminates against imports of manufactures into OECD economies. The Uruguay Round Agreements (URA) will bring about a dramatic reduction in non-tariff measures (NTMs) in industries where such measures have predominated in the past. The main effects will be felt in agriculture and in the clothing and textile sectors, while the phasing out of Voluntary Export Restraints (VERs) over four years will have positive implications for some developing country exporters." The implications of the drastic reduction in NTMs are far more far-reaching for developing countries than for industrial countries in terms of their export interests because of the more extensive application of NTMs to developing country trade".<sup>2</sup>

At the same time however, most African, Caribbean and Pacific (ACP) countries are likely to face negative effects, particularly during the short term, resulting from the erosion of existing preferential arrangements, and they will need to carry out major restructuring in potential growth sectors and enterprises to achieve greater competitiveness and export-oriented growth.

Most of the URA gains will accrue to developed rather than developing countries, with one estimate suggesting that as little as 11 per cent of total gains will accrue to developing economies.<sup>3</sup> Thus while the more efficient and more creative of developing-country manufacturers of clothing and textiles will benefit from the abolition of the Multi-Fibre Arrangement (MFA), the majority of the global gains will accrue to consumers in industrialized countries in the form of lower prices. Further, the main impact will not be felt until 2005 because the reforms are backloaded. China and India are likely to be among the main beneficiaries, while more developing countries seem likely to lose, than to gain, market shares, underlining the need for them to focus on improving their competitive capability.

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<sup>2</sup> Patrick Low and Alexander Yeats, "Non-Tariff Measures and Developing Countries: Has the Uruguay Round Levelled the Playing Field?", *World Economy*, January 1995, Vol. 18, No. 1, p. 69.

<sup>3</sup> Goldin I., Knudsen O., and D. van der Mensbrugge, *Trade Liberalization: Global Economic Implications*, OECD Development Centre and the World Bank, 1993.

Because resource-based exports, which dominate the trade of most developing countries and especially low-and-middle-income Africa, face low trade barriers, the URA is unlikely to have much of an impact on their export performance, except where second-round effects result in faster global economic growth and increased demand.

One third of developing countries rely significantly on clothing and textile exports, which account for over 20 per cent of total developing country exports of manufactured goods. Because textiles and apparel have been one of the most heavily-restricted sectors in world trade, the URA should benefit the more competitive exporters substantially. The challenge for many developing countries will be to become sufficiently cost- and quality-efficient as well as innovative to be able to make headway in an intensely competitive global industrial economy.

#### **TRIMs will constrain industrial policy**

The phase-out of trade-related investment measures (TRIMs) will have a significant impact on developing countries, in that governments will no longer be able to use such policies to boost domestic value-added and insist that foreign investors give priority to exports. In general, the TRIMs agreement means that performance requirements cannot be imposed on foreign investors. With the prohibition of such provisions, host governments will have to seek alternative ways of inducing foreign investors to expand local content and value-added, and boost exports. At the same time, however, TRIMs will maintain the pressure on developing countries to liberalize their investment regimes as part of their drive to attract new investment.

The trade-related aspects of intellectual property rights (TRIPs) agreement may well have a more severe impact, especially in high-technology sectors, working to the disadvantage of developing countries in two main respects: countries wishing to place and sell products covered by patents will be forced into licensing agreements involving royalty payments to patent owners; while research and development activities may be stifled since the TRIPs agreement is likely to inhibit "reverse engineering" - the process by which industrial country products are copied and adapted for developing-country usage (see Chapter IV).

#### **ACP exporters at risk**

The reduction of Most-Favoured Nation (MFN) tariffs under the Uruguay Round will divert trade away from African, Caribbean and Pacific (ACP) suppliers to other developing countries, as well as producers in the countries in transition. Preference erosion is expected to be most severe in the EU market, where ACP exporters enjoy their greatest preferential advantages. However, as a proportion of total ACP exports to the world, the ACP preference erosion loss will be tiny, at just 0.6 per cent (see Chapter IV).

ACP exporters will suffer from the phasing out of the MFA agreement, with total industrial export losses assessed at \$317 million or 44 per cent of their overall losses. ACP producers of clothing and textiles are forecast to lose their market share to their highly competitive Asian rivals.

The clothing and textile sectors in the countries in transition - most notably the former Soviet Union, Bulgaria, the Czech Republic and Slovakia - will also gain from the MFA phase-out. Industry in the Baltic States, the Czech Republic, Hungary, Poland, Romania and Slovakia, which appear to have a comparative advantage in manufacturing and semi-manufacturing, should also benefit from enhanced access to industrial country markets.

Although resurgent enthusiasm for regional economic integration among emerging economies is not justified by its disappointing track record, many countries now believe that they have little option but to seek closer economic ties with their neighbours. As a result, there has been a marked increase in the number of regional integration agreements, with 33 being notified to the

General Agreement on Tariffs and Trade (GATT) between 1990 and 1994. Evidence suggests that such arrangements complement rather than compete with multilateral trade liberalization, while also enabling developing countries to strengthen their bargaining power (see Chapter IV).

## **ENVIRONMENTAL POLICIES**

The relationship between (domestic and international) environmental policies and industrial competitiveness is a complex one. This issue has become an important concern for the industrializing countries of Latin America and the Caribbean. Firms in developing countries fear that stricter environmental standards in developed countries will result in a loss in market share and export earnings due to higher compliance and production costs.

There may be short-term adverse effects on certain sectors or firms in developing countries, but the impacts at the macro level are insignificant. In the medium to long term, the competitive position of efficient firms in export markets will most likely improve due to improved quality and environmental standards. Empirical evidence shows that the effects of stringent environmental norms on the competitiveness of individual firms will vary depending on a number of factors including: the type of industry and its share in export markets; the size and location of firms; the degree of openness of the economy and rate of economic growth; the availability of infrastructure facilities especially for small firms; and the availability of timely information on foreign standards and environmental regulations. Competitiveness is more likely to suffer in small firms and companies operating in natural resource-intensive industries.

Eco-labelling has the potential to reduce the export opportunities of developing countries in the short run, assuming that it becomes a significant marketing tool in developed countries. Developing countries lack the pertinent information and infrastructure (certification and accreditation bodies) needed to qualify for many eco-labelling schemes. Their firms have limited access to cleaner technologies and may incur relatively high compliance costs in meeting the requirements for eco-labelling schemes, which are becoming even greater with the growing use of process-related criteria for awarding eco-labels. The ISO/DIS 9000 and 14000 standards have the potential to overcome some of these negative impacts for the more advanced firms. However, more efforts in the areas of international labels, mutual recognition, certification, equivalency, transparency, participation and technical assistance are needed to ensure that eco-labelling requirements are not perceived to be, or do not become, barriers to trade.

Whereas it is difficult to quantify the impacts of international environmental agreements on competitiveness, the Montreal Protocol on Substances that Deplete the Ozone Layer attempts to reimburse incremental costs through financial assistance. The impacts of environment-related NAFTA clauses on competitiveness are still unclear. However, the existence of parallel provisions for technical and financial assistance provides a reasonable cushion for lessening adverse impacts.

Policy responses at the sectoral, national and international levels are necessary to mitigate and alleviate fears about the adverse consequences of stricter environmental regulations on the competitive position of industry in developing countries. Response options include: economic instruments and border tax adjustments, harmonization of environmental policies, integration of environmental and industrial policies, facilitation of cleaner production technologies, and a host of measures to lessen the competitiveness impacts of eco-labelling requirements.

## **SOCIAL DIMENSIONS OF INDUSTRIAL DEVELOPMENT**

The impact of industrialization on social development is becoming an increasingly debated issue in the light of globalized competition. SMEs will play an increasingly important role in terms of output, exports and, especially, employment. Such a growth pattern, with its strong linkage effects with the rest of the economy, will have positive social implications. Industrial districts and clusters,

which enable groups of small firms to exploit economies of scale and enhance collective efficiency, will strengthen and diversify the industrial base of developing economies. By dint of sub-contracting and other non-equity relationships, SMEs can be expected to expand their export activities significantly. However, the need to become more competitive to survive in open economies will limit the traditional employment generating capacity of SMEs.

Direct employment creation in industry has slowed as a consequence of economic progress, structural change, industrial restructuring and technological advance. While the restructuring and outsourcing of services previously performed in-house has meant job losses, the indirect job-creation capability of manufacturing has been much understated. Research shows that the indirect employment effects of investment in industry are large relative to direct effects resulting from inter-industry and cross-sector linkages.

In the 1970s and 1980s, foreign direct investment, joint ventures and non-equity links were the main engine of employment growth, along with rapid job creation in the services sector (especially the public sector), and high levels of informal sector absorption of potential employees. Today, this pattern has changed in three main respects:

- Low-cost unskilled and semi-skilled labour is less likely to attract foreign participation than in the past. Instead, FDI and joint ventures are attracted by high-quality, skilled personnel. On the whole, investment in modern, scale-effective plants creates fewer - and higher-quality - jobs than in the 1970s and 1980s.
- Public-sector employment creation has slowed and, in many cases, turned negative as State-owned enterprises are privatized, invariably with substantial retrenchment of labour. At the same time, in the less-developed countries in particular many governments have been forced to trim their public service workforce in an effort to curb fiscal deficits.
- The advantages of informal sector development are assessed more critically than in the past.

The manufacturing sector's contribution to improved social conditions and reduced income inequality depends on a host of considerations, in particular the pattern of industrial development and the policy framework within which it takes place. Social progress is not guaranteed. Linkage effects were invariably weak in those countries that followed capital- and/or natural-resource-intensive growth paths, and social progress has been far greater where a country's development strategy has targeted agriculture, labour-intensive industry or services.

For a number of reasons, industrialization is unlikely to generate direct employment on the same scale as in the 1960s and 1970s. In the late 1990s and beyond, employment creation and poverty alleviation will have to be tackled in a very different global business environment - one in which the scope of national industrial policy may become increasingly circumscribed.

With integrated international production, manufacturers establish individual value-adding activities in different locations, leading to greater labour market interdependence and a new international division of labour. Greater crossborder interdependence between TNC affiliates and enterprise-level non-equity links means that competitive business activities can be located in different countries and, in some instances, outsourced to subcontractors. The resulting relocation and interdependence of jobs highlights the much enhanced role of education and training in attracting new investments and developing technological skills and capability. Labour quality is increasingly influential in location decisions of foreign investors and partners, and countries able to provide the high-level skills required are much more likely to attract foreign direct investment and participation in high value-adding activities than countries that are still reliant on low-cost, low-productivity personnel.

Efforts to devise a socially optimal industrial growth path for developing countries are constrained by the need to ensure increased competitiveness. Industries in the developing world can no longer rely entirely on "lower order" competitive advantage - in the form of natural resources and low-cost labour. Increasingly, competitive advantage is based on technological capability, the continuous upgrading of production techniques, quality and design, human skills, flexible production systems and aggressive marketing.

In narrowing the policy options available to national governments, globalization and the liberalization of trade and investments are channelling developing countries towards a different industrialization path from that taken by OECD countries. Although developing countries will have to maintain a proper balance between large, medium and small industrial enterprises, depending on their sectoral comparative advantages, technological trends and market demands if they are to reconcile social development objectives with industrial growth and international competitiveness, for the less-developed countries in particular, a dual pattern of integrated industrial growth may be needed. This would comprise externally oriented industrial development driven by export-dominated activities integrated with a vibrant medium, small-scale and micro-enterprise sector, focusing on subcontracting and other supplier linkages with the external sector while also satisfying domestic demands for goods and services including in less-developed and rural regions. Because small firms are typically more labour-intensive, the SME sector including micro enterprises, can play a vital role in poverty alleviation by generating jobs and income for the most vulnerable communities, as well as providing an essential element in the value-added chain of manufacturing activities.

Until relatively recently, reliance on small-scale and micro enterprises was seen as an indicator of underdevelopment, and the fostering of such enterprises was justified on social rather than economic grounds. Micro enterprises, in particular, were to be encouraged so as to achieve job generation, equitable income distribution and poverty alleviation rather than for any major contribution to economic efficiency and competitiveness.

The conjuncture of disillusionment, especially in Africa but also in Latin America and Asia, with industrialization driven by capital-intensive and large-scale enterprise, and growing anxiety about the failure of such investments to generate enough jobs to keep pace with labour force growth has contributed to the revival of emphasis on the key role of SMEs. Three vehicles for SME participation in the globalization process have attracted growing attention:

- Subcontracting relations with large firms;
- The development of industrial districts and firm clusters, especially in Italy (see Chapter VI); and
- Township and Village Enterprises (TVEs) in China.

As far as globalization is concerned, participation in exports has been a striking feature of recent SME development. In Taiwan Province of China, the share of SMEs in total exports is 56 per cent, in China itself more than 50 per cent, and for East Asia as a whole about 40 per cent - more than double the estimated 20 per cent for SMEs in OECD countries.

SME contributions to exports take various forms, ranging from subcontracting to direct exports, sometimes via associated firms or export market intermediaries. Data from the Republic of Korea show a marked increase in direct exports, not just of traditional products like woven textiles, but also more technologically advanced items like auto parts and metal-cutting equipment.

Research shows that SME support programmes can make a substantial contribution to job creation. In a study of five sub-Saharan economies, it was found that 43 per cent of the increase in employment during the 1980-91 period occurred in small enterprises employing less than 50

people, while in Colombia, India, Indonesia, Kenya, the Philippines, United Republic of Tanzania and Zambia, SMEs employing up to 50 workers absorb more than half the industrial workforce.

In this context rural industrialization is an attractive policy option for a number of reasons:

- Small rural firms use labour-intensive techniques and employ relatively unskilled people;
- They maximize utilization of local raw materials as well as unskilled workers;
- They are often a vehicle for developing entrepreneurship and upgrading entrepreneurial skills;
- They provide the basic needs requirements of the rural population; and
- They contribute to improved gender equality by employing a high proportion of women.

## **INDUSTRIAL POLICY**

The impact of national economic policies is becoming diluted as economies are liberalized and decontrolled, and nation States become more interdependent. At the same time, economic policy is converging on the middle ground as policy-makers eschew extreme interventionist or free market solutions.

The debate on industrialization strategies has shifted decisively over the past decade; the disagreements of the 1970s over inward-looking versus outward-oriented industrial policy have been replaced by a dialogue on the most effective strategies for building competitive advantage at a time of accelerating technological progress, global liberalization and heightened market competition.

The difficulties inherent in designing strategies appropriate to a rapidly changing global business environment, especially at a time when the impact of industrial policy may be reduced by the globalization process, cannot be exaggerated. As governments liberalize, privatize and deregulate, the range and nature of national strategies and policies tend to become increasingly complex. Policies designed to foster specific sectors or industries will have to be adjusted within the framework of regional economic interdependence.

Against this background, the nature and role of industrial policy are changing; the Uruguay Round Agreements limit the use of tariff and non-tariff measures to protect infant industries; TRIMs restricts the use of trade-related measures to influence the pattern of FDI; industry location decisions are influenced more by growing crossborder linkages and the availability or otherwise of skilled labour than by government fiscal incentives.

Policy makers have chiefly responded by:

- Shifting industrial policy "upstream" away from interventions designed to protect and promote a specific industry or sector to more general strategies aimed at boosting economy-wide competitiveness indirectly - e.g. increased investment in infrastructure, education and R&D, improved transport facilities, greater support for technology development and technological transfer, along with a broader and more efficient range of industry-related service activities.
- Generally shifting away from inward-focused intervention in support of industries serving the domestic market towards enterprises targeting export markets.

- Putting greater emphasis on regional objectives - policies designed to help backward regions within a country, or backward countries within a region.
- Providing increased emphasis on industrial promotion, competitiveness and development of innovative technological capability at the enterprise level, including the restructuring and privatization of existing enterprises in the countries in transition and in those developing economies with large State-owned enterprises, and greater technological and institutional support for SMEs. This is possibly the field providing the greatest potential for industrial intervention in developing countries.

The industrial policy debate has focused on the extent and manner in which developing economies as a group can replicate the East Asian model of rapid, sustained, export-driven economic growth. Because there is no single East Asian model to emulate and no firm consensus on precisely which form of intervention will optimize industrial and economic growth in developing countries, industrial policy is best viewed as a menu of options. Furthermore, policies that succeeded under different global market conditions in the 1970s and 1980s may no longer be appropriate.

Three clear conclusions stand out:

- The importance of outward-oriented strategies, whereby a country's manufacturing sector is driven by the discipline of market competition;
- The need to share in the globalization process by pursuing an export-led growth strategy, attracting FDI and building non-equity links with TNCs, and
- The need for selective, targeted supplyside interventions, based on long term industrial development visions formulated and implemented in close coordination between the government, the private sector and other groups of society.

The more advanced the developing country, the greater the range of choice. In the least-developed countries with tiny markets, weak infrastructure and a poor skills and technology base, there may be little option but to focus, initially at least on simple, consumer-based industries. Given their small markets, their prospects for attracting major FDI inflows (other than into natural resource industries) are poor. For the immediate future, such countries can do little more than seek to foster labour-intensive operations and develop an export-platform strategy, as in Mauritius.

### **Openness and market competition are essential**

It has been argued that "the international opening of an economy is the *sine qua non* of the overall reform process. Trade liberalization not only establishes powerful direct linkages between the economy and the world system, but also effectively forces governments to take actions on other parts of the reform programme under the pressure of international competition"<sup>4</sup>

Open economies tend to catch up while those that remain closed to global economic influences of all kinds, lag behind. Open economies also make the transition more rapidly from being primary-product exporters to exporters of manufactured goods.<sup>5</sup> In embarking on a policy of increased openness, however, developing countries need to be aware that the international market is very complex, far from perfect and increasingly based on regional market integration arrangements. Against this background, there is an urgent need for international efforts to ensure

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<sup>4</sup> Sachs, Jeffrey and Warner, Andrew, Economic Reform and the Process of Global Integration, *Brookings Papers on Economic Activity*: 1, 1995.

<sup>5</sup> *Ibid.*, p. 53.



fair access, particularly for the LDCs to competitive market structures, and a levelling of the playing field.

### **Three pillars**

If trade liberalization is arguably the most important single component of a successful industrialization strategy, substantial investment in capacity building in the twin forms of human capital development and technology upgrading follow close behind.

The third pillar is domestic rivalry. Enterprises nurtured as "national champions", closed off from domestic as well as international competition, find it hugely difficult to become globally competitive. Accordingly, domestic competition policy also has a key role to play in creating competitive industries.

### **Clusters contribute to SME success**

Clusters and industrial districts have an important role in the development of globally competitive SMEs. Such is the pace of technological and organizational change that policies must be flexible and dynamic. Measures that succeeded in the 1980s may have already lost their viability.

Incentives are more likely to succeed than sanctions. Efforts to constrain FDI or limit technology imports run the risk of deterring investment. In an increasingly borderless world, potential foreign investors may merely take their operations elsewhere.

Structural adjustment programmes should include a specific strategy for manufacturing. The expectation that manufacturing will blossom in the absence of a coherent strategy has not been borne out by African experience.

In industrialized and transition economies as well as developing economies, industrial restructuring, including privatization, will only succeed if the policy framework is appropriate. In the past, policy makers have focused on picking winners, but in the 1990s and beyond, they are required to anticipate losers - to forecast "sunset" as well as "sunrise" industry situations - and devise policies to mitigate the impact of industrial closures and retrenchments just as much as measures to facilitate the development of competitive advantages.

One of the most important lessons of the East Asian experience is that intervention worked where it was carried out in close coordination with the private sector within the framework of a market-driven economy. Industrial policy responded to the problems and needs of private enterprise rather than seeking to impose elaborate schemes according to the dictates of grandiose national plans.

Ultimately, competitiveness succeeds or fails at the enterprise rather than the national level. Governments can - and should - create an enabling environment for business and investment, but the choices of what to make and sell, and how and where to do it, must be left to entrepreneurs.

### **OUTLOOK**

In 1975, the General Conference of UNIDO held at Lima set a target for the developing-country share of global MVA; the so-called Lima target was 25 per cent by the year 2000. This target is likely to be nearly achieved - the developing-country share had reached 19.7 per cent by 1995 - and the latest projections suggest that the developing world's share in global MVA will reach 23.7 per cent in 2000 and 29.1 per cent by 2005, while its share in global exports of manufactured goods

will increase from an estimated 24.3 per cent in 1995 to 29.8 per cent at the turn of the century and to more than 36 per cent by 2005 (see Chapter II).

UNIDO's baseline scenario assumes a moderate GDP growth of 2.5 per cent a year in the G-5 countries along with continued global economic reform and trade liberalization, as well as moderate real interest rates. Under the baseline scenario, the industrialized countries' share of global MVA will continue to decline over the next decade, reflecting the fact that industrial production in the developing countries will grow by almost 7 per cent a year compared with just over 2 per cent per annum in the developed economies. MVA growth will accelerate in all developing regions over the forecast period, but East and South-East Asia will continue to grow far faster than any other region. As a result, the latter's share in global MVA will rise from 11 per cent in 1995 to 20 per cent in a decade's time. The developing countries' share of world MVA is set to grow rapidly from 19.7 per cent in 1995 to 29.1 per cent by the year 2005, although almost all of this growth will emanate from the high-performing Asian economies.

The scenario also suggests that the share of MVA in global GDP will rise marginally to 23.4 per cent in 2005 from 22.9 per cent at present. This reflects a sharp increase in the developing countries, where the share of MVA in GDP is expected to rise to 28.3 per cent from 23.6 per cent at present. Once again the trend is most marked in Asia, but industry's share of GDP is also forecast to improve in all other developing regions except Latin America.

The baseline scenario points to a strong growth of manufactured exports by developing countries, whose market share will rise from 24 per cent at present to more than 36 per cent by 2005. Again, the vast bulk of the increase in market share reflects greater market penetration by the East Asian countries, including China. Their share will rise from 17.9 per cent to 29.9 per cent over the period, at which stage they will account for more than 80 per cent of developing world exports of manufactured goods.

The analysis of industrial growth perspectives, during the next decade and beyond, highlights certain important conclusions:

- (i) The pace of industrialization and technological development in developing countries continues to be extremely uneven. Although spectacular industrial and export growth has taken place in certain East Asian countries and, to a lesser extent, in some Latin American economies, industrial growth has continued to be slow in most other developing economies and has even deteriorated in sub-Saharan Africa. The technology gap between industrialized countries and most developing countries also continues to increase rapidly, particularly with respect to the application and development of new, generic technologies such as informatics, biotechnology and new materials.
- (ii) The impact of global economic developments and trends with respect to technological innovations, globalization, and liberalization of trade and investment following the Uruguay Round Agreements, is likely to be highly significant for developing countries and transition economies. Enterprises from these countries need increasingly to compete in international markets. Industrial subsectors and niche areas with export potential will need to be identified and such enterprises must not only upgrade their technology usage and product quality but develop innovative capability for products, processes and related services in external markets.
- (iii) Industrial policy reforms in developing countries and transition economies will need to be increasingly export-oriented and governments in these countries will need to undertake carefully-targeted selective policy interventions to facilitate industrial restructuring. This will require special emphasis on the promotion of SMEs and micro enterprises in less-developed regions, including rural areas, to provide increased employment and income to vulnerable sections of the population, particularly women.

- (iv) The industrial growth perspectives emphasize the necessity for specialized industrial services through international institutional support. The development and upgrading of technological capability, the enhancement of competitive export-oriented production and marketing, the industrial restructuring of potential-growth subsectors and of export-oriented enterprises, the promotion of external linkages and alliances, and the key and changing role of governments in developing countries undoubtedly require specialized support services of increasing complexity and magnitude. The pattern of industrialization in the increasingly competitive global environment must be based on an integrated industrial strategy covering interrelated functions, services and programmes. It is vital, for this purpose, that well-defined technological and other support functions are provided at the international level to transition economies and developing countries so as to ensure that competitive and sustainable industrial growth can be achieved in these countries during the next decade.
  
- (v) Industrial growth, increased employment, more equitable development and environmental protection in developing countries - and particularly in LDCs - are important to developed countries as well. In an increasingly interdependent international economy, globalization of communications and consumption aspirations must be complemented by effective globalization of production patterns, employment opportunities and rising incomes. They are the best means for meeting the needs of growing international consumer and investment markets, and the best platform for peace and stability around the world. These objectives can not be left to global market forces and to the private sector alone. They require, more than ever, international cooperation for industrial development, through specialized institutions and networks. UNIDO, created for such a purpose, is therefore more important than ever both to developing and to developed countries.

## CHAPTER II. THE PRESENT AND FUTURE STATE OF WORLD INDUSTRY

Historically, industrialization has been a function of market size. Countries with large populations and/or high income per head have industrialized earlier and faster than small, poor nations. Over the past 25 years, however, a growing number of developing countries have bucked the trend, managing to develop large, dynamic manufacturing sectors - as measured by the share of manufacturing value-added (MVA) in GDP - primarily by becoming part of the globalization process, which has enabled them to industrialize despite small domestic markets.

Nevertheless, industrialization in the developing world has been an extremely uneven process. While the developing economy share of global manufacturing production rose 64 per cent from 12 per cent in 1970 to 19.7 per cent in 1995 (see Table II.1), almost all of this increase came from one region - South-East and East Asia including China, whose share more than doubled from 4.2 per cent to 11.1 per cent. The rest emanated from North Africa and West Asia (one per cent) and South Asia (0.3 per cent). Both Latin America and sub-Saharan Africa lost ground.

**Table II.1. Regional shares in global manufacturing production, 1970, 1980, 1990 and 1995 (Percentage)**

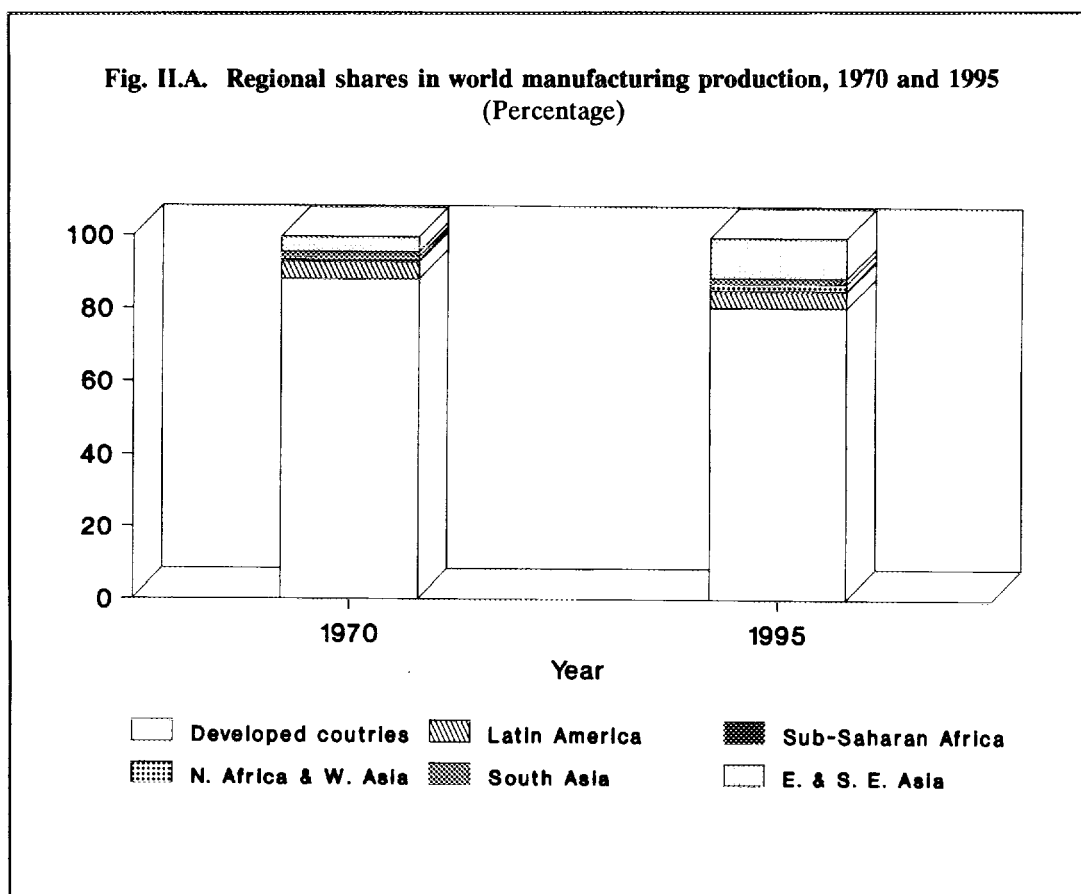
Region	1970	1980	1990	1995
Developed countries	88.0	82.8	84.2	80.3
Developing countries including China	12.0	17.2	15.8	19.7
Latin America	4.7	6.5	4.6	4.6
Sub-Saharan Africa	0.6	0.5	0.4	0.3
North Africa and West Asia	0.9	1.6	1.8	1.9
South Asia	1.2	1.2	1.3	1.5
East and South-East Asia including China	4.2	6.8	7.4	11.1

Source: UNIDO Global Database.

### ECONOMIC POWER IS SHIFTING

The most striking feature of world economic growth in the past decade has been the gradual shift of economic power from Europe and North America to the East Asian region of Japan and the newly industrializing economies (NIEs) of East and South-East Asia. While Western Europe and North America have increased their share of global MVA over the past 20 years to 58.3 per cent in 1995 from 57 per cent twenty years earlier, the East Asian economies (including China) more than doubled their share from 4.7 per cent in 1975 to 11.1 per cent (China 5.1 per cent) in 1995.

This shift in the global location of industry has been accentuated by the - temporary - steep decline in industrial activity in the countries in transition. The share of the former centrally planned economies of eastern and central Europe collapsed from more than 17 per cent in the mid-1970s to an estimated 3.7 per cent in 1995.



The main explanation for the declining share of MVA in GDP in the developed market economies (Table II.2) appears to have been the shift in private consumption spending from manufactured goods to higher income-elasticity services, including tourism, and lower levels of gross fixed capital formation. The relocation from some regions in North America, western Europe and Japan to the developing countries of manufacturing like steel, leather goods and textiles was another factor.

With the exception of Asia and especially China, MVA growth has slowed markedly since the mid-1970s, which represented a watershed in the pattern and pace of global industrialization (Table II.3). Indeed, between 1970 and 1990 the share of manufacturing in global GDP fell 5.4 percentage points from 28.3 per cent to 22.9 per cent, with the main losses occurring in the industrialized economies of North America, western Europe and Japan.

In developing countries as a whole, MVA growth slowed markedly in the 1980s before recovering in the first half of the 1990s. The share of manufacturing in GDP almost doubled in East and South-East Asia (excluding China) (Table II.3), also increasing significantly in South Asia, highlighting the yawning gap between Asian growth rates - 4.5 per cent annually in the first half of the 1990s in South Asia, 7.4 per cent in East and South-East Asia South-East and over 15 per cent in China - and Latin America (2 per cent a year) and sub-Saharan Africa (0.1 per cent annually).

**Table II.2. Share of manufacturing value added in GDP by region, 1960, 1970, 1980 and 1990**  
(Current prices and \$ exchange rates)

Region	1960	1970	1980	1990
World	29.0	28.3	25.8	23.0
Developed market economies	28.7	27.9	25.1	22.7
Developing countries	20.3	20.2	20.9	21.9
North America	27.9	24.8	21.5	18.5
Western Europe	29.8	30.5	27.1	23.9
Eastern Europe and former USSR	42.3	41.3	43.9	36.6
Japan	34.6	36.0	29.2	29.1
Latin America	20.9	23.7	24.6	23.1
Tropical Africa	7.0	10.3	10.1	9.5
North Africa and West Asia	10.1	12.5	8.2	13.1
Indian subcontinent	12.0	12.7	14.8	15.4
East and South-East Asia (excl. China)	14.4	19.1	22.9	26.6
China	n.a	n.a	38.4	31.5

Source: UNIDO Global Database.

**Table II.3. World growth rates of MVA, 1970-95**  
(1990 \$)

Region	1970-80	1980-90	1990-95
North America	2.3	2.5	3.1
Western Europe	2.6	1.6	0.5
Japan	5.2	5.8	1.2
Eastern Europe and former USSR	7.1	1.6	-9.6
Latin America and the Caribbean	5.5	0.4	2.0
Sub-Saharan Africa	2.0	2.5	0.1
North Africa and Western Asia	7.7	5.5	3.2
South Asia	4.2	6.8	4.5
China	9.4	9.5	15.4
East and South-East Asia	11.5	8.5	7.4
Developing countries (including China)	6.9	4.7	6.5
World	3.6	2.9	1.9

Source: UNIDO Global Database.

## NO UNIQUE INDUSTRIALIZATION MODEL

No single influence explains the success of South-East and East Asia, although the region's outward-orientation and capacity to compete with OECD players was undoubtedly a major factor. Thus Brazil's average annual GDP growth rate of 2.1 per cent (between 1980 and 1995) contrasts starkly with the Republic of Korea's 8.8 per cent a year. A major reason for the contrast is that the Republic of Korea's open economy, with an export: GDP ratio of 38 per cent, enabled it to generate extra resources to cope with debt-service payments far more effectively than Brazil, which had an export: GDP ratio of only 7 per cent.<sup>1</sup> The most successful economies were those that

<sup>1</sup> UNIDO Background Paper, John Humphrey, *Industrialization in Developing Countries: The Challenges of Employment and Social Integration*, 1995, (ID/WG.542/29 (SPEC.)), p. 10.

best exploited globalization by rapidly expanding their exports of manufactured goods and attracting substantial inflows of foreign direct investment (Chapter III).

In the 1990s, industrial development is increasingly driven by the forces of globalization - itself the product of worldwide liberalization and deregulation, rapid technological progress, and new systems of structuring and managing business. The pace of industrial expansion is closely correlated with foreign trade growth, specifically exports of manufactures, and foreign investment inflows, not just direct investment but also non-equity links and portfolio investment.

The benefits of globalization have been largely restricted to a handful of East Asian and Latin American countries, however, whose outward orientation of trade and investment policies has enabled them to increase their integration with the global economy. The challenge of the latter half of the 1990s and beyond is to broaden the globalization process so that it extends to the vast majority of less and least developed nations, especially, but not only, in Africa and the Middle East. The enormity of the challenge is illustrated by the comparison between the industrial performance of East and South-East Asia and that of sub-Saharan Africa (see Table II.4). While manufacturing has been the driving force behind both economic growth and export expansion in East and South-East Asia, MVA per capita in Tropical Africa has declined continuously for a quarter of a century while manufacturing's share of GDP has fallen by a third.

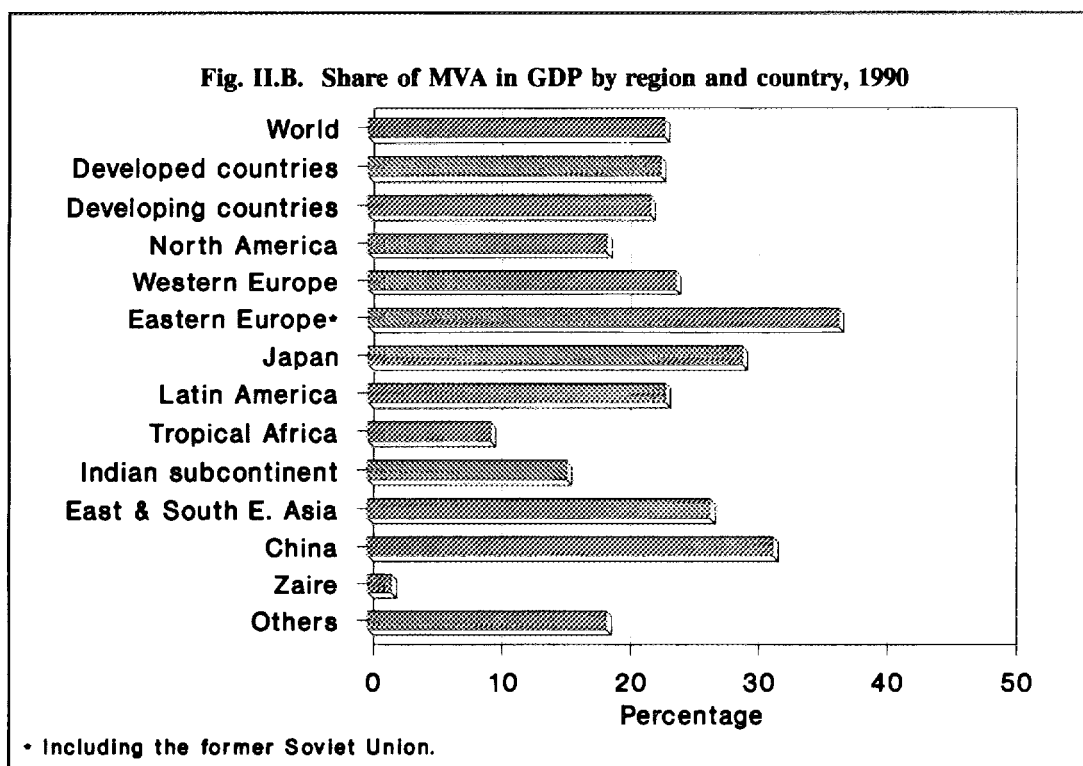
**Table II.4. Selected industrial performance indicators: East and South-East Asia, and Tropical Africa, 1970-95**  
(Percentage)

Region	1970-80	1980-90	1990-95
<b>East and South-East Asia</b>			
GDP growth rate	8.1	7.1	6.9
MVA growth rate	11.5	8.5	7.4
MVA share of GDP	20.9	25.0	26.8
Labour productivity growth rate	2.9	5.6	4.4
<b>Sub-Saharan Africa</b>			
GDP growth rate	3.0	2.2	1.2
MVA growth rate	2.0	2.5	0.1
MVA share of GDP	13.6	10.2	9.8
Labour productivity growth rate	-0.2	0.5	-3.0

Source: UNIDO, *Industrial Development- Global Report*, 1996 and Global Database.

### Structural change

The industries in which late industrializers are able to develop comparative advantage - processed foods, beverages and tobacco, clothing and textiles, footwear and some intermediate products - account for no more than one-quarter of world MVA. The fast-growth industries - such as electrical and non-electrical machinery, transport equipment, and chemicals - are dominated by industrialized and newly industrializing countries and account for more than 40 per cent of global output. Developing countries are also disadvantaged by the fact that the fastest growing sectors of manufacturing have been skill- and technology-intensive industries, such as scientific goods and plastics. Table II.5 illustrates the industrial sectors in which developing country manufacturers are building market share, showing that these gains have been greatest in resource-intensive sectors (iron and steel, non-metallic products, petroleum refineries, coal and petroleum products and non-ferrous metals) and in labour-intensive, technologically mature activities - leather and fur products, footwear, clothing, textiles and pottery. At the same time, developing countries have made substantial relative market share gains in some higher-technology activities, such as transport equipment and electrical machinery.



**Table II.5. Share of developing countries (including China) in global MVA, 1975 and 1995 (Percentage)**

Industry	1975	1995	Change in market share (percentage points)
Leather and fur products	22.8	42.9	+ 20.1
Tobacco manufactures	39.4	39.7	+ 0.3
Petroleum refineries	28.9	38.5	+ 9.6
Textiles	26.8	38.2	+ 11.3
Footwear	19.5	37.7	+ 18.2
Iron and steel	13.6	36.3	+ 22.7
Clothing	14.8	32.8	+ 18.0
Non-metallic mineral products	18.4	31.2	+ 12.8
Beverages	22.0	29.7	+ 7.7
Pottery, china and earthenware	20.5	27.8	+ 7.3
Non-ferrous metals	13.0	24.2	+ 11.2
Rubber products	19.8	22.6	+ 2.8
Miscellaneous petroleum and coal products	11.9	22.5	+ 10.6
Other manufactures n.e.s.	13.3	22.4	+ 9.1
Industrial chemicals	14.2	21.0	+ 6.8
Glass and glass products	13.2	20.3	+ 7.1
Food manufacturing	16.1	19.2	+ 3.1
Other chemical products (including pharmaceuticals)	19.5	18.0	- 1.5
Electrical machinery	9.4	17.2	+ 7.8
Plastic products	16.2	15.9	- 0.2
Metal products - excluding machinery	13.2	15.0	+ 1.8
Furniture and fixtures	11.7	14.5	+ 2.8
Wood and cork products	13.2	14.4	+ 1.2
Transport equipment	8.2	14.0	+ 5.8
Paper and paper products	11.9	13.9	+ 2.0
Non-electrical machinery (including office machines)	10.4	12.8	+ 3.2
Printing and publishing	9.8	8.1	- 1.7
Professional and scientific goods	5.8	7.6	+ 1.8

Source: UNIDO Global Database.



However, among developing countries, only East and South-East Asia have increased their market share in capital- and technology-intensive activities, while developing countries as a whole have made most progress in textiles, clothing and footwear, where MVA growth rates have been below average in recent decades.

Thus in footwear, where developing countries account for 37.7 per cent of global production (see Table II.5), world output declined by 1.4 per cent a year during the 1980s, and by 1.2 per cent annually during the 1990-94 period. Similarly, in textiles, where developing countries control 38.2 per cent of global MVA, world output was flat during the 1980s, falling 0.6 per cent a year between 1990 and 1994.

Sluggish demand growth notwithstanding, developing countries have built impressive market shares over the past 20 years. However, the sectors in which developing countries have increased their market share the most account for less than a quarter of world production. In other words, developing countries are building market share mainly in sectors that command small - or declining - shares of global production. The share of low-technology industries in global MVA has shrunk from 57 per cent in 1970 to 50 per cent in 1994, reflecting faster growth in the more skill and capital-intensive industries.

Table II.6 illustrates the substantial decline in the share of low-technology activities in all parts of the world, except sub-Saharan Africa, where low-tech still accounts for four-fifths of MVA and in China, where the ratio has barely changed in the past 25 years and remains close to 60 per cent.

#### **The de-linking of employment from growth**

The period from the 1950s to 1975 marked the "golden age" of manufacturing development in developing countries. Industry diversified as new sectors developed and, for a long period, the ISI strategy generated growth in both manufacturing output and employment.

Until the mid-1970s, the manufacturing sector grew sufficiently rapidly in developing countries to create enough new jobs to keep pace with non-agricultural employment growth as a whole. In sub-Saharan Africa and South-East and East Asia, employment growth in the period 1965-80 far exceeded the underlying growth rate of non-farm employment. Similarly, in Latin America, the Caribbean and South Asia, growth in manufacturing employment accelerated in the 1970s, creating jobs more rapidly than in other non-agricultural sectors.<sup>2</sup>

The first oil price crisis, the subsequent world recession, rampant inflation and the third world debt crisis signalled the end of the golden age and the onset of a new, ominous period of jobless growth. With the exception of South-East and East Asia, MVA growth and industrial employment generation in developing economies slowed after 1975, while in the first half of the 1980s manufacturing employment actually fell in South Asia, Latin America and sub-Saharan Africa.

Even so, up to 1980 the growth rate of direct employment in manufacturing exceeded that of the non-agricultural work force (Table II.6), which has averaged 3.9 per cent a year since 1950. Industrial development also generated substantial indirect employment in the services sector (Chapter I).

The employment elasticity of industrial growth in developing countries has been estimated at between 0.4 and 0.7 over the last three decades - which means that for every 10 per cent increase in MVA, industrial employment rose between 4 and 7 per cent. However, recently employment elasticity has fallen significantly in many developing economies reflecting accelerating technological

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<sup>2</sup>

*Ibid.*

**Table II.6. Structure of value-added by region, 1970-94, selected years  
(Percentage)**

Years	1970	1980	1990	1994
		WORLD		
Low technology	57.2	54.9	49.7	50.1
Machinery excluding				
Transport equipment	20.9	22.5	24.2	23.4
Transport equipment	8.3	9.1	10.0	9.9
Chemicals	11.8	12.0	14.7	15.1
Other manufacturing	1.8	1.6	1.4	1.4
		NORTH AMERICA		
Low technology	52.2	49.7	47.0	45.8
Machinery excluding				
Transport equipment	23.1	25.8	24.4	25.1
Transport equipment	10.1	10.5	11.7	11.8
Chemicals	13.0	12.5	15.4	15.9
Other manufacturing	1.7	1.6	1.4	1.4
		WESTERN EUROPE		
Low technology	56.3	53.7	49.1	49.6
Machinery excluding				
Transport equipment	21.5	23.0	24.5	23.8
Transport equipment	8.8	9.9	10.2	10.0
Chemicals	12.4	12.4	15.2	15.7
Other manufacturing	1.0	1.0	0.9	0.9
		JAPAN		
Low technology	50.0	51.7	42.9	44.5
Machinery excluding				
Transport equipment	25.3	24.7	30.6	28.1
Transport equipment	9.4	9.5	10.7	10.6
Chemicals	13.7	12.6	14.2	15.2
Other manufacturing	1.6	1.5	1.5	1.6
		LATIN AMERICA AND THE CARIBBEAN		
Low technology	69.3	66.3	64.1	63.2
Machinery excluding				
Transport equipment	10.2	12.0	11.8	11.7
Transport equipment	6.5	6.6	5.9	6.5
Chemicals	12.6	13.7	17.0	17.4
Other manufacturing	1.3	1.4	1.3	1.2
		EAST ASIA AND SOUTH-EAST ASIA		
Low technology	68.9	64.3	54.8	54.6
Machinery excluding				
Transport equipment	9.8	14.2	21.0	22.1
Transport equipment	4.1	5.5	7.9	8.3
Chemicals	14.0	13.2	14.1	13.3
Other manufacturing	3.2	2.9	2.2	1.7
		SOUTH ASIA		
Low technology	66.3	61.8	61.1	57.7
Machinery excluding				
Transport equipment	11.6	14.6	13.8	14.1
Transport equipment	5.7	7.1	8.0	7.1
Chemicals	15.5	15.8	16.7	20.4
Other manufacturing	0.9	0.6	0.4	0.7
		CHINA		
Low technology	58.6	59.8	56.3	59.6
Machinery excluding				
Transport equipment	22.1	19.6	20.3	18.6
Transport equipment	1.8	3.4	4.3	6.5
Chemicals	15.7	15.2	16.8	12.9
Other manufacturing	1.7	2.1	2.3	2.4
		SUB-SAHARAN AFRICA		
Low technology	83.1	76.3	79.2	80.7
Machinery excluding				
Transport equipment	3.3	3.5	3.3	2.8
Transport equipment	2.7	7.9	4.8	4.1
Chemicals	9.1	11.1	11.5	11.2
Other manufacturing	1.9	1.2	1.2	1.2

Source: UNIDO Global Database.

Note: Low technology industries are defined as food, beverages, tobacco, textiles, clothing, footwear, leather products, wood and cork products, furniture, paper and paper products, printing and publishing, petroleum refineries, coal products, pottery, china, glass and non-metallic minerals, iron and steel, non-ferrous metals and metal products excluding machinery.

progress and the diverging rates of growth between slow-expansion, low-technology labour-intensive industries and rapid-growth, high-tech sectors where employment elasticities are low.<sup>3</sup>

**Table II.7. Manufacturing employment, 1965-90**  
(Percentage growth per annum)

Region	1965-70	1970-75	1975-80	1980-85	1985-90	1965-90
Sub-Saharan Africa	6.0	5.8	4.8	-0.4	-1.1	3.0
South Asia	2.0	3.9	4.0	-0.7	3.5	2.5
South-East and East Asia (excl. China)	6.3	7.4	7.5	3.4	4.1	5.9
China	..	..	2.6	4.1	5.3	..
Latin America and the Caribbean	2.6	5.8	4.4	-0.6	-0.3	2.3
Developing countries (excl. China)	3.4	5.6	5.1	1.0	2.1	2.1

Source: UNIDO Global Database.

The slowdown in direct employment generation in manufacturing is partly a function of structural change, explained by the shift away from labour-intensive industrialization since 1975. Employment growth in sectors like food, textiles, leather and furniture - the usual industrialization "entry point" for LDCs - has been relatively slow and their share of employment has declined in all but three of the 15 countries listed in Table II.8 (the exceptions being Kenya, Mauritius and Sri Lanka).

While traditional labour-intensive activities have lost ground, employment in machinery and equipment industries has grown strongly, particularly in the more advanced developing countries. In 1975, Singapore was the only one of the 15 economies in Table II.8 to have more than one-quarter of its industrial work force engaged in sector 38 (machinery and equipment), but by 1990 the number of such economies had increased to seven, reflecting two distinct trends:

- growing employment in labour-intensive activities in the electrical and electronics industries; and
- industrial deepening as the non-electrical machinery and transport equipment sectors developed.<sup>4</sup>

#### Divergent regional trends

Structural change has been greatest in Asian industry, with the employment share of labour-intensive sectors falling sharply from 56 per cent in 1975 to 45 per cent in 1990. The main shift was towards the machinery sector, where employment trebled.

A similar, less marked trend occurred in Latin America, though here the main shift was from labour-intensive jobs to intermediate goods industries such as chemicals, paper and printing, rubber, plastics, non-metallic minerals and metals, and petroleum refining. This reflected the region's strong resource base and reliance on ISI until the mid-1980s. In South Asia, India moved towards machinery and equipment activities but Sri Lanka increased its dependence on labour-

<sup>3</sup> UNIDO Issue Paper, *State of World Industry and Scenarios for the Post-2000*, 1995, (ID/WG.542/3 (SPEC.)).

<sup>4</sup> UNIDO Background Paper, Humphrey, *op. cit.*

intensive operations. In sub-Saharan Africa, employment in labour-intensive industries fell marginally in three sectors but increased in two.

### Competitiveness as the engine of growth

While increased global trade and foreign investment flows have constituted major elements of the globalization process, it is global competitiveness which has emerged as the principal engine of industrial growth and of exports of manufactured products. Since 1986, international trade in goods and non-factor services (exports plus imports) as a proportion of developing economy GDP has risen from 33 per cent to 43 per cent, while FDI inflows have increased sixfold.

The share of merchandise exports between developing countries increased from 30.8 per cent in 1980 to 39 per cent by 1993. Developing countries' exports are no longer dominated by primary commodities - manufactures now account for almost 60 per cent of such exports, up from a tiny 5 per cent in 1955. Their share of world exports of manufactures more than quadrupled from 5 per cent in 1970 to 22 per cent in 1993, while their share of exports to industrialized countries has grown from 11.6 per cent in the mid-1980s to 18.5 per cent last year.

**Table II.8. Manufacturing employment by sector, selected developing countries, 1975 and 1990**  
(Percentage)

Country or area	Employment in sectors 31-38		Sectoral distribution (%) <sup>a/</sup>					
	1975	1990	Sectors 31-33		Sectors 34-37		Sector 38	
			1975	1990	1975	1990	1975	1990
	(Thousand)							
Ethiopia	60	102	80.5	79.4	17.4	18.0	2.1	2.6
Kenya	99	164	54.7	56.4	20.8	23.4	24.5	20.1
Mauritius	21	104	67.4	88.9	12.7	7.0	19.9	4.1
Zimbabwe	144	181	55.0	52.5	22.0	27.6	23.0	19.9
Tropical Africa	1,341	1,567	66.5	69.8	20.8	20.0	12.8	10.2
India	5,650	7,265	49.5	44.0	32.1	30.4	18.5	25.6
Sri Lanka	187	231	67.1	69.6	22.6	24.6	10.3	5.8
Indian sub-continent	6,655	9,268	55.1	51.2	25.8	27.8	19.2	20.9
Hong Kong	660	686	59.3	51.4	16.5	17.9	24.2	30.7
Indonesia	869	2,619	73.9	66.7	18.8	23.2	7.3	10.0
Korea, Republic of	1,298	2,890	48.8	32.6	28.5	28.1	22.7	39.3
Malaysia	283	823	46.6	35.8	29.5	25.6	23.9	38.6
Singapore	187	344	30.3	16.1	18.0	16.6	51.7	67.3
South-East and East Asia	5,709	12,351	54.9	47.9	23.6	23.9	21.5	28.2
Colombia	442	517	52.6	46.9	29.6	36.6	17.8	16.5
Ecuador	73	111	64.9	56.5	30.2	30.7	4.9	12.8
Mexico	413	1,060	34.7	29.6	41.5	42.6	23.7	27.8
Venezuela	324	458	47.6	42.4	33.6	39.1	18.8	18.5
Latin America and Caribbean	9,906	11,699	48.7	48.2	26.1	28.4	25.1	23.4

Source: UNIDO Background Paper, Humphrey, *Industrialization in Developing countries: The Challenges of Employment and Social Integration*, 1995, (ID/WG.542/29 (SPEC.)), Table 1.4; and UNIDO Database.

a/ Sectors 31-33: food products, textiles and clothing, leather, wood and furniture. Sectors 34-37: paper, chemicals, rubber, plastics, metals. Sector 38: metal products, machinery and equipment (electrical and non-electrical).

Developing countries have been particularly successful in building market share in the clothing industry (Table II.9) where their share of exports to industrialized countries rose to 58.7 per cent in 1995 from 44.7 per cent a decade earlier. Simultaneously developing countries have become increasingly important markets for industrialized countries (Table II.10), increasing their share of world imports of manufactured goods from 5.5 per cent in 1970 to 17.2 per cent in 1991.

**Table II.9. Developing countries' share of global exports, selected industrial product groups, 1992**

Product categories	Percentage share
Textiles and clothing	22.0
Electrical machinery	14.0
Metals	11.0
Mineral products, precious metals and stones	9.5
Non-electrical machinery	9.0
Other manufacturing	8.5
Leather, rubber, footwear and travel goods	7.5
Chemicals and photographic supplies	7.0
Wood, pulp, paper and furniture	5.7
Transport equipment	3.0
Fish and fish products	2.8

Source: General Agreement on Tariffs and Trade (GATT), *An Analysis of the Proposed Uruguay Round Agreement with Particular Emphasis on Aspects of Interest to Developing Countries*, November 1993.

**Table II.10. Regional structure of exports of world manufactures, 1992**

	Exports to developed countries		Exports to developing countries	
	\$ billion	Percentage	\$ billion	Percentage
Developed countries	1,480	54	550	20
Developing countries	330	12	370	14
<b>World</b>	<b>1,810</b>	<b>66</b>	<b>920</b>	<b>34</b>

Source: GATT, *International Trade Statistics*, 1993.

Not only have manufactured exports been rising as a proportion of total developing country exports, but exports of manufactures have grown more rapidly than MVA - albeit from a tiny base - in all developing regions except sub-Saharan Africa (Table II.11).

However, here too the process has been uneven. While the export: GDP ratio for 27 developing countries virtually doubled between 1960 and 1990, rising from 15 per cent to 28 per cent, it declined in sub-Saharan Africa, was barely changed in South Asia and only started to increase modestly in Latin America from 1975. Most of the increase came from South-East and East Asia, and this trend would have been even more clear-cut had Taiwan Province of China been included.

**Table II.11. Growth of MVA and manufactured exports, 1965-90**

Region	MVA	Export of manufactures	Number of countries
	Percentage based on constant 1990 \$		
Sub-Saharan Africa	138	75	24
South Asia	255	416	4
South-East and East Asia	1,177	1,842	8
China	982	3,200 <sup>a/</sup>	1
Latin America	153	178	21
All developing countries (excluding China)	314	607	62

Source: UNIDO Global Database.

a/ Estimate.

Relatively few developing countries, almost all of them in Asia and Latin America, have managed to join the exclusive club of industrial exporters. In 1990, manufactured exports accounted for at least one-fifth of export revenues in only seven of thirty sub-Saharan African countries (Central African Republic, Comoros, The Gambia, Mauritius, Senegal, Sierra Leone and Zimbabwe). In Asia and the Pacific, the ratio of manufactured exports ranged from 36 per cent in Indonesia to 92 per cent in the Republic of Korea. Even more striking is the fact that the manufactured exports of 30 sub-Saharan countries in 1990 totalled \$3.5 billion - less than 40 per cent of Indonesia's industrial exports and only 5 per cent of the figure for the Republic of Korea.

## OUTLOOK

In 1975, the UNIDO General Conference held at Lima set a target for the developing country share of global MVA of 25 per cent by the year 2000 - the Lima target. With the developing country share having reached 19.7 per cent by 1995, this target is likely to be nearly achieved and the latest projections suggest that the developing countries' share in world MVA will reach 29.1 per cent by the year 2005, while their share in global exports of manufactured goods increases from an estimated 24.3 per cent in 1995 to 29.8 per cent at the turn of the century and over 36 per cent by 2005.

UNIDO's baseline scenario is based on the assumption of moderate GDP growth of 2.5 per cent annually in the G-5 countries along with continued global economic reform and trade liberalization as well as low transport costs and moderate real interest rates. Under the baseline scenario, world GDP growth will accelerate from 1.9 per cent annually during the 1990-95 period (Table II.12) to 2.9 per cent a year between 1995 and 2000 rising to 3.2 per cent annually in the 2000 to 2005 period.

In the developing countries, growth will be maintained at 5.1 per cent a year over the five years to the year 2000 (compared with 4.7 per cent annually in the first five years of the 1990s), before accelerating to 5.8 per cent a year between 2000 and 2005. Once again, the pattern will be very uneven with growth of 7.9 per cent in East and South-East Asia, including China, but less than three per cent in Tropical Africa and Latin America. Strong regional growth in East and South-East Asia will raise its share of global GDP to 12.7 per cent by the year 2005 - more than half the total for the developing world of 24.1 per cent.

**Table II.12. Baseline scenario - GDP growth rates and percentage shares, 1990-2005**

Region	1990-95	1995-2000	2000-2005
Developed market economies	1.6	2.3	2.4
Eastern Europe and CIS	-8.4	1.5	2.0
Developing countries (including China)	4.7	5.1	5.8
Latin America	3.1	2.9	3.1
Tropical Africa	1.2	2.1	2.2
North Africa/West Asia	1.5	3.2	3.3
Indian subcontinent	4.4	4.5	4.6
East and South-East Asia including China	8.1	7.5	8.2
World	1.9	2.9	3.2
<b>Shares in global GDP</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>
Developed market economies	79.0	77.0	74.2
Eastern Europe and CIS	1.9	1.8	1.7
Developing countries (including China)	19.1	21.3	24.1
Latin America	4.8	4.8	4.8
Tropical Africa	0.8	0.8	0.7
North Africa and West Asia	3.1	3.2	3.2
Indian subcontinent	2.2	2.4	2.5
East and South-East Asia including China	8.0	10.0	12.7

Source: UNIDO, Global Database.

The industrialized countries' share of global MVA will continue to decline over the next decade reflecting the substantially faster growth of developing country industrial production of almost 7 per cent annually compared with just over 2 per cent in the developed economies. MVA growth will accelerate in all developing regions over the forecast period, but with East and South-East Asia continuing to grow faster than any other region. As a result, the latter's share in global MVA will rise to 20 per cent by the year 2005 from 11.1 per cent in 1995. The developing countries' share of world MVA will grow rapidly from 19.7 per cent in 1995 to 29.1 per cent by the year 2005, with almost all of this growth emanating from the high-performing Asian economies.

The scenario suggests that deindustrialization will be reversed over the decade with the share of MVA in global GDP rising marginally to 23.5 in the year 2005 from 22.9 per cent at present, reflecting a sharp increase in the developing countries where the share of MVA in GDP will rise from 23.6 per cent at present to 28.3 per cent. Once again the trend will be most marked in Asia but industry's share of GDP will also improve in all other developing regions except Latin America. Eastern Europe's share in global MVA will fall over the period from 2.8 per cent to 2.4 per cent and deindustrialization will continue with the share of MVA in manufacturing slightly declining from 34.0 per cent to 33.5 per cent in 2005 (Table II.13).

The baseline scenario points to strong growth of manufactured exports by developing countries whose market share rises from 24.3 per cent at present to over 36.3 per cent by 2005. Again, the vast bulk of the increase in market share reflects greater market penetration by the East Asian countries, including China. Their share rises from 17.9 per cent to 29.9 per cent over the period, at which stage they will account for over 80 per cent of developing world exports of manufactured goods (see Table II.14).

**Table II.13. MVA growth rates and percentage shares, 1990-2005**

Region	1990-95	1995-2000	2000-2005
<b>Growth rates of MVA</b>			
Developed market economies	1.5	2.0	2.0
Eastern Europe and CIS	-9.6	1.3	1.9
Developing countries	6.5	6.9	7.8
Latin America	2.0	2.7	2.8
Tropical Africa	0.1	3.3	3.5
North Africa and West Asia	3.2	5.4	5.7
Indian subcontinent	4.5	4.8	5.0
East and South-East Asia including China	10.7	9.2	9.9
World	1.9	3.0	3.4
<b>Percentage shares in global MVA</b>			
	<b>1995</b>	<b>2000</b>	<b>2005</b>
Developed countries	77.5	73.7	68.5
Eastern Europe and CIS	2.8	2.6	2.4
Developing countries	19.7	23.7	29.1
Latin America	4.6	4.6	4.4
Tropical Africa	0.3	0.3	0.3
North Africa and West Asia	1.9	2.2	2.4
Indian subcontinent	1.5	1.6	1.7
East and South-East Asia including China	11.1	14.8	20.0
<b>Percentage shares of MVA in GDP</b>			
Developed countries	22.5	22.2	21.6
Eastern Europe and CIS	34.0	33.6	33.5
Developing countries	23.6	25.7	28.3
Latin America	22.0	21.8	21.6
Tropical Africa	9.5	10.1	10.8
North Africa and West Asia	14.2	15.7	17.6
Indian subcontinent	15.5	15.7	15.9
East and South-East Asia including China	31.7	34.3	36.9
World	22.9	23.1	23.4

Source: UNIDO, Global Database.

**Table II.14. Baseline scenario: Manufactured exports, 1995, 2000 and 2005 (Percentage shares)**

	1995	2000	2005
Developed market economies	74.2	69.4	62.8
Eastern Europe	1.5	0.8	0.8
Developing countries	24.3	29.8	36.3
Latin America	3.2	3.1	2.9
Tropical Africa	0.3	0.3	0.3
North Africa and West Asia	1.6	1.7	1.7
Indian subcontinent	1.1	1.3	1.5
East and South-East Asia incl. China	17.9	23.3	29.9

Source: UNIDO, Global Database.



In a rapidly-changing, restructuring world economy such scenarios must be treated with caution, given the many imponderables surrounding future trends. In such an exercise it is simply impossible to take full account not just of such imponderables, but also of qualitative issues such as the impact of economic reform and restructuring throughout the world, and the medium-term effects of the Uruguay Round Agreements.

Structural change in manufacturing and between manufacturing and other sectors, most notably services, will accelerate in response to the pressures released by liberalization, deregulation and globalization. Industrialization patterns will also be affected by the legacy of past policies. In many countries, import-substitution-industrialization left a manufacturing sector populated by large, inefficient and overly diversified firms. Two different patterns of industrial development are envisaged as governments in these post-ISI countries open up their economies to global competition.

- Those industries that cannot be sustained in the new liberalized environment will undergo wholesale restructuring. In India, some economists believe that trade liberalization is undermining hi-tech activities, shifting production and exports to resource-based industries,<sup>5</sup> while in Brazil, firms manufacturing computers and peripherals have been forced to restructure, increasing their reliance on imports.
- Liberalization and enhanced competition will force those firms that remain viable to abandon past diversification strategies, narrow their product range and focus on areas of core competence. This is likely to mean some vertical disintegration as firms are forced into increased specialization.

Macroeconomic stability must be maintained during the restructuring phase. Manufacturing has suffered in those Latin American countries that restored price stability with policies which resulted in real exchange rate appreciation, thereby undermining industrial competitiveness.

Appropriately sequenced trade liberalization, underpinned by policy support for industrial restructuring, will force firms to upgrade, freeing them from dependence on low-quality, high-cost domestic inputs, while encouraging management to invest in broadening and deepening its skills base. But liberalization and restructuring invariably have their downsides as productivity improvements lead to job losses. Accordingly, large-scale industry is unlikely to generate many new jobs in countries undergoing restructuring "for some time to come".

While countries like China and India, which are also restructuring, face job losses arising from productivity growth, they stand to gain enormously from the eventual phase-out of the Multi-Fibre Arrangement (MFA) in 2005. The huge success of the cotton textile industry in Tiruppur in south India underlines the potential for strong export-led growth in those Asian countries that are able to exploit improved market access in the developed-market economies.

### **South-East Asia**

Restructuring is taking place between South-East and East Asia and other lagging regions as well as within the region itself. Rising real wages in the first wave of newly industrializing economies (NIEs) - Hong Kong, the Republic of Korea, Singapore and Taiwan Province of China - compounded by exchange rate appreciation, forced industrialists to seek low-labour cost locations elsewhere in the region (see Chapter IV). This not only opened up new opportunities for low-wage late-starters such as Malaysia, Indonesia, Thailand and Viet Nam, but also for crossborder vertical integration (Box II.A).

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<sup>5</sup>

Nambiar R. and Tadas G., "Is Trade De-Industrializing India?", *Economic and Political Weekly*, 15 October 1994.

**Box II.A. Crossborder vertical integration in Asian industry**

Manufacturing industry is becoming increasingly integrated across national borders as industrialists locate various activities from the production (value-added) chain in locations where the cost is lowest. The process is illustrated by the production of women's blouses in Asia, which encompasses three distinct stages of diminishing technological complexity - production of synthetic fibre, fabric manufacture and production of the blouses themselves.

- Between 1978 and 1987, the Republic of Korea emerged as an exporter of fibre alongside the leading Asian exporter, Japan.
- In the same period, China and the Republic of Korea became significant exporters of fabric as Japan's importance declined.
- The simplest part of the value-added chain, blouse manufacture, shifted from Hong Kong to China, Indonesia, Sri Lanka and Malaysia.

*Source:* UNIDO Background Paper, John Humphrey, *Industrialization in Developing Countries: The Challenges of Employment and Social Integration*, 1995. (ID/WG.542/29(SPEC.)).

The same process is likely to repeat itself as productivity and real wages rise in the second tier of NIEs (Malaysia, Thailand and Indonesia), and activity will shift to lower labour-cost locations such as China, Viet Nam and South Asia.

## **CHAPTER III. THE IMPLICATIONS OF GLOBALIZATION FOR INDUSTRIAL DEVELOPMENT**

### **Globalization - opportunity or threat?**

Globalization has changed the nature and pattern of industrialization. Even small enterprises are confronted with international competitors and find it advantageous to link up with transnational corporations (TNCs) by way of franchise or licensing agreements, sub-contracting arrangements or even alliances.

Globalization is both an opportunity and a threat. In the 1990s, the world's fastest-growing economies are the fast-lane integrators (Chapter I). Governments, or enterprises, that are shut out of the process may avoid the threat of competition from abroad, but at the heavy cost of being left in the slow-lane.

Integration with the global economy opens the way for small, low-income countries to industrialize in a manner that was not possible when inward industrialization policies were in vogue in the 1960s and 1970s. At the same time, it is clear from the correlation between export expansion, inflows of foreign investment, and industrial and economic growth that countries that have been unable to integrate - such as those in sub-Saharan Africa - are being left behind.

The integration of production and distribution of goods and services among the economies of the world is not a new phenomenon. Successive rounds of trade liberalization since World War II, the gradual deregulation of global capital markets, the abolition of exchange controls in many countries and the privatization of state-owned enterprises - all of these influences have created an increasingly borderless world. The global economy is increasingly characterized by complex patterns of cross-border activities involving international investment (both direct and portfolio), foreign trade and non-equity cooperation for the purposes of product development, sourcing, production and marketing.

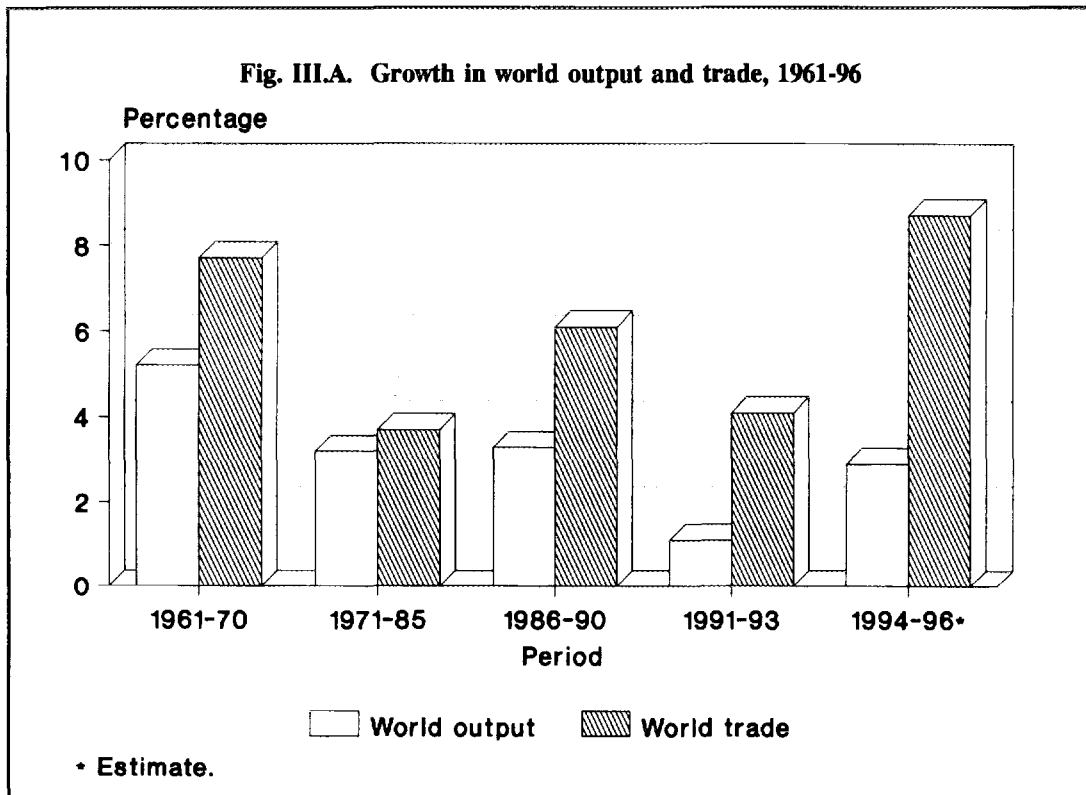
Globalization is private enterprise's response to the changed and changing international business environment. The process has its roots in four key developments, the first two of which are arguably the most important:

- Policy changes in the world economy, specifically the liberalization of trade and capital flows, the deregulation of markets, private sector development including privatization, which has opened up new investment opportunities in most countries;
- Accelerating technological progress that has changed the rules of the game for both TNCs and for host developing countries and enterprises in these countries;
- New organizational structures within companies, in part made feasible by reduction in transport costs associated with technological advances in the information and communications industries; and
- The progressive shift of economic power from the north and west to the developing countries, especially in Asia - a result, as much as a cause, of globalization.

In developing countries, especially those in East and South East Asia, globalization - by way of foreign direct investment (FDI), non-equity cooperation (NEC) and trade liberalization - has become the vehicle for the rapid growth of production and exports. Increased inflows of inward FDI, the proliferation of joint ventures and the increasing sophistication of non-equity technology and marketing links between TNCs, mainly from industrialized economies and affiliated or

unrelated firms in developing countries, have led to the integration of production, distribution, R&D and other corporate activities across national borders.

Globalization implies that trade expands faster than output, while foreign direct investment (FDI) grows even more rapidly. The ratio of trade to output measures the extent and speed of integration. In the global economy, the trade/GDP ratio has more than doubled in the past 35 years from 21 per cent in 1960 to 46 per cent in 1994. Over the same period, the ratio for low and middle income economies increased from 31 per cent to 47 per cent.<sup>1</sup>



While the pace of integration - measured as the difference between the growth rates of trade and of output (GDP) - has not been constant, it has accelerated significantly since the mid-1980s. In developing countries, the speed of integration has accelerated dramatically during the 1990s, though not in Africa and the Middle East (see Table III.1).

### The borderless world

Since the mid-1970s, the fastest-growing countries have been those that have managed to industrialize by developing a competitive advantage in manufactured exports to the point where industrial exports have become the engine of growth. This pattern of growth, characterized by a growing share of manufacturing value-added (MVA) in GDP and a rising ratio of exports - and specifically exports of manufactures - to GDP, marks the first phase of globalization of developing countries.

<sup>1</sup>

Sigeru Otsubo, *Globalization - A new Role for Developing Countries in an Integrating World*, World Bank, July 1996, Policy Research Working Paper No. 1628.

**Table III.1. Trends in world trade integration, 1961-96**

	1961-70	1971-85	1986-90	1991-93	1994-96 <sup>a/</sup>
World trade growth <sup>b/</sup>	7.7	3.7	6.1	4.1	8.7
World output growth	5.2	3.2	3.3	1.1	2.9
Speed of integration <sup>c/</sup>	2.6	0.6	2.8	3.0	5.8
High-income OECD	3.3	0.7	3.2	1.1	5.4
United States	3.1	1.9	4.0	4.2	6.9
Japan	4.6	1.5	0.9	-1.7	4.7
European Union	3.6	0.6	3.7	0.7	4.8
Latin America & the Caribbean	0.3	-0.6	0.7	6.4	5.6
Sub-Saharan Africa	-0.9	-1.5	-0.7	0.7	0.7
East Asia	-0.5	1.3	1.4	5.7	6.1
South Asia	-0.8	-0.4	-0.4	4.4	4.4
Europe and Central Asia	3.0	0.0	-1.9	6.2	9.7
Europe	3.8	0.4	0.8	5.8	5.2
Former Soviet Union	1.7	-0.2	-5.0	-0.9	13.6
Middle East & North Africa	-0.5	-1.5	3.1	1.2	0.0
Latin America	-0.4	-1.6	1.9	9.5	2.6

Source: Shigeru Otsubo, *Globalization: A New Role for Developing Countries in an Integrating World*, World Bank, July 1996, Policy Research Working Paper No. 1628.

a/ Estimates and forecast.

b/ Growth rate of export plus import volumes of merchandise except for 1961-70. For 1961-70, national accounts data for trade in goods and services are used.

c/ Speed of integration = growth rate of world trade - growth rate of world output.

Some developing regions, notably East and to a significantly lesser extent, South Asia, benefitted far more from the globalization process than other developing countries. Indeed, many developing countries have become less integrated with the integration index - the ratio of trade to GDP - falling in 44 of 93 developing countries over the past ten years, while the ratio of FDI to GDP declined in over a third of the countries.<sup>2</sup>

The a speed of integration index shows not only that fast integrators have outperformed those in the slow-lane, but also that greater macroeconomic stability is associated with rapid global integration. The linkages run in both directions. The discipline imposed by integration with the world economy forces policy makers to implement appropriate macroeconomic strategies. At the same time, FDI inflows and enhanced trade flows are underpinned where policy is inappropriate. Fast integrators have lower inflation, more stable exchange rates and smaller budget deficits than those in the slow lane.

The speed of integration index uses four indicators:

- (i) The ratio of real trade to GDP;
- (ii) The ratio of FDI to GDP;
- (iii) The share of manufactures in total exports; and
- (iv) Institutional Investor credit ratings.

Table III.2 shows that regions with a high proportion of fast and moderate integration achieved higher rates of economic and export growth in the first half of 1990s, explained partly by high ratios of FDI to GDP.

<sup>2</sup>

World Bank, *Global Economic Prospects and the Developing Countries*, Washington D.C., 1996, p. 20.

**Table III.2. Growth and integration, 1991-95**  
(Percentage)

Region	Percentage of fast moderate integrators	Real GDP per capita 1991-95	Export growth per capita 1991-95	FDI inflows as a share of GDP	Other private capital flows as a share of GDP 1993-95
East Asia	100	8.0	14.1	3.1	2.5
South Asia	100	2.2	8.4	0.3	1.2
Latin America & the Caribbean	48	1.1	7.2	1.1	2.0
Middle-East and North Africa	46	-0.2	0.4	0.4	0.3
Sub-Saharan Africa	33	-1.5	-1.6	0.9	0.1
Europe/Central Asia	78	-7.7	1.0	1.4	2.1

Source: World Bank, *Global Economic Prospects and the Developing Countries*, Washington D.C., 1996.

Ultimately, globalization is the outcome of decision-making by the key players - transnational corporations and international investors. Liberalization and deregulation of the national economies is paving the way for greater participation of such enterprises in economies which, a few years ago, were largely closed to international business.

Radical restructuring in East and Central Europe, and the opening up of most economies in the developing world has radically changed the rules of the game for governments as well as corporations. By facilitating globalization, such policies have reduced the role of individual governments while transferring some power to international organizations, most notably the World Trade Organization, as well as to TNCs. National governments are courting investment by TNCs and portfolio investors as never before - designing business-friendly investment environments and eliminating obstacles to foreign participation in their economies.

Reasons for this include:

- The stagnation - and decline - in aid flows to the least developed countries which is forcing governments to seek private sector investment;
- Recognition that domestic savings levels in low income economies are inadequate to fund investment on the scale needed to generate jobs and accelerate economic growth; and
- Acknowledgement that TNCs are far and away the most effective vehicles for transferring technology and providing market access to export markets.

The main forces driving globalization are broadly similar to those underpinning international trade growth. Firms adopt new and different strategies designed to maximize profits within the context of a changed international economic environment.

Globalization takes four main forms:

- International trade;
- FDI, especially in manufacturing industry;
- Cross-border inter-firm cooperation, including non-equity cooperation (NEC) such as strategic alliances, licensing, franchising, subcontracting arrangements; and
- Portfolio investment.

**Table III.3. Net foreign direct investment as a ratio of GNP, 1990-95**

Country group	1990	1991	1992	1993	1994	1995 <sup>a/</sup>
All developing countries	0.6	0.8	1.0	1.5	1.6	1.8
Sub-Saharan Africa	0.3	0.7	0.5	0.7	1.1	0.7
East Asia & the Pacific	1.2	1.4	2.0	3.2	3.2	3.3
South Asia	0.1	0.1	0.2	0.2	0.3	0.5
Europe & Central Asia	0.1	0.3	0.5	0.7	0.8	2.5
Latin America & the Caribbean	0.7	1.2	1.2	1.2	1.4	1.2
Middle East & North Africa	0.6	0.4	0.5	0.9	0.8	0.4
By income group						
Low-income countries	0.6	0.7	1.4	3.2	3.5	3.3
Middle-income countries	0.6	0.8	0.9	1.0	1.1	1.3
<u>Memo</u>						
Low-income countries excluding China	0.3	0.4	0.5	0.7	0.9	0.7

Source: World Bank, *World Debt Tables*, Washington D.C., 1996.

a/ Preliminary.

### FOREIGN DIRECT INVESTMENT (FDI)

Until recently, this aspect of globalization was dominated by corporations from OECD countries, but offshore investment by dynamic industrial enterprises and groups from East and South-East Asian economies, including China, and some Latin American countries represents a growing proportion of the total. In all probability, India and South Africa will also become part of this process in the near future.<sup>3</sup>

Developing countries that have successfully participated in the globalization process share two common characteristics:

- a policy environment conducive to mobilization of industrial investments, particularly FDI; and
- a plentiful supply of educated workers capable of competing with low- and medium-skilled labour in industrialized economies.

### The corporate response

The corporate response to the new policy environment of the mid-1990s depends on:

- Industry-specific considerations, notably cost structures, market drivers, government policies and the competitive environment.
- Global strategy levers - the different ways in which corporate strategies can be globalized. Strategy levers include the participation policy of firms in global operations in different markets, their product strategy, where and how they locate different operations, and the way in which they respond to competitive moves by rival corporations.

<sup>3</sup> UNIDO Background Paper, Peter Gundlach and Erich Nunnenkamp, *Globalization of Manufacturing Activity: Evidence and Implications for Industrialization in Developing Countries*, 1995, (ID/WG.542/13 (SPEC.)).

- The capacity of an enterprise to implement such strategies, in turn dependent on its tangible and intangible resources, including financial and human resources, control over technologies and brand-names.
- The firm's assessment of the benefits and costs of globalization, which will depend substantially on organizational considerations that are crucial to the successful exploitation of global strategies.

The ability of foreign investors to locate an increased proportion of their value-adding activities in developing countries and the capacity of enterprises in developing countries to absorb such inflow and to participate in export-oriented manufacture constitute key elements in the globalization process for developing countries. The process is driven by the rapid advance of information technology, the growing trend towards the convergence of demand patterns (the globalization of markets) and intensified competition in international markets. In the past 15 years, the process of crossborder integration has become increasingly sophisticated and complex.

- In the simplest strategies, stand-alone affiliates or multi-domestic subsidiaries of TNCs serve national markets, operating with a high degree of autonomy from the parent company and undertaking most value-added activities within the country concerned.
- As trade and capital flows are liberalized, international communications improve, scale economies increase and global competition intensifies, so new patterns of integration have evolved, implying increased globalization.
- Simple integration involves outsourcing of production, either by locating manufacturing or assembly activities offshore (foreign direct investment) or by subcontracting operations to foreign suppliers or participation in joint ventures, licensing, franchising and other contractual arrangements involving production and operation in developing countries.
- Complex integration goes beyond outsourcing and manufacture in other countries to locate value chain activities in those markets where the benefit-cost ratio is greatest. Thus data-processing accounting, finance or R&D activities may be located in one or other developing country.

### **The growth of FDI**

FDI has become the single most important component of capital flows developing countries, overtaking official development finance (foreign aid) in 1993 (see Table III.4). At the start of the decade private capital flows of all kinds accounted for 43 per cent of aggregate net flows with official aid contributing almost 57 per cent. In 1990, FDI's share was less than a quarter.

By 1995, the private share had risen to 72 per cent and that of FDI - by now the largest single component - to 39 per cent. The value of inward FDI has more than trebled from \$25 billion in 1990 to over \$90 billion in 1995. East, South and South-East Asia's share of the developing world's stock of inward investment rose from less than 30 per cent in 1980 to over 52 per cent in 1994. During the 1990s, inflows to the region have averaged \$38.8 billion annually accounting for 60.4 per cent of all FDI flows to the developing countries. The region's share of global inward FDI doubled between the early 1980s and 1991-1993, reaching 25.7 per cent in 1993/94.

The region's share of FDI inflows is distorted by China's dominance - with an inflow of \$27.5 billion in 1993 and over \$37 billion in 1995, China became the single largest recipient of global investment. A second notable feature is the strong growth in ASEAN inflows, relative to those attracted by the newly industrializing economies (NIEs) of Hong Kong, the Republic of Korea, Singapore and Taiwan Province of China (see Table III.5).

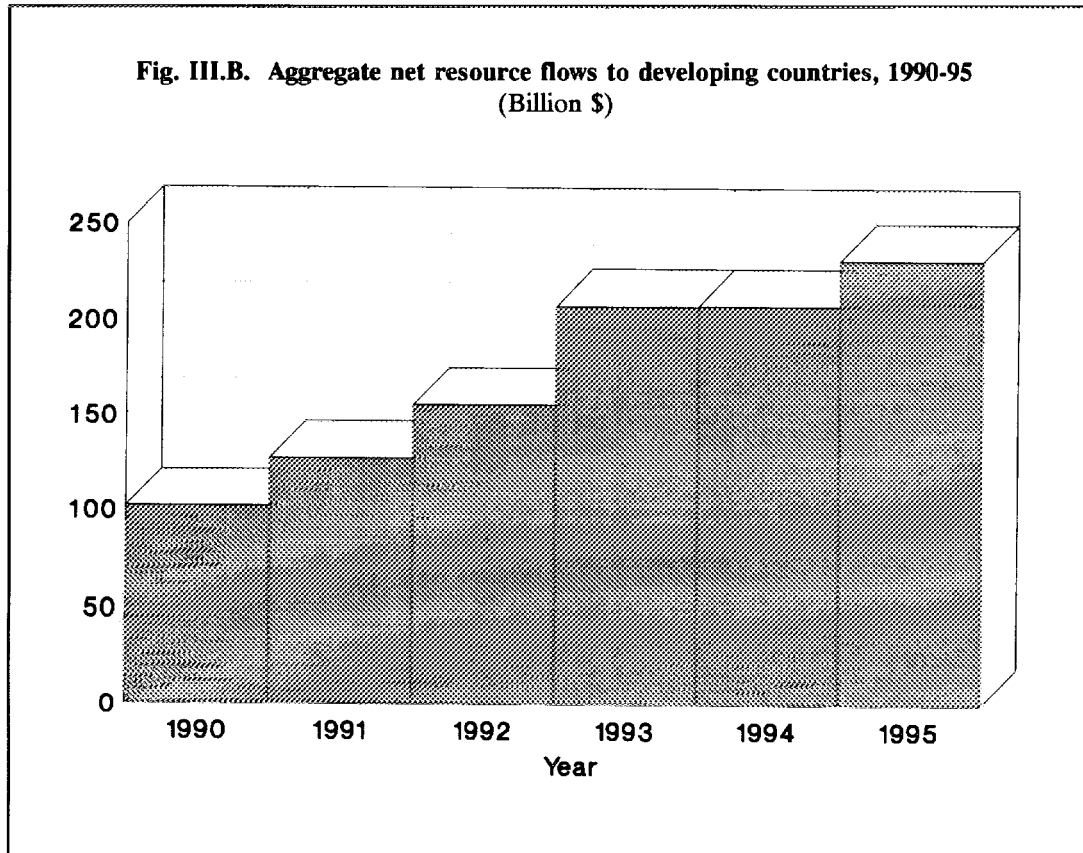


**Table III.4. Aggregate net long-term resource flows to developing countries, 1990-95**  
(\$ billions)

	1990	1991	1992	1993	1994	1995 <sup>a/</sup>
Aggregate net resource flows	101.9	127.1	155.3	207.2	207.4	231.3
Official development finance	57.9	65.5	55.0	53.0	48.6	64.2
Official grants	29.4	37.5	31.9	29.4	32.5	32.9
Official loans	28.5	28.0	23.1	23.6	16.1	31.3
Bilateral	13.5	13.2	10.8	9.4	6.1	18.8
Multilateral	15.0	14.8	12.3	14.2	10.0	12.5
Total private flows	44.0	61.6	100.3	154.2	158.8	167.1
Private debt flows	15.3	19.0	39.6	40.3	43.8	54.8
Commercial banks	1.7	2.5	13.8	-4.9	9.2	17.1
Bonds	3.0	12.8	13.2	38.3	32.2	33.7
Others	10.6	3.7	12.6	6.9	2.4	4.0
Foreign direct investment (FDI)	25.0	35.0	46.6	68.3	80.1	90.3
Portfolio equity flows	3.7	7.6	14.1	45.6	34.9	22.0

Source: OECD, *Development Assistance Committee Report*, 1995.

a/ Estimate.



**Table III.5. FDI inflows to Asia and the Pacific, 1984-95**  
(\$ million)

Host region/country	1984-89 Annual average	1990	1991	1992	1993	1994	1995 <sup>a/</sup>
<b>Asia</b>	11,540	22,122	22,694	29,114	49,979	56,266	68,051
<b>West Asia</b>	1,688	2,319	1,919	1,800	3,303	2,383	2,468
Bahrain	96	-4	-7	-9	-5	-31	6
Cyprus	64	127	83	93	83	76	80
Iran, Islamic Rep. of	-62	-362	23	-170	-50	-10	-30
Iraq	2	-	-3	-1	1	-	-
Jordan	31	38	-12	41	-34	3	43
Kuwait	-	-6	1	35	13	16	15
Lebanon	4	6	2	4	6	7	35
Oman	116	141	149	87	99	130	150
Qatar	-6	5	43	40	29	37	35
Saudi Arabia	1,084	1,864	160	-79	1,369	1,341	890
Syrian Arab Republic	50	71	62	67	70	76	77
Turkey	245	684	810	844	636	608	1,037
United Arab Emirates	56	-116	26	130	183	113	110
Yemen	7	-131	583	719	903	17	20
<b>Central Asia</b>	..	..	..	140	195	263	549
Armenia	..	..	..	..	..	8	10
Azerbaijan	..	..	..	..	..	..	110
Georgia	..	..	..	..	..	..	..
Kazakhstan	..	..	..	100	150	185	284
Kyrgyzstan	..	..	..	..	..	10	15
Tajikistan	..	..	..	..	..	10	15
Uzbekistan	..	..	..	40	45	50	115
<b>South, East and South-East Asia</b>	9,852	19,803	20,775	27,174	46,481	53,619	65,033
Afghanistan	-	..	-	-	-	-	-
Bangladesh	1	3	1	4	14	11	125
Brunei Darussalam	-	3	1	4	14	6	7
Cambodia	..	..	..	33	54	69	80
China	2,282	3,487	4,366	11,156	27,515	33,787	37,500
Hong Kong	1,422	1,728	538	2,051	1,667	2,000	2,100
India	133	162	141	151	273	620	1,750
Indonesia	406	1,093	1,482	1,777	2,004	2,109	4,500
Korea, Democratic Peoples Republic	106	-	-	-	-	-	1
Korea, Republic of	592	788	1,180	727	588	809	1,500
Lao, People's Democratic Republic	1	6	8	9	60	60	75
Macau	-	1	3	2	3	3	2
Malaysia	798	2,333	3,998	5,183	5,006	4,348	5,800
Maldives	3	6	7	7	7	8	9
Mongolia	..	..	2	8	8	10	10
Myanmar	1	5	-	3	4	4	10
Nepal	1	6	2	4	6	7	8
Pakistan	136	244	257	335	354	422	639
Philippines	326	530	544	228	1,025	1,457	1,500
Singapore	2,239	5,575	4,879	2,351	5,016	5,588	5,302
Sri Lanka	36	43	48	123	195	166	195
Taiwan Province of China	691	1,330	1,271	879	917	1,375	1,470
Thailand	676	2,444	2,014	2,116	1,726	640	2,300
Vietnam	2	16	32	24	25	100	150
<b>The Pacific</b>	155	297	264	405	119	101	107
Fiji	17	80	15	50	49	35	35
Kiribati	-	-	..	..	..	..	..
New Caledonia	2	31	3	17	20	10	10
Papua New Guinea	123	155	203	291	1	4	15
Solomon Islands	5	10	15	14	15	17	17
Tonga	-	-	-	1	2	2	2
Vanuatu	8	13	25	26	27	30	25
Western Samoa	-	7	3	5	5	3	3

Source: UNCTAD, *World Investment Report*, 1996.

a/ Estimate.

**Table III.6. FDI inflows and stock in developing countries, 1981-94**

Region	Annual average inflow			Inflow 1993	Inflow 1994 <sup>a/</sup>	Stock 1994
	1981-85	1986-90	1991-94			
<b>Developing countries<sup>b/</sup></b>						
Value (\$billion)	13.1	25.3	63.4	73.4	84.4	584.0
Share of the world total (%)	25.9	16.0	33.3	35.2	37.4	25.2
<b>Africa</b>						
Value (\$billion)	1.7	2.8	3.1	2.9	3.1	64.1
Share of the world total (%)	3.4	1.8	1.6	1.4	1.4	2.8
Share of developing-country total (%)	12.9	11.2	4.9	4.1	3.6	10.9
<b>Latin America and the Caribbean</b>						
Value (\$billion)	5.9	8.0	18.3	19.9	20.3	186.2
Share of the world total (%)	11.6	5.1	9.6	9.5	9.0	8.0
Share of developing-country total (%)	44.7	31.7	29.0	27.1	24.1	31.3
<b>West Asia</b>						
Value (\$billion)	0.4	0.4	1.4	1.3	1.4	34.5
Share of the world total (%)	0.9	0.3	0.7	0.6	0.6	1.5
Share of developing-country total (%)	3.4	1.7	2.2	1.8	1.7	5.8
<b>East, South and South-East Asia</b>						
Value (\$billion)	4.9	13.8	40.0	48.5	59.1	305.1
Share of the world total (%)	9.8	8.7	20.1	23.3	26.2	13.2
Share of developing-country total (%)	37.6	54.4	63.2	66.0	70.0	51.2
<b>The Pacific</b>						
Value (\$billion)	0.1	0.2	0.3	0.3	0.3	2.7
Share of the world total (%)	0.3	0.1	0.2	0.1	0.1	0.1
Share of developing-country total (%)	1.1	0.7	0.5	0.4	0.4	0.5
<b>Memorandum:</b>						
<b>Least developed countries</b>						
Value (\$billion)	0.2	0.6	0.9	0.8	0.9	10.6
Share of the world total (%)	0.4	0.4	0.5	0.4	0.4	0.5
Share of developing-country total (%)	1.4	2.3	1.4	1.1	1.0	1.8
<b>Developing countries excluding China</b>						
Value (\$billion)	12.3	22.4	44.0	45.8	50.6	491.6
Share of the world total (%)	24.3	14.2	23.1	22.0	22.4	21.2
Share of developing-country total (%)	93.9	88.5	70.0	62.4	60.0	82.6

Source: UNCTAD, *World Investment Report*, 1995.

a/ Estimate.

b/ Includes industrially less developed countries in Europe (Gibraltar, Malta and the former Yugoslavia).

### Box III.A. Intra-regional FDI and clusters in Asia

Nowhere are the linkages between FDI and economic performance better illustrated than in Asia. South, East and South-East Asia's share of global FDI rose from 8.5 per cent in 1990 to over 13 per cent by 1994 (see Table III.6). Initially, the bulk of this inflow emanated from the TRIAD regions of North America, the European Union and Japan, but in recent years intra-regional FDI has grown strongly underscoring the significance of regional industrial clusters.

At first, the Asian cluster of industrializing countries was driven by Japanese FDI (see Table III.7). In nine South-East Asian markets (China, the Republic of Korea, Taiwan Province of China, Hong Kong, Singapore, Malaysia, Indonesia, Thailand and the Philippines), Japan's absolute amount of investment rose sixfold between 1980 and 1993 to reach \$45.9 billion. Despite this, its relative share fell to 18 per cent over the period, as also did the shares of the EU and the USA.

Over the same period, the proportion of Japan's outward stock invested in Asia halved from 24 per cent to 11.7 per cent as Japanese TNCs switched the focus of their offshore investments, setting up transplant operations in North America and the European Union.

Intra-regional Asian investment which rose from \$10.4 billion in 1980 to \$132 billion in 1993 was a second factor. Table III.8 shows the evolution of the newly industrializing economies as major sources of outward FDI, with their share of intra-regional investment increasing one-quarter to 43 per cent over the period. More than 70 per cent of this was in China (\$127 billion by 1993), while a further \$31.4 billion was in ASEAN countries.

The share of nine Asian economies (the eight listed in Table III.8 plus Singapore) in the total inward stock of the same nine countries increased from 30 per cent in 1980 to 45 per cent in 1993. Half (\$1.8 billion) of the Republic of Korea's outward FDI in 1993 and 41 per cent (\$1.6 billion) in the first half of 1994 was destined for other Asian locations, especially China, Indonesia and Viet Nam. Similarly, more than one third (\$2 billion) of outward FDI from Taiwan Province of China went to the ASEAN economies in 1992. As a result, regional Asian TNCs have become serious competitors with their OECD counterparts, not just in Asia but all over the world, including OECD domestic markets.

**Table III.7. Japanese FDI in the Far Eastern cluster, 1980, 1985 and 1993**

Country	1980		1985		1993	
	Value \$ million	Percentage share	Value \$ million	Percentage share	Value \$ million	Percentage share
Thailand	285	29	558	28	4,539	33
Taiwan Province of China	505	19	1,182	23	5,056	29
Republic of Korea	1,206	65	1,902	52	4,466	40
Hong Kong	-	-	308	21	1,171	33
Indonesia	3,462	38	4,951	30	13,937	21
Subtotal	5,458	37	8,901	31	29,169	26

Source: UNCTAD, *Recent Developments in International Investment and Transnational Corporations*, Geneva, February 1995.

**Table III.8. Intra-regional FDI stock in selected Asian countries, 1980 and 1993 (Percentage)**

	NIEs		ASEAN		China		Total	
	1980	1993	1980	1993	1980	1990	1980	1993
<b>Host country</b>								
Hong Kong	2.9	1.8	3.2	0.2	-	11.1	6.1	13.1
Republic of Korea	3.6	3.7	-	-	-	0.1	3.6	3.8
Taiwan Province of China	21.5	15.6	8.6	4.5	-	-	30.2	20.1
Subtotal	7.4	5.6	3.0	1.4	-	0.9	10.3	8.0
<b>ASEAN</b>								
Indonesia	11.6	25.5	0.7	0.4	-	1.0	12.3	26.9
Malaysia	36.3	31.8	0.4	4.6	-	0.7	36.3	37.0
Philippines	5.5	19.2	-	0.7	-	-	5.5	19.9
Thailand	18.5	31.6	1.7	0.6	-	0.2	20.2	32.4
Subtotal	20.1	27.7	0.5	1.6	-	0.3	20.6	29.5
China	52.5	76.7	0.4	1.0	-	-	53.0	77.0
<b>Total</b>	25.7	43.1	1.1	1.3	-	0.3	26.8	44.7
Value, \$ billion	10.0	127.3	0.4	3.8	-	0.85	10.4	132.0

Source: UNCTAD, *Recent Developments in International Investment and Transnational Corporations*, February 1995.

Disparities in FDI flows extend to countries as well as regions. Over the past decade, the ten largest host developing countries have consistently attracted between two thirds and four fifths of developing country inward investment. Table III.9 shows that the composition of the ten largest developing host nation economies is largely similar to the pattern of inward stocks. The two main exceptions are Brazil and Saudi Arabia, whose large stocks of inward FDI were accumulated in earlier years. Neither country features as a major recipient in 1993.

#### **FDI flows to the countries in transition are growing**

Investment inflows to the countries in transition in central and eastern Europe increased 78 per cent in 1993/94 to over \$12 billion from \$6.9 billion in 1991/92. In 1994, the region's stock of inward FDI was estimated at over \$20 billion (less than 1 per cent of the global total), - the bulk of which was in three countries. Hungary with \$6.8 billion has attracted most FDI followed by Poland with \$4.4 billion and the Czech Republic with \$3.5 billion. Russia is in fourth place with \$2.3 billion.

By the end of 1993, TNCs had established some 50,000 affiliate companies in the countries in transition with the Czech Republic, Hungary and Poland being the main destinations. Although FDI has contributed to productivity growth and improved efficiency in some countries, inflows have been far lower than expected and none of the transitional economies yet ranks as a major destination for foreign investment.

### **Box III.B. Outward FDI and regional cluster: The case of textile and clothing**

Although FDI has played a minor role in globalizing the sector, world exports of clothing and textiles surpassed the growth rate of world trade so that their share in global exports rose to 7.1 per cent in 1992 from 4.8 per cent in 1980. Much of this represented increased output by developing countries, whose share of worldwide production in both industries rose eight percentage points to 35 per cent for textiles and 24.6 per cent for clothing between 1984 and 1993.

Although many developing countries participated, the main thrust came from Asia, which today accounts for more than 70 per cent of developing countries' production. Clothing production grew strongly in sub-Saharan Africa, albeit from a tiny base, expanding 6.3 per cent between 1984 and 1993 compared with 4.4 per cent for developing countries as a whole. But output in central Europe has declined dramatically since the late 1980s, while Latin America also lost market share, although growth resumed in the early 1990s.

In the more capital-intensive textile sector, Far Eastern suppliers raised their share of OECD imports to 19.7 per cent in 1992 from 16.6 per cent in 1983, although the newly industrializing economies of Hong Kong, Singapore, Republic of Korea and Taiwan Province of China lost share to China, South Asia and the ASEAN countries.

In labour-intensive clothing, developing countries raised their share of OECD imports from 56.4 per cent to 61.1 per cent over the same period, with the main increased penetration coming from China (whose share almost trebled to 13.6 per cent), while Africa and Latin America virtually doubled their market shares. A striking feature of the trend in developing countries' exports of clothing to the OECD was the "flying geese" pattern, reflected in the steep decline in the share of the NIEs from 33.9 per cent in 1983 to 18 per cent in 1992. While this is partly explained by OECD protectionism via the Multi-Fibre Arrangement, the main factor at work was shifting comparative advantage within Asia. The NIEs moved upmarket into more capital- and skills-intensive activities, thereby creating opportunities for their less developed neighbours. Average annual FDI in clothing and textiles in the Republic of Korea fell from \$189 million during the 1987-1991 period to only \$5 million in 1992/93.

Globalization contributed to this successful Asian restructuring in the form of FDI within the regional cluster, although South Asia's involvement in this intra-Asian networking remained relatively weak. Western hemisphere clothing industries - the Caribbean, Mexico and Columbia - attracted FDI from the United States, while EU transnationals invested in the Moroccan and Tunisian clothing industries. But non-equity ties have had a greater impact, with EU firms purchasing finished products from suppliers in Turkey, Hong Kong and, increasingly, China; meanwhile, Mediterranean and ACP States have exploited their preferential access to the EU market by developing subcontracting arrangements with European manufacturers. Central and east European suppliers are also expanding their sales to the EU, with processed-clothing exports doubling in the three years to 1992. The main suppliers, accounting for 80 per cent of the total, were from Poland, Hungary and Romania.

**Table III.9. The ten largest host developing economies, FDI flows and stock, 1993**  
(\$ million)

Host economy	Flows	Host economy	Stocks
All developing economies	70,812		494,418
Total ten largest developing host economies	57,105		336,996
Percentage share of ten largest developing host economies in total inflows to developing economies	81	Percentage share of ten largest host economies in total inward stock of developing economies	68
China	27,515	China	57,172
Singapore	6,830	Singapore	50,805
Argentina	6,305	Indonesia	44,146
Mexico	4,901	Mexico	41,912
Malaysia	4,351	Brazil	40,371
Indonesia	2,004	Malaysia	26,936
Thailand	1,715	Saudi Arabia	22,463
Hong Kong	1,667	Argentina	21,701
Taiwan Province of China	917	Hong Kong	17,669
Nigeria	900 <sup>a/</sup>	Thailand	13,824
<b>Memorandum:</b>			
Percentage share of the nine largest host economies, excluding China	42		57

Source: UNCTAD.

a/ Estimated.

### National policy and FDI

Table III.9 underscores the extent to which the explosion of FDI flows has benefited only a tiny handful of the more advanced developing countries, despite government efforts in most developing countries to liberalize investment regimes so as to attract increased capital inflows. The direction of FDI flows is determined more by the growth potential and the political and economic stability of host countries than by specific policies and incentives.<sup>4</sup>

While the role of liberalization, deregulation and privatization in attracting FDI should not be underestimated, a 1992 study covering 42 countries during the 1982-88 period emphasizes the importance of the quality of infrastructure, market size and level of industrialization in attracting FDI by TNCs based in the United States.<sup>5</sup> By contrast, incentives such as tax breaks were found to have little impact on inward investment.

### Investment drivers

A survey by international business and financial advisory group concludes that "large market potential" was identified as the most important reason for offshore investment by 94 per cent of

<sup>4</sup> UNIDO Background Paper, Nagesh Kumar, *Foreign Direct Investment, Technology Transfer and Exports of Developing Countries: Trends and Policy Implications*, 1995, (ID.WG.542/6 (SPEC.)).

<sup>5</sup> *Ibid.*

the 230 of its global client companies surveyed.<sup>6</sup> Three other decisive influences noted were:

- expected returns (78 per cent);
- the need for a strategic business location (64 per cent); and
- pre-empting competition (52 per cent).

Significantly, the survey found that neither access to raw materials nor plentiful supplies of low cost labour were "high priority drivers". Indeed, labour quality, rather than low-cost labour, has become the major determinant of inward investment. For foreign investors, the local availability of highly qualified personnel is of crucial importance, without whom there is little justification for locating an industrial operation.

However, selective policies, such as those in export-intensive and high-tech activities, may improve the quality of FDI inflows. At present, the distribution of such flows is extremely uneven across countries. Developing countries able to negotiate preferential access to major trading blocs - i.e. east European and Mediterranean countries with the EU, and Mexico with Canada and the United States - enjoy a substantial advantage over other regions.

#### **Box III.C. Outward FDI and regional clusters: The case of chemicals**

In capital-intensive chemicals, globalization has followed a very different pattern. The chemical industry accounts for 37 per cent of all German outward FDI and 23 per cent in the case of the United States. Chemicals fit the classical pattern of globalization, with exports growing faster than output and FDI faster than exports. The industry is dominated by ten OECD-based TNCs accounting for one fifth of global sales in 1988; concentration has subsequently increased as a result of mergers. The developing countries' share of industrial chemicals production, excluding China, has risen by 80 per cent since the mid-1970s, reaching an estimated 16.7 per cent of the global total in 1995 compared with 9.3 per cent in 1975.

Production is increasingly concentrated in Asia; in industrial chemicals, Asian developing countries doubled their market share to 12.6 per cent in 1993 (from 6.6 per cent in 1984), while, over the same period, their contribution to total developing-country production rose from 44 per cent to 70 per cent, mainly reflecting growth in production by Asian NIEs, but also expansion by lower-income countries such as China and India.

During a period when the developing countries' share of OECD chemical imports declined, the Asian NIEs pushed their share of developing-country exports up to 19 per cent in 1993 from below 10 per cent in 1984 - the mirror image of their loss of market share, to other Asian exporters, in clothing. Predictably, developing countries' market penetration of the chemicals sector has been lowest in high R&D activities such as pharmaceuticals.

With FDI in chemicals accounting for one-quarter of inflows to Argentina, Mexico, Republic of Korea and Taiwan Province of China, FDI has been the main driver of globalization in the chemicals industry. In particular, Japanese FDI has been crucial to Asia's integration into the world chemicals market, with Indonesia being the main location, while TNCs are the major players in Latin America, the United States and Germany. High growth forecasts for Asian chemical markets point to continued heavy FDI in this sector, while the Uruguay Round agreement on trade-related intellectual property rights is likely to foster even greater FDI investment in the latter half of the decade.

<sup>6</sup>

Ernest and Young, *Investment in Emerging Markets - A Survey of the strategic investments of 1 000 Global companies*, 1994.



Similarly, by creating a critical mass in terms of market size while enhancing growth potential, regional economic integration among poorer countries could also become an increasingly important determinant of FDI and other capital inflows. Unfortunately, however, past experience suggests that such regional groupings give rise to the polarization of investment and industrialization, resulting in inequitable patterns of growth within the regional groups.

Technology import policy needs to strike a delicate balance between discouraging domestic R&D investment and fostering a false sense of complacency. While a too liberal policy towards technology imports under licensing and FDI may discourage local technological effort, a restrictive, regulatory policy may make local enterprises complacent about the need for constant upgrading.

## **NON-EQUITY COOPERATION**

### **Joint ventures and non-equity linkages**

While the data on joint ventures and non-equity cooperation (NEC) are limited, it is clear that this has become a fast-growing channel for global cooperation and technology transfer, though to date, the bulk of this has taken the form of linkages between enterprises in developed economies. One study finds that over 95 per cent of "strategic" technology alliances, where R&D considerations are uppermost, are between enterprises in industrialized countries, while such arrangements comprise just 1.5 per cent between developed- and developing-country enterprises.<sup>7</sup>

Factor endowment patterns are crucial in determining the nature and manner of interfirm cooperation across national borders. Because firms in developing countries have little to offer in terms of technology, alliances linking firms in OECD countries with those in the developing economies tend to focus on market access or take the form of efficiency-seeking relationships such as subcontracting. In this instance, the OECD firm expects to benefit from the employment of relatively low-cost labour in the developing country. As a result, business partnerships between developing countries firms and TRIAD-based TNCs are most important where production techniques are relatively standardized, where technology is mature and where there are market access opportunities for the TRIAD partner.

About 90 per cent of technology-transfer agreements and 85-90 per cent of payments for technology are estimated to be between firms in industrialized economies, though substantial technology transfer has occurred between these corporations and their partners in several developing countries, particularly in Asian and Latin American economies, especially in the automotive, capital goods, and consumer electronics subsectors. However, such transfers primarily relate to technology and know-how and are generally much less R&D-intensive than strategic alliances.

FDI is the main vehicle for technology transfer between industrialized countries and developing countries, though host-country firms may well prefer to access technology through non-equity agreements, such as strategic alliances, because these broaden the opportunities for indigenous technological deepening.

In countries such as Brazil and India, technology agreements between local companies and foreign enterprises have exceeded one thousand in number annually. In several other countries such as Kenya, Mauritius, Nigeria and Zimbabwe, technology and know-how agreements have become increasingly popular and are emerging as a substitute for FDI, particularly where enterprises have the financial capacity and technological capability and are keen to retain autonomy.

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<sup>7</sup>

UNIDO Background Paper, Gundlach and Nunnenkamp, *op. cit.*

East Asian experience suggests that strategic alliances between TNCs from industrialized, developed countries and developing-country partners are more likely to be established by larger, more capital-intensive firms in developing economies. The evidence also suggests that relatively advanced developing countries have a better chance of participating in business alliances.

Prospects of developing-country firms becoming involved in the international division of labour vary with the different modes of globalization. Participation in crossborder technology research is weak, although the availability in India and the countries in transition of large numbers of well-qualified scientists and technologists - at salaries far lower than those prevailing in OECD countries - will mean that a growing proportion of R&D activities can be advantageously located in such regions. So far, however, this has mainly been as a result of separate agreements between foreign firms and developing-country companies and institutions. The number of technology agreements with developing-country enterprises has also increased very significantly, together with payments of fees and royalties for technology and know-how.

Even low-income developing countries have managed to join in the process of globalization, especially in subsectors such as clothing and textiles, but also by integrating with the world economy as subcontractors and through other forms of non-equity involvement. The more advanced developing countries are losing competitive advantage in this highly labour-intensive segment. Rising real wages have eroded their cost advantages, while quotas imposed by industrialized countries limited their market access, forcing them to relocate some of their labour-intensive operations in low-wage economies, while simultaneously upgrading towards more capital- and skill-intensive activities, including production of machinery and transport equipment.

#### **Box III.D. Outward FDI and regional clusters: The case of motor vehicles**

By 1993, developing countries accounted for 19 per cent of world motor-vehicle production, again dominated by Asia, with 7.7 per cent. (The Republic of Korea's share of this total was 4.4 per cent and China's 2.5 per cent). The other major players in the countries in transition and the developing countries players were the Soviet Union (3.4 per cent), Brazil (3 per cent) and Mexico (2.3 per cent).

Data on auto part manufacture is sparse, but production is increasing in the Republic of Korea and Taiwan Province of China. While in the former market nearly 90 per cent of automotive inputs used by national assemblers are manufactured locally, in Argentina and Brazil local content exceeds 80 per cent and in Mexico 70 per cent.

In 1992, more than 17 per cent of global motor vehicle engine production was located in Mexico and the Republic of Korea (up from 11.3 per cent five years earlier), while Brazil, the Republic of Korea and Mexico have attracted auto part FDI from OECD car manufacturers.

Three features dominated globalization of the vehicle manufacture industry:

- FDI, especially in Latin America;
- Global sourcing by OECD manufacturers; and
- Strategic alliances and other non-equity links between OECD and developing-country firms, especially in Asia.

*Source:* UNIDO Background Paper, Gundlach and Nunnenkamp, *Globalization of Manufacturing Activity: Evidence and Implications for Industrialization in Developing Countries*, 1995, (ID.WG.542/13 (SPEC.))

FDI and technology transfer arrangements have played an important role in propelling developing-country players into these markets. High growth projections for Asian markets, in particular, are likely to encourage further FDI and non-equity links in these and other industrial subsectors where production has increased considerably in several developing countries. Higher technological and skill requirements have limited developing countries' integration into the automobile industry, but

the region's share in the manufacture of both finished products and of auto parts has risen strongly. FDI was the driving force behind this process in Latin America, while, in Asia, non-equity links have played a central role.

## PORTFOLIO INVESTMENT

Arguably, portfolio flows constitute the least important element of globalization. Since 1990, net portfolio equity flows to developing countries have increased from \$3.7 billion to \$22 billion in 1995, with their share in total net flows rising from 3.6 per cent to 9.5 per cent over the period. The significance of portfolio flows varies regionally from as little as 2 per cent of the global total in 1995 going to sub-Saharan Africa, while East Asia and the Pacific attracted 55.6 per cent and Latin America and the Caribbean 28 per cent (Table III.10).

**Table III.10. Portfolio equity flows to developing countries by region, 1989-95**  
(\$ million)

Region	1989	1990	1991	1992	1993	1994	1995 <sup>a/</sup>
Sub-Saharan Africa	0	0	0	144	144	860	465
East Asia & the Pacific	2,623	2,268	1,049	5,102	18,107	12,613	12,230
South Asia	168	105	23	380	2,025	6,223	1,430
Europe & Central Asia	71	235	0	65	191	1,934	1,590
Latin America & the Caribbean	434	1,099	6,228	8,229	25,149	13,159	6,200
Middle East & North Africa	0	0	0	0	0	106	85
<i>Memo</i>							
Global <sup>b/</sup>	76	36	253	137	2,900	1,477	-
All developing countries	3,372	3,743	7,552	14,057	45,615	34,895	22,000

*Source:* World Bank, *Debt Tables*, Washington D.C., 1995, p. 102.

*Note:* The numbers are derived from reported market transactions and often are available only on a gross basis, except for direct purchases of stocks in local markets, which are on a net basis. Starting in 1993 investment by global funds is included under direct purchases of stocks in the local market.

a/ Preliminary.

b/ Global funds that invest across emerging markets.

Portfolio flows contribute to the development process in six main ways:

- They bolster a country's external payments position and help finance imports;
- They make an important contribution to domestic capital-market development and constitute a possible source of funding for industrial development;
- They lower the cost of capital and widen the financing choices available to companies;
- They play a vital role in the privatization process whether indirectly, by fostering the development of capital markets, or directly, by financing private-sector buy-outs of State enterprises;
- They may be the forerunner of FDI;
- They raise a country's economic profile and that of its leading stock exchange-listed corporations.

### **An era of unprecedented opportunity**

The era of globalization has been described as one of unprecedented opportunity for developing countries, most of whom have undertaken unilateral liberalization since the mid 1980s. Although developing countries are projected to contribute about one third of the forecast growth in world trade over the 1997-2004 period, prospects for global integration vary considerably between regions.<sup>8</sup>

- East Asia with its large market and autonomous regional integration influences is rated as a "structural integrator";<sup>9</sup>
- Latin America, Eastern and Central Europe, and Central Asia are classified as contingent integrators in which the process of further integration will be driven by capital inflows;
- Sub-Saharan Africa, the Middle East and North Africa will continue to be substantially influenced by terms of trade effects - especially energy and metal prices - and capital flows. In sub-Saharan Africa's case official capital flows will be crucial.

As a second and third tiers of newly industrializing countries are drawn into the globalization process, the view that only a handful of developing countries will benefit from the process is no longer sustainable. Newcomer prospects are improving as the more advanced developing countries themselves become sources of outward FDI, primarily in regional clusters in Asia. As per capita incomes and wages rise and labour markets tighten, so these developing countries are shifting towards higher value-added activities while relocating labour-intensive operations in lower-income economies.

### **Threats posed by globalization**

In an increasingly borderless world, where competitiveness is driven by liberalization and technological progress, developing countries face serious threats as well as potential opportunities.

These include:

- Decline in MVA as a proportion of GDP, arising because domestic industry is unable to compete either with foreign imports or in export markets;
- Rapidly rising wages, even under labour surplus conditions, thereby forcing management to move up the technology ladder in search of increased productivity to justify new investment and retain competitiveness;
- Declining employment in manufacturing industry as new generic technologies substitute capital for labour, despite the comparative advantage of plentiful labour supplies;
- A shift towards greater dependence on primary production and some services (tourism) caused either by the loss of comparative advantage in manufacturing due to inadequate technological upgrading - or the closure of import-substitution industries unable to compete under open-economy conditions. This is the so-called "locked in" pattern of trade and development, whereby countries exploit experience effects, becoming relatively more productive in those activities in which they are already specialized. There is evidence to sustain this theory in some African and Latin American countries, where the relative

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<sup>8</sup> Otsubo, *op. cit.*, p. 38.

<sup>9</sup> *Ibid.*, p. 38.

efficiency of resource-based industries is reinforced by the competitive discipline imposed in export markets.<sup>10</sup>

### **Preconditions**

Preconditions for successful integration with the global economy include:

(a) Domestic policy reform to open the economy is the key to participation in the globalization process. Increased openness implies:

(i) Lowering - if not removing - barriers to international trade; import liberalization should be used to eliminate any anti-export bias in developing-country trading regimes, as export subsidies will have to be phased out under the Uruguay Round Agreements. This will make export industries more attractive and may enhance the inflow of FDI/non-equity forms of cooperation;

(ii) Liberalizing all forms of international investment;

(iii) Eliminating policy disincentives and regulations that deter the transfer of foreign technology through licensing and other non-equity links. Specific policies to facilitate technology transfer are essential to avoid the development of an "imitation" syndrome at corporate and national levels;

(b) Evidence and experience show that macroeconomic instability is a major obstacle to FDI and other forms of globalization. Governments need to develop an enabling environment, including relative price stability, fiscal discipline and competitive tax rates. The contrasting experiences of Brazil and Mexico in the motor vehicle industry suggest that globalization is more likely to pay dividends where appropriate domestic policies are in place;

(c) Given the crucial role of domestic investment both for initial start-ups and upgrading and enhancing human as well as physical capital, domestic-resource-mobilization and development of local entrepreneurship constitute essential prerequisites, especially in developing countries that are heavily dependent on aid inflows;

(d) Investment in human capital is at least as important as physical capital accumulation - the more so under conditions of globalization, which accelerates technology transfer. Technology transfer cannot, however, proceed effectively without a strong human capital base in the recipient country;

(e) Regionalization - the development of free-trade areas or customs unions - may facilitate globalization. Preferential trade arrangements and access to foreign capital under agreements with the EU and the cluster effects enjoyed by Mexico in terms of NAFTA contribute to faster, export-led development.

At the same time the contrasting experiences of the Asian developing countries and the African, Caribbean and Pacific (ACP) group of States under the Lomé conventions show that membership of an economic union is neither a necessary nor a sufficient condition for economic progress. The Asian developing countries have utilized globalization most effectively without participating in any regional integration arrangement with advanced industrialized countries. By contrast, globalization has bypassed many, indeed most, ACP States despite their preferential access to EU markets.

<sup>10</sup>

UNIDO Background Paper, Charles Cooper, *Technology, Manufactured Exports and Competitiveness*, 1995, (ID/WG.542/5 (SPEC.)).

Regional integration is no substitute for outward orientation and appropriate domestic policies. "Openness and a sufficient provision of public goods must figure high on the policy agenda".<sup>11</sup>

### **Policy implications**

As globalization proceeds, so the dividing lines between its different vehicles become increasingly blurred. This is most apparent in the substitution of non-equity links, particularly technology licensing agreements and strategic alliances, for more traditional forms of FDI. Until the early 1980s, many governments concerned that foreign domination of their economies would both undermine their autonomy and crowd out indigenous enterprise, used wide-ranging regulations to regulate FDI and the globalization process, insisting on local participation in ownership, or local content. Such policies encouraged TNCs to globalize using non-equity forms of cooperation, although not without two major drawbacks:

- TNCs, fearing dilution of proprietary technologies, patents and brand-names, were reluctant to transfer state-of-the-art technologies and products, or brand-names, to their non-equity partners in developing countries.
- Such restrictions favoured simple rather than complex integration strategies, limiting the potential benefits to the developing countries concerned to low-technology, labour-intensive "screwdriver" industries rather than those with access to higher-technology applications.

While developing countries may prefer FDI in some industries and non-equity linkages in others, the suitability of different globalization strategies will depend on a host of considerations over and above government policy, which is just one of several determinants driving the market entry decision of international business. The combination of the proliferation of globalization techniques and the liberalization of government policies often highlights the increasingly reduced role of government in influencing such decisions.

In a world in which competition to attract foreign capital - in whatever form - is increasingly intense, policies to promote one type of inflow (NEC) relative to another (FDI) may be counterproductive. It is primarily for corporations to decide whether and how they wish to penetrate a particular market. Policies to curb FDI and encourage non-equity links or portfolio inflows may deter investment altogether, resulting in increased imports of finished products.

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<sup>11</sup> UNIDO Background Paper, Gundlach and Nunnenkamp, *op. cit.*

## CHAPTER IV. INDUSTRIAL IMPLICATIONS OF TRADE LIBERALIZATION

### Opportunities and threats

Both the Uruguay Round agreements and the establishment of the World Trade Organization (WTO) will have far-reaching repercussions on industrialization in developing economies. In joining the WTO, developing countries have committed themselves to accepting the entire Uruguay Round package of trade reforms. "Partial compliance is no longer an option".<sup>1</sup>

In terms of export market prospects, the main gains to developing countries will be:

- improved access to the markets in developed market economies; and
- an "insurance policy" against future barriers to those markets.<sup>2</sup>

The two main Uruguay Round provisions with near-term implications for industrialization in the developing countries are:

- the phasing out of the Multi-Fibre Arrangement (MFA) over ten years; and
- tariff cuts.

There are threats as well as opportunities for developing economies, with the Uruguay Round likely to have some adverse repercussions on most African (see Chapter VII) and Caribbean countries, who will suffer short-term losses due to the erosion of existing preferential arrangements. Following Uruguay Round liberalization, the developed market economies may also selectively resort to safeguard and anti-dumping actions to reduce the rate of import growth.

### MFA abolition

Under the MFA, trade in clothing and textiles is subject to quotas on developing country exports negotiated bilaterally between importing industrialized countries and exporting developing countries. As the MFA is phased out, clothing and textile products will be integrated into the WTO, meaning that tariffs will be the only border measures allowed.

Although clothing and textiles dominate developing-country exports to industrialized economies, there are two main reasons why the phasing-out of the MFA and the removal of bilateral export quotas may not benefit developing-country exporters as much as hoped:

- The liberalization process is backloaded so that 51 per cent of international trade in textiles and apparel will be switched from quotas to tariffs during the first three phases of a four-stage process. The remaining 49 per cent will be liberalized by way of a "big bang" at the end of year ten. The near-term impact on developing-country exports is also likely to be diluted because industrialized countries are almost certain to integrate the least import-sensitive items first, leaving the bulk products until 2005. There is the further

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<sup>1</sup> UNIDO Background Paper, Tracy Murray, *Effects of the Uruguay Round Agreements on Industrialization in Developing Countries*, 1995, (ID/WG.542/15 (SPEC.)).

<sup>2</sup> Gary Hufbauer and Marie-Helene le Manchec, *Implications of the WTO and NAFTA for Developing countries*, UNIDO, December 1994 (Mimeo).

possibility that, as the date for final implementation draws near, future governments will come under intense pressure to renege on aspects of the deal.<sup>3</sup>

- If the agreement is implemented fully and trade in clothing and textiles is substantially liberalized, market conditions will change markedly. The abolition of export quotas will mean that all exporters will have to compete on a level playing field. While, as a group, developing economies will gain from the elimination of the MFA, the gains will not be evenly spread. The more efficient developing-country manufacturers will benefit at the expense of some of the less competitive, resulting in dramatic changes in market share.

#### **"Far more losers than gainers"**

A conservative estimate of developing-country export gains on account of quota liberalization alone is \$50 billion (if liberalization had taken full effect in 1992), while by 2005, assuming 4 per cent annual growth in the clothing and textile trade, the gains from quota elimination are estimated at \$80 billion.<sup>4</sup>

Because the clothing sector is highly labour-intensive, low-wage economies may well take market share from their higher-wage counterparts. China and India seem likely to gain at the expense of the Asian newly industrializing economies (NIEs) and other higher-wage States in Latin America. According to one estimate, "far more" developing countries will be net losers from MFA abolition than net gainers. In turn, this implies ongoing restructuring of industry in such countries, especially early in the twenty-first century, when the full impact of MFA abolition will be felt.

#### **Tariff reductions**

Tariff cuts will be phased-in equally over five years, with the main impact being felt in the near term. The impact will not be great for low-tariff products imported into OECD markets. Pre-Uruguay Round tariffs averaged 6.3 per cent so that the 2.4 per cent Uruguay Round reduction will reduce the average tariff rate in industrial countries to 3.9 per cent. However, even modest tariff reductions may benefit developing-country exporters significantly:

- Because past tariff-reduction agreements focused on the least import-sensitive items, where tariffs were cut by the largest amounts, future liberalization will involve more import-sensitive products opening the way to significantly-increased exports by developing States.
- Furthermore, tariff cuts contribute directly to exporters' bottom-line profit performance. Thus, where exporters have a 5 per cent profit margin on sales, a 1 per cent tariff reduction is equivalent to a 20 per cent increase in margins.
- Average trade-weighted tariff rates are misleading; because high tariffs reduce imports, they have smaller weights in the calculation of trade-weighted averages. Conversely, low tariffs have heavier weights, implying that when all tariffs are reduced by similar proportions, the cuts at the high-tariff end boost trade disproportionately.
- While average tariffs in industrialized countries may be low, individual developing-country exports still attract high duties. Major such exports, including clothing, textiles, footwear

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<sup>3</sup> UNIDO Background Paper, Tracy Murray, *op. cit.*

<sup>4</sup> Hufbauer and le Manchec, UNIDO, *op. cit.*



and leather, rubber and travel goods, face tariffs of more than 15 per cent. A 20 per cent reduction in such rates will considerably improve developing countries' market access.

- The reduction of tariff escalation is particularly important for developing-country industrialists; in the leather industry from hides and skins to leather, though not from leather to leather products; in the wood industry from semi-manufactured lumber to finished wood articles, though not from logs to lumber or wood-panels; from paper to paper articles, though not from pulp to paper; in the jute industry from fibres to yarns; in tobacco from raw tobacco to tobacco products (a significant reduction); and from unwrought nickel, lead and tin to semi-manufactures. Reduced escalation will encourage greater processing, although in one important sector - yarns to fabrics - escalation has actually increased.

#### **Tariff cuts among developing countries**

One third of developing-country exports of manufactures are purchased by other developing economies, and these will benefit from the Uruguay Round in two ways:

- The more important developing-world trading countries will cut average tariffs by about one fifth from 25 per cent to less than 20 per cent.
- The agreement to tariff binding with the Uruguay Round will mean that developing-country imports of products subject to bound tariffs (i.e., that cannot be raised) will increase from 25 per cent to 75 per cent of their total imports.

The average bound duties on industrial goods imported by developing countries - typically higher than applied rates - are estimated to fall to 12.3 per cent from 15.3 per cent, with the tariff reduction package as a whole affecting developing economy imports valued at around \$305 billion.

- On the average, tariff rates applied by developing countries will drop by only two or three percentage points, leaving many applied rates in the range of 10 per cent to 30 per cent. A recent UNIDO study<sup>5</sup> estimates the impact of applied tariff cuts on trade between developing countries at some \$50 billion by 2005.

#### **Market access will improve "significantly"**

Although all the Uruguay Round tariff changes will benefit developing-country exporters, reductions in Most-Favoured-Nation (MFN) tariff rates will erode the preference margins enjoyed in EU markets by the 70 African, Caribbean and Pacific (ACP) States, as well as preferential entry to industrialized countries in terms of the Generalized System of Preferences (GSP). In the near term - i.e., over the next five years - the main developing-country beneficiaries of the Uruguay Round will be:

- exporters of leather, rubber, footwear and travel goods, which will enjoy standard tariff reductions; and
- those exporters of tanned leather, wood and paper products and yarns or jute who gain from the reduction in tariff escalation.

While such potential gains may not appear impressive, tariffs will come down for a wide range of industrial goods; furthermore, since such tariff reductions go straight to the bottom-line profits of manufacturers and importers, significant world trade expansion is likely, with extensive benefits

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<sup>5</sup>

Hufbauer and le Manchec, UNIDO, *ibid.*

for developing countries. Market access will improve significantly for developing-country exporters of industrial products.

#### **Longer-term implications**

Both the trade-related investment measures (TRIMs) and trade-related aspects of intellectual property rights (TRIPs) agreements provide for grace periods before developing countries are required to conform with WTO rules. In general, the grace period is five years, although this is being extended for least developed countries. The adverse effects of both agreements will not therefore start to be felt until the next decade.

#### **Trade-related investment measures**

Many developing countries have linked investment incentives (usually in the form of tax-breaks or import protection) to trade requirements in the hope that foreign firms will enter into high-cost local purchasing agreements. Often, the net effect is lower real income for the developing economy, with the added danger of the system becoming self-perpetuating because foreign firms enjoy the benefit of lower taxes or protection from competition while the developing country government achieves greater employment and domestic value-added.

Under the TRIMs agreement, developing economies will have to abolish local content requirements and trade balancing tests within five years - least developed countries have seven years and developed market economies two years - though they will be allowed to temporarily apply TRIMs for infant-industry and balance-of-payments reasons.

#### **Box IV.A. TRIMs and the Philippine motor vehicle industry**

Vehicle assembly in the Philippines is protected by a virtual embargo on the importation of new vehicles. In return for this major competitive benefit in the domestic market, established firms must meet domestic content and minimum export requirements. The import restriction drives up the prices of motor vehicles, thereby encouraging domestic production, but local content and export requirements increase the costs of assembly and marketing, encouraging high cost domestic production while imposing heavy costs on domestic consumers. If the Philippines Government fully implements the TRIMs agreement, these distortions will be phased out over the next decade.

*Source:* Hufbauer and le Manchec, UNIDO, *op. cit.*, p. 22.

To the extent that it narrows the range of industrial policy options available to developing country governments, TRIMs will have important implications for developing countries and transition economies. In the past, developing countries have made extensive use of such measures and their phasing out will force governments to find alternative means of broadening domestic content and ensuring enhanced export capacity. On the other hand, the disciplines imposed on member States are less than onerous; host countries retain the right to regulate FDI as long as the TRIMs agreement is not infringed, though, in general, performance requirements may not be imposed on foreign investors.

Furthermore, developing-country attitudes to FDI have changed radically. Most States have implemented FDI-friendly regimes and are liberalizing their foreign investment regulations, even without Uruguay Round pressures in the form of the TRIMs rules.

### **Trade-related aspects of intellectual property rights**

Because the bulk of marketable intellectual property is currently owned by OECD-based firms, the TRIPs agreement will work to the disadvantage of the developing countries in two main respects:

- Developing-country firms wishing to produce and sell products covered by patents will be forced into licensing agreements, invariably involving royalty payments to the patent owner. In some cases, foreign TNCs will prefer to serve the market themselves by direct export so that there will be no local production. As a result, potential employment opportunities will be lost, while developing countries will be required to introduce and enforce legislation for the protection of intellectual property.
- The agreement could well stifle R&D activities in developing countries. In the absence of TRIPs, developing-country firms sought to copy (reverse engineer) products patented in the industrialized countries for sale in the domestic market, thereby creating jobs and ensuring competition with the imported item. The development of such R&D capacity is crucial to a country's ability to upgrade its technology, and the quality and range of its industrial production. The TRIPs agreement could well undermine this process, with adverse longer-term consequences for technological upgrading.

Developing countries could partly remedy this situation by:

- exploiting the agreement's compulsory licensing provisions, though these have been made operationally more difficult, since non-use of a patent is no longer a criterion that may be applied;
- ensuring that patented products are produced domestically;
- establishing a narrow scope for patents, thereby encouraging local firms to licence foreign patents and undertake R&D leading to patentable improvements; and
- encouraging the experimental use of patents by universities and other research institutes as allowed in terms of the TRIPs exception covering the non-commercial use of intellectual property.

In the medium term, developing countries may well be disadvantaged by the TRIPs agreement, but governments can - and should - use its provisions and exceptions to foster the development of knowledge-based activities. The effects of TRIPs will be felt in all sectors where intellectual property rights (IPRs) are operative, especially in the chemical, pharmaceutical and biotechnology industries where the impact on developing economies is likely to be most significant. Undoubtedly, TRIPs will pose a major challenge to developing countries and transition economies, particularly in respect of technology upgrading.

### **Agriculture**

The six-year phase-in period for the Uruguay Round Agreements in agriculture - extended to ten years in the case of developing countries - means that their impact will mainly be felt in the next century. In any event, the agriculture agreement will have only minimal implications for industrialization; it will mainly impact on trade in agricultural commodities rather than processed products, although there are important exceptions such as cheese and wine.

### The impact on ACP States

Although ACP States comprise half the world's developing economies, their performance in terms of export volumes and market shares is insignificant. Indeed, their market share has more than halved from 6.7 per cent in 1976 to 3.1 per cent in 1993 (see Table IV.1). Preferential entry to the EU markets seemingly made little contribution to the industrialization process, with ACP exports of processed goods growing by only 4.4 per cent a year between 1976 and 1993, compared with 13 per cent for non-ACP developing countries. Over the same period, the ACP share of processed imports into the EU (excluding intra-EU trade) fell from 2.6 per cent to 1.1 per cent.<sup>6</sup>

**Table IV.1. Share of EU imports, 1976-1993, selected years (Percentage)**

	1976		1982		1988		1993	
	ACP	Other developing countries	ACP	Other developing countries	ACP	Other developing countries	ACP	Other developing countries
Processed food/drink	6.2	31.4	7.6	38.7	8.8	50.0	8.3	41.4
Chemicals, plastics products	1.2	6.0	0.6	7.0	0.4	11.9	0.3	10.8
Textile products, footwear	2.6	39.5	1.9	42.1	3.0	45.0	2.3	45.1
Metals, metal products	8.9	13.1	6.7	14.4	5.5	18.1	1.8	15.8
Other manufactures	0.2	8.2	0.2	10.3	0.8	15.0	0.5	17.3
Total processed products	2.6	15.5	1.7	16.3	2.0	21.0	1.1	21.7
Total all goods	6.7	38.1	5.9	33.9	4.7	26.3	3.1	27.5

Source: Michael Davenport, Adrian Hewitt, Antonique Koning, *Europe's Preferred Partners: The Lomé Countries in World Trade, ODI Special Report, 1995.*

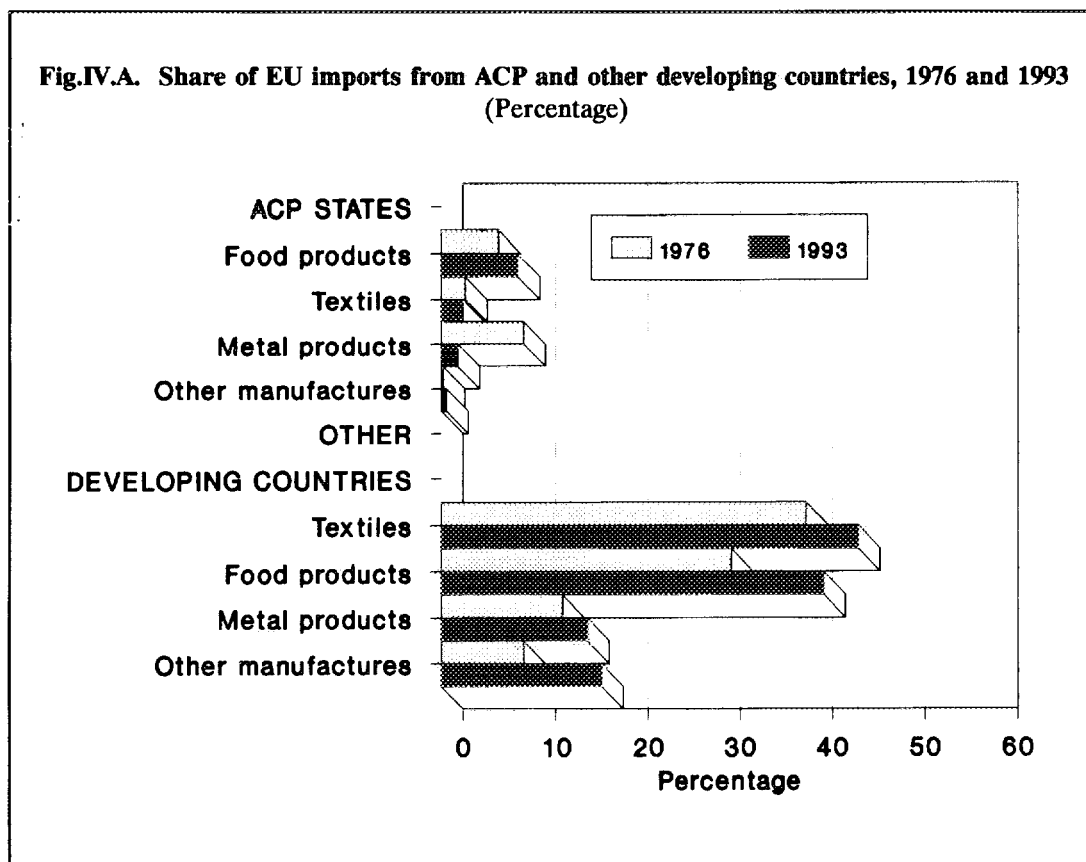
No clear conclusions about the impact of preferences on ACP exports of manufactures emerge from the data, partly because ACP preferences on processed goods are usually shared by non-ACP exporters. In some cases, where the preference is limited to ACP States, it appears to have been effective - examples include rum from the Caribbean and canned asparagus from Lesotho, although in this latter case Lesotho has lost market share to eastern European suppliers in recent years. It may be that preferences that provide a competitive advantage over particular suppliers may not suffice once new players enter the market. It also appears that the advent of synthetic materials in twine production has undermined ACP and GSP preference margins, resulting in the loss of market share by suppliers such as the United Republic of Tanzania.

Rules of origin requirements discriminate against small countries - which find it difficult to generate local supplies of inputs - in particular. Opportunities for cumulation fail to compensate for this, leading to the conclusion that the threshold for non-originating inputs is too low.

### Impact of the Uruguay Round

The reduction of MFN tariffs under the Uruguay Round and subsequent adjustment of GSP rates will divert trade away from ACP suppliers to other developing countries. ACP suppliers are also likely to suffer from the phasing out of the MFA agreement - from which ACP States are exempt in the EU market.

<sup>6</sup> UNIDO Background Paper, Adrian Hewitt, Antonique Koning and Michael Davenport, *The Impact of the Uruguay Round on ACP Manufactured Products (ID/WG.542/16 (SPEC.))*.



While non-ACP developing countries will benefit from the reduction of tariff escalation, ACP States, for whom escalation has not been a problem, will lose out as their advantage arising from exemption from tariff escalation is eroded. This will not have a material impact because their processed exports to the EU are so limited, but it will make it marginally more difficult to export processed products in the future.

Preference erosion will be greatest in the EU market, where ACP exporters enjoyed their largest preferences (practically zero tariff) for manufactured exports. On the other hand, for the small range of manufactures that have not previously benefited from preferences - mainly in Japan and the United States - further liberalization might benefit ACP exporters.

Table IV.2 summarizes the Overseas Development Institute's (ODI) estimate of likely static losses resulting from ACP preference erosion. For 65 ACP States, the revenue loss is estimated at \$317 million or 2.5 per cent of ACP exports of industrial products to OECD countries. Africa will be hit hardest, mainly in the metals and minerals sectors, but the biggest individual losers are in the Caribbean (Bahamas, Dominican Republic, Jamaica, Suriname, Trinidad and Tobago). In the Pacific, Papua New Guinea will suffer significantly in the metals and minerals sectors.

Revenue declines are concentrated among ten ACP States, which account for 55 per cent of total losses, although in no case does the estimated loss exceed 5 per cent of industrial exports. As a proportion of total ACP exports to the world, the preference erosion loss on industrial products is tiny, at 0.6 per cent. This is because a large proportion of ACP exports already enter OECD markets free of tariffs for all suppliers.

**Table IV.2. Static losses resulting from ACP preference erosion**  
(Quantitative estimates, \$ million)

	Metals, minerals	Wood, pulp, paper	Leather footwear	Chem- icals	Elect. equip.	Non- elect. equip.	Transport equip- ment	Other indus- trial	Imports 1992	Revenue change <sup>a</sup>
Africa	-60.9	-36.1	-0.4	-10.9	-2.9	-3.7	-6.6	-54.4	8,222.4	-175.8
Caribbean	-7.5	-0.3	-6.5	-27.9	-11.6	-1.7	-5.2	-59.3	3,366.3	-120.0
Pacific	-4.3	-5.8	-0.2	0.0	-1.4	-0.1	0.0	-2.4	659.3	-14.2
ACP (65)	-78.7	-42.3	-7.2	-39.0	-15.9	-5.5	-12.1	-116.3	12,766	-317

Source: UNIDO Background Paper, Michael Davenport, Adrian Hewitt, Antonique Koning, *The impact of the Uruguay Round Agreements on manufactured products of the African, Caribbean and Pacific Group, 1995*, (ID/WG.542/16(SPEC.)).

a/ Figures do not always add because of rounding.

Table IV.3 summarizes the likely impact of Uruguay Round changes on ACP exports, and suggests a total loss of 1.3 per cent of 1992 exports, which totalled \$53 billion. The \$317 million predicted decline in industrial exports accounts for 44 per cent of the overall loss of \$713 million.

**Table IV.3. Summary of the Uruguay Round settlement**  
(Trade effects; \$ million and share of 1992 exports from the ACP to OECD countries)

	Change in net exports of temperate agricultural products	Change in revenue from exports of tropical products and fish	Change in revenue from exports of industrial products <sup>a/</sup>	Total change in exports	1992 exports to the rest of the world	Total change as percentage of total exports
Africa	-173	-156.3	-175.8	505.3	44,689	-1.1
Caribbean	-52	-11.0	-120.0	-183.1	6,109	-3.0
Pacific	-2	19.3	-14.2	-25.0	2,390	-1.1
ACP	-227	-176.6	-317	-713.4	53,188	-1.3

Source: UNIDO Background Paper, Michael Davenport, Adrian Hewitt, Antonique Koning, *The impact of the Uruguay Round Agreements on manufactured products of the African, Caribbean and Pacific Group, 1995*, (ID/WG.542/16(SPEC.)).

a/ Excluding textiles and clothing.

The global clothing industry can be expected to become far more competitive following the eventual abolition of the MFA, with substantial market opportunities for producers enjoying significant comparative advantage. But because they were not subject to MFA controls, ACP producers of clothing and textiles will be "hard-pressed" to benefit; rather, the highly competitive Asian manufacturers will gain most. At the same time, significant African ACP exporters (Lesotho, Madagascar and Mauritius) facing "intrinsic" comparative advantage and whose market share has been achieved by exploiting Lomé preferences may well be hit by the phasing-out of the MFA, while recent market entrants, like Zimbabwe, will also find it difficult to compete with the Asians (Chapter VII). In the Caribbean, suppliers like Jamaica and some of the smaller islands

#### Box IV.B. The Lomé Convention

Some 97 per cent of exports from 70 African, Caribbean and Pacific (ACP) States - the bulk of them least developed countries - enter the EU market without restriction by any duty or non-tariff barrier. They are also exempt from export quotas imposed under the Multi-Fibre Arrangement for clothing and textiles.

Since the creation of the European Economic Community, ACP exports have been subject to non-reciprocal preferences designed to encourage further processing of primary products and to boost industrialization. ACP States are guaranteed duty-free access for exports of manufactures as well as for a large proportion of their agricultural exports. Because EU tariffs escalate with value-added, preferences granted under the Lomé Convention are higher for processed and manufactured goods.

Free access is dependent on imports to the EU meeting the often complex rules of origin requirements, which specify that ACP exports must originate from within the region, although cumulation of inputs from ACP countries or EU member States is permitted. Thus, an ACP country importing raw materials or inputs from another ACP State or from the EU for processing or manufacture still satisfies rules of origin criteria.

The Lomé Convention stipulates that ACP exports should not be granted less favourable treatment than non-Lomé countries, which are entitled to preferential market entry under the Generalized System of Preferences (GSP). Over the years, however, ACP advantages have been partially eroded as the EU has extended preferences to other developing economies, including the economies in transition (i.e. eastern Europe and the Former Soviet Union). ACP States also benefit from GSP schemes offered by other industrialized countries, notably Japan and the United States, although these tend to be less favourable than the Lomé Convention in respect of product coverage and rules of origin (cumulation is not allowed). Preferences on clothing and textiles are subject to quota, while ACP schemes are time-bound and have therefore been less likely to encourage investment in manufacturing.

ACP States also benefit from GSP schemes offered by other industrialized countries, notably Japan and the United States, although these tend to be less favourable than the Lomé Convention in respect of product coverage and rules of origin (cumulation is not allowed). Preferences on clothing and textiles are subject to quota, while ACP schemes are time-bound and have therefore been less likely to encourage investment in manufacturing.

Caribbean ACP States also enjoy tariff- and quota-free entry to the United States market for most exports - although key exceptions include most apparel and textiles, leather goods (including footwear), canned tuna, petrol and petroleum products, and some agricultural items. Sugar exports are subject to United States quotas which vary from year to year. However, exports of such products to the United States under the Caribbean Basin Initiative (CBI) are subject to rules of origin whereby at least 35 per cent of value-added must be contributed by the country in question, although it may be cumulated over CBI countries, and up to 15 per cent may be imports from the United States provided that "substantial" transformation takes place in the CBI country.

The CBI is more advantageous than the GSP system of the United States since it is not time-bound and has more liberal rules of origin. Under a similar agreement with Canada (CARIBCAN), Caribbean ACP States enjoy quota- and tariff-free entry to the Canadian market (again with exceptions similar to those imposed under the CBI).

*Source:* Adrian Hewitt, Antonique Koning and Michael Davenport, *Europe's Preferred Partners in World Trade*, ODI Special Report, 1995.

are also likely to lose share, while Haiti, the only Caribbean exporter with a cost advantage, might manage to maintain its position. The main losers among ACP States are expected to be Jamaica and Mauritius, with losses of 7.6 per cent and 16.5 per cent of 1992 exports respectively, but for the ACP group as a whole, the impact will be extremely marginal, at 0.2 per cent of total revenue.<sup>7</sup>

However, small ACP States such as Benin, Burkina Faso, Chad and Mali, which produce cotton, are potential exporters of clothing and textiles and currently depend for a significant part of their export earnings on sales to the EU of basic textiles, which are not subject to the MFA, might suffer from preference erosion. It will be more difficult to attract the sectoral investment that would enable these countries to move upmarket to higher value-added products.

ACP States should indirectly benefit from the Uruguay Round's expected positive impact on global economic growth, world trade and investment. There will also be gains from improved access to non-EU markets, while reduced developing-country tariffs will offer opportunities for increased trade between developing countries.

### **Industrial policy implications**

Industrial policy implications include:

- (a) The Uruguay Round's anti-subsidy provisions will seriously constrain subsidies that lower export prices. However, while explicit export subsidies or cost-reducing production subsidies to exporters are banned, governments will still be able to provide indirect support in the form of pre-production R&D, international marketing assistance, and training and education programmes;
- (b) The Uruguay Round was the first in which large numbers of developing countries played an active role. Their decision to accept tariff binding limits the scope for future use of tariffs to protect infant industries, although in many cases developing countries have bound their tariffs at rates higher than those currently applicable, thereby leaving themselves some room for manoeuvre;
- (c) ACP States and other less developed countries need to become less reliant on preferences and instead build greater competitive advantage by giving increased priority to industrial and marketing development. This would necessitate varying degrees of industrial restructuring in subsectors and niche areas, and local enterprises, having export potential. Improved infrastructure, especially transport and telecommunications, and the creation of effective export promotion organizations should be high on the policy agenda, along with more outward-looking trade policies. Increased private-sector involvement in trade policy formulation is also desirable;
- (d) In the light of the close correlation between FDI, technological upgrading and export competitiveness, the least developed countries need to step up their efforts to attract foreign investment. Mauritius' success in attracting Asian investors offers lessons for other developing countries;
- (e) ACP States need to participate more actively in international economic and financial institutions and diplomacy. By July 1995, only 34 out of 70 ACP States had joined the WTO, while only 12 of them had ambassadors in Geneva.
- (f) Improved market research information is crucial for industrial export growth. International agencies have a role to play in improving market information, although the best solution is often a joint venture or some non-equity relationship with wholesale or retail distributors in target markets.

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Sheila Page and Michael Davenport, *World Trade Reform; Do Developing Countries gain or lose?*, ODI Special Report, 1994.



#### Box IV.C. The future of Lomé

It is expected that the EU may not be able to offer ACP States the same exclusive and discriminatory treatment in any successor arrangement to Lomé IV.

Three possible scenarios are envisaged:

- The retention of Lomé IV, although with the abolition of non-reciprocal treatment for some of the more developed ACP States, such as the Bahamas. This could be justified on the grounds that more advanced ACP States should no longer require such preferential treatment, nor should they be accorded the same advantages as the least developed countries (LDCs). This would reduce the ACP group to the least developed African economies, which are most vulnerable and most dependent on trade with the EU.
- Globalization of the Lomé Convention with a focus on the world's least developed countries, including a handful outside Africa (such as Bangladesh, Laos); this implies that not all African countries, but only the least developed, would be targeted.
- The establishment of free-trade areas linking ACP States with the EU. ACP States would be encouraged to set up regional free-trade areas that would then negotiate barrier-free entry to the EU. Such an initiative might act as a catalyst for greater LDC regional economic integration, which has made very little progress thus far.

#### Economies in transition

The clothing and textile sectors in the countries in transition - most notably the former Soviet Union, Bulgaria, the Czech Republic and Slovakia - will benefit from the phase-out of the MFA. Enterprises in countries such as the Czech Republic, Hungary, Poland, Romania, and Slovakia, which appear to have a comparative advantage in manufacturing and semi-manufacturing will also benefit from enhanced access to industrialized country markets. At the same time, increased and more secure market access should also foster FDI and non-equity links.

The opening-up of markets in eastern Europe is expected to have a material impact on industry location decisions. Lower labour costs - than in the OECD countries - and the relative abundance of unskilled and semi-skilled personnel could create a competitive advantage platform for some of the transitional economies. The dismantling of trade barriers could encourage western enterprises to take advantage of the gains from outward processing trade (OPT) by subcontracting the manufacture of selected items to eastern European firms. OPT trade of this kind has developed with eastern European firms exporting textiles, clothing and footwear to western Europe.<sup>8</sup>

#### Regional integration

Resurgent enthusiasm for regional economic integration among emerging economies is not justified by past failures, and some observers argue that there is no case where a regional integration scheme has contributed materially to the evolution of a developing country.<sup>9</sup>

<sup>8</sup> UNIDO, *Industrial Development - Global Report*, 1995.

<sup>9</sup> Augusto de la Torre and Margaret Kelly, *Regional Trade Arrangements*, IMF, March 1992, Occasional Paper 93.

Regional integration has been primarily an industrialized-country phenomenon, centred in western Europe. Of the 109 agreements notified to GATT between 1948 and 1994, west European countries were partners in 76 instances. An important recent development, however, is the growing participation of central and eastern Europe. Indeed, no fewer than 24 of the 33 agreements notified to GATT since 1990 were concluded between western European countries on one hand and the economies in transition on the other.<sup>10</sup>

The fact that the world's two largest trade markets - the EU and North America - are increasingly conditioned by regional trade agreements is creating the spectre of a world economy divided into three major regional trading blocs: North America, the EU, and a Far Eastern cluster centred on Japan.

In this situation, developing countries and the countries in transition are re-examining their strategies. Some non-members will try to join existing clubs - NAFTA or the EU - while others will be tempted to set up new regional trade associations in an effort to strengthen their bargaining power *vis-à-vis* North America and the EU.

Regional integration appeals to developing countries on four main counts:

- As a means of enhancing economic growth and industrial efficiency through improved resource allocation.
- As a defence against the regional trade blocs established by industrialized countries.
- As a way of accelerating the expansion of manufactured exports.
- As a vehicle for generating critical mass so that enterprises can exploit economies of scale and experience effects and improve their global competitiveness.

However, few regional integration agreements reached by developing countries have met their original timetables for the establishment of a free trade area or customs union. On the whole, they have proved to be largely disappointing avenues for development owing to the absence of wide sectoral coverage that limited the potential gains to member States from trade liberalization. Since the start of the Uruguay Round, the developing countries especially in Asia and Latin America, have renewed their interest in such agreements as outward-oriented economic reform programmes transformed the policy environment making it more conducive to the achievement of regional integration objectives.

With the demise of the Council for Mutual Economic Assistance (CMEA) and the disintegration of the former Soviet Union, the countries in transition faced the loss of markets for their exports along with sources of raw materials and other inputs. This coincided with the breakdown of established trading and production arrangements, forcing them to focus attention on developing new trade relationships with each other while also seeking closer links with the developed market economies, especially the EU. In December 1992, the Czech Republic, Hungary, Poland, and Slovakia, established the Central European Free Trade Agreement, to develop a free-trade area by the end of 1997. A number of European countries (Switzerland, Finland, Norway and Sweden) have signed free-trade agreements with each of the Baltic States, while in 1994 the EU also signed free-trade agreements with the Baltic countries.

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WTO, *Regionalism and the World Trading System*, Geneva, April 1995.

### Replicating EU success will be difficult

The success of market integration in the industrialized world - and notably the EU - will be difficult to replicate among developing countries. Small markets, low per capita incomes and similar factor endowments, and the resulting similarity in production structures, inhibits trade expansion arising from intra-industry specialization and product differentiation. In the EU, by contrast, intra-industry trade is fostered by large markets, high income per head and product differentiation. It is considered that developing countries may, more advantageously, seek gains from trade based on different resource endowments and production structures. Such an approach would be better served by unilateral and multilateral liberalization.<sup>11</sup>

A 1993 OECD study<sup>12</sup> evaluating the performance of 12 well-established developing-country regional groupings encompassing 77 countries in three geographic regions - sub-Saharan Africa, Asia, and Latin America and the Caribbean - concludes that "the overwhelming result of their collective experiences (except for in Asia) has been, up to now, a low level of economic integration." Despite this however, it is still considered that regional integration is an important tool for economic development; and/or that regional integration continues to be desirable for developing countries in various regions.

The main reasons for the failure - thus far - of developing-country economic integration were:

#### Political

Specific problems include:

- A lack of commitment;
- The inability of member States to put regional goals before national ones;
- The tendency to resort to unilateral, restrictive trade measures when trade liberalization created pressures for domestic adjustment or when economies suffered from exogenous shocks;
- An inability to come to mutually acceptable terms over the distribution of costs and benefits. For many governments the surrender of national sovereignty is incompatible with national development;
- The built-in administered bias favouring non-regional products over regional ones since non-regional imports are invariably seen to be of better quality, while regional imports are inferior to the domestic product;
- Cultural differences, including deeply rooted differences in political ideologies and social customs, that have exacerbated the negative experience of regionalism; and
- The failure of policy makers to adopt a regional strategy when other potentially more effective means of pursuing economic objectives were available.

#### Economic

The ineffective performance of regional cooperation arrangements is also attributed to:

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<sup>11</sup> D. Greenaway and C. Milner, "South-South Trade—Theory, Evidence and Policy", *The World Bank Observer*, 1990.

<sup>12</sup> OECD, *Regional Integration and the Developing Countries*, Paris, 1993.

- The inability of governments to find new sources of revenue to replace income lost from customs duties when tariffs are lowered;
- Differences in initial conditions such as disparate levels of income and different stages of industrial and economic development;
- A low level of initial integration, implying that members had little to trade. For many groups, trading interests lay mainly outside the region, so that even where regional trade barriers were lowered there was little inducement to shift trade patterns - *i.e.* there was little trade creation;
- In many instances, similarities in resources and production structures failed to boost trade even when barriers were reduced;
- Import substitution policies, non-tariff barriers (NTBs) and other market distortions designed to ensure the survival of inefficient domestic industries were left in place in some member States;
- Intra-regional barriers remained, thereby inhibiting the free flow of factors of production;
- Macroeconomic imbalances made adjustment, both domestic and to integration, even more onerous; and
- Exogenous shocks such as commodity price declines, drought, higher real interest rates in global markets.

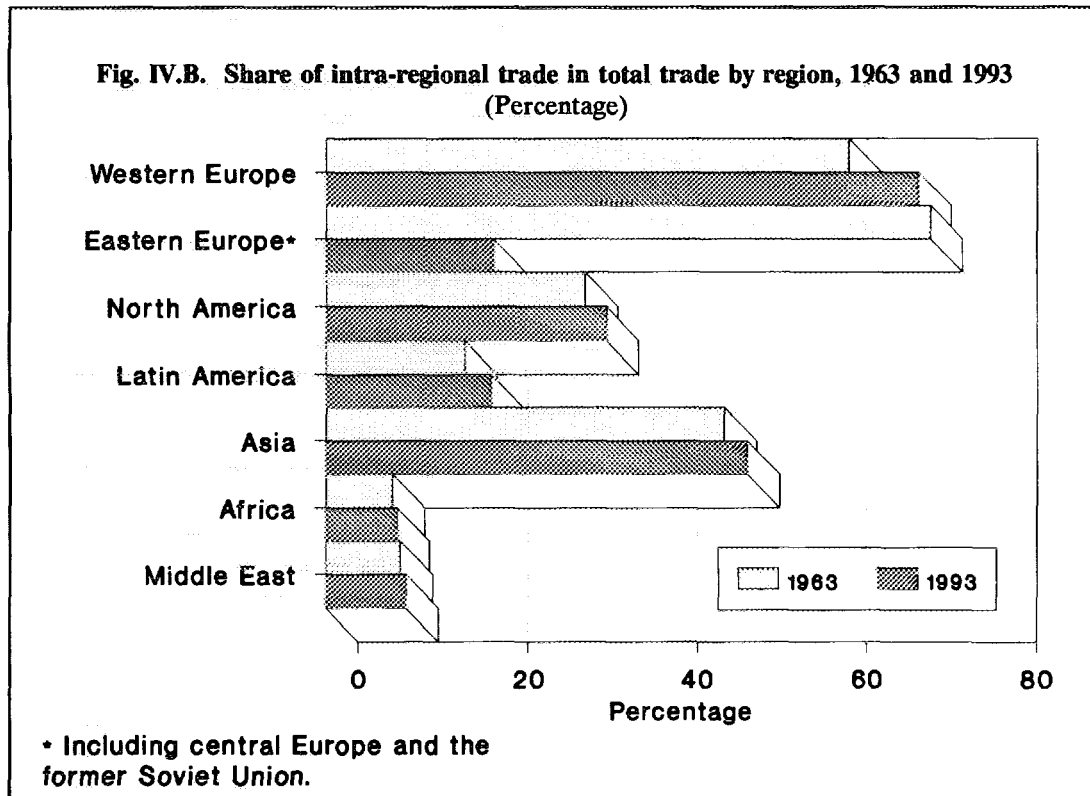
#### Disappointing intra-regional trade growth among developing countries

Confirming these findings, the World Trade Organization concludes that the European Union is the only region to show a "clear policy-induced increase in the relative importance of intra-regional trade". Table IV.4 shows that in western Europe the share of intra-regional trade increased from 53 to 70 per cent between 1958 and 1993 with most growth taking place between 1958 and 1973. In Asia and Latin America, the share of intra-regional trade also increased, though to a smaller extent, while in other regions, its importance was largely unchanged or even declined. The most outstanding example being the de-regionalization of trade in central and east Europe.

**Table IV.4. Share of intra regional trade (exports plus imports) in total trade in seven geographic regions, 1928-1993**  
(Percentage of each region's merchandise trade)

Years	1928	1938	1948	1958	1963	1973	1983	1993
Western Europe	50.7	48.8	41.8	52.8	61.1	67.7	64.7	69.9
Central and Eastern Europe and the former Soviet Union	19.0	13.2	46.4	61.2	71.3	58.8	57.3	19.7
North America	25.0	22.4	27.1	31.5	30.5	35.1	31.7	33.0
Latin America	11.1	17.7	20.0	16.8	16.3	27.9	17.7	19.4
Asia	45.5	66.4	38.9	41.1	47.0	41.6	43.0	49.7
Africa	10.3	8.8	8.4	8.1	7.8	7.6	4.4	8.4
Middle East	5.0	3.6	20.3	12.1	8.7	6.1	7.9	9.4

Source: WTO, *Regionalism and the World Trading System*, 1995, p. 39.



At the same time, however, the EU's increasing openness to international trade has largely maintained the importance of extra-regional trade in relation to output, which fell modestly from 15.8 per cent in 1958 to 12.8 per cent in 1993.

Unfortunately, few meaningful conclusions can be drawn from the successful EU experience, which is unique because of its political commitment to carry integration well beyond the limits of conventional customs unions or free-trade areas.<sup>13</sup>

### The revival of regionalism

Despite these broadly negative assessments of past experience with regional integration amongst developing economies, there has, since 1990, been a surge in new regional integration agreements notified to the GATT: 33 between 1990 and 1994. "The appeal of regional integration shows no sign of abating, and the issues raised by the interaction between regional integration agreements and the world trading system are unlikely to disappear from the international policy agenda".<sup>14</sup>

It is clear, however, that if existing (and proposed) regional integration arrangements are to perform better in the future, substantial reforms will be required, including :

- (a) A strong and sustained political commitment. Experience shows that initial enthusiasm for integration can dissipate rapidly;

<sup>13</sup> WTO, *op. cit.*, p. 55.

<sup>14</sup> *Ibid.*, p. 1.

- (b) Effective mechanisms to distribute more equitably the costs and benefits of integration;
- (c) The freeing of regional trade as a complement to overall trade liberalization. Import substitution is no more effective at regional than at national levels;
- (d) Macroeconomic stability: instability slows or even reverses the integration progress;
- (e) Structural flexibility: structural rigidities, often the aftermath of import-substitution industrialization, reduce the potential gains from integration;
- (f) Design of better agreements ensuring the inclusion of virtually all trade in goods and services, removal of tariff and non-tariff barriers to intra-regional business and the inclusion of provisions covering investment.<sup>15</sup>

On the whole, the more negative assessments have more to do with the implementation of regional integration arrangements than their underlying logic. While a revival of inward-oriented integration schemes designed to foster regionally based, import-substitution industries, allocated among member States by political decision, will not be successful or desirable, there is plenty of evidence to demonstrate that regional and multilateral trade agreements are complementary rather than competitive paths to a more open global trading system.<sup>16</sup>

A retreat into "fortress-style" regional agreements is unlikely; so powerful are the forces of globalization and so intense the competition to become part of the system rather than risk being left behind that outward-looking economic unions will be preferred as and when political obstacles are overcome. Such regional arrangements, designed to attract FDI and other globalization links on the basis of a larger domestic market, while simultaneously increasing the bargaining power of groups of developing countries through collective action within an integrated global economy, offer the opportunity to replicate the EU and NAFTA models more successfully.

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15 OECD, *op. cit.*

16 WTO, *op. cit.*, p. 62.

## CHAPTER V. NEW TECHNOLOGIES AND COMPETITIVENESS

### Generic technologies mean intensified competition

Few developments better illustrate the accelerating pace of technological advance than the speed with which newly industrializing countries have managed to double living standards. In the eighteenth century, it took the United Kingdom 58 years to double real per capita incomes, while in the case of the United States of America the process covered 47 years, between 1839 and 1886. Japan took 34 years (from 1885), while late industrializers, such as the Republic of Korea took eleven years (1966 to 1977) and China less than ten.<sup>1</sup>

Technological development over the last two or three decades has clearly shown the increasing importance of generic new technologies of three main kinds:

- biotechnology,
- new materials, and
- information technologies.

These technologies lead to entirely new products, markets and business opportunities. Their impact is trans-sectoral and they can drastically improve the competitiveness of products and processes of enterprises in a large number of industries.

Moreover, the interaction among new generic technologies themselves create unparalleled business opportunities for developing countries. New bio-materials increasingly draw on new genetic resources and engineering. The recently developed combinatorial chemistry technologies are not only producing more new chemical compounds in just a few years than the pharmaceutical industry previously did in its entire history, but also allowing the development of 10,000 new materials in single experiments.

Advances in information technologies have had the most significant impact on the global manufacturing sector resulting in major advances in industrial automation including computer numerical control (CNC) techniques, computer aided design (CAD) and manufacture (CAM), and flexible manufacturing systems (FMS). The introduction of such new technology has not only improved productivity, but it has also led to major improvements in the quality and consistency of products, thereby increasing competitiveness.

### Industrial automation and competitiveness

Products affected by industrial automation in mechanical engineering (home electric appliances, transport equipment, power and electrical equipment and many types of machines) make up a large part of manufacturing output in the more advanced developing countries. They are being forced to choose between conventional technologies, that maximise employment, and automated techniques that enhance quality, productivity and competitiveness.

Enterprises that fail to upgrade technologically risk being excluded from alliances in an increasingly globalized and oligopolized mechanical engineering industry where industrial automation is becoming the dominant technology.

Flexible manufacturing systems (FMS), increased automation and associated software have emerged as essential technological features of manufacture in industrialized countries. As

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<sup>1</sup> UNIDO, *Industrial Development - Global Report*, 1995, p. 8; UNIDO, *Industrial Development - Global Report*, 1996.

Japanese experience has shown, there is much more to the successful adoption of state-of-the-art technology than technology transfer itself. Organizational change is needed to ensure the efficient management and implementation of new technologies, together with policy and institutional support at national level in the initial stages.

The extent to which the automation of production processes replaces labour also requires careful assessment of both the implications of labour displacement, and the stage at which such replacement is financially viable. The capital cost of robotics and automated processes are still very high and may only be justified in a relatively small number of developing countries that have access to adequate markets and appropriate skills and backup.

For most developing countries the entry point to modern generic technologies is likely to be some kind of industrial automation starting with computer-numerical-control (CNC) machine tools and computer-aided design, which avoid the heavy capital investment required for robotics and FMS.

Apart from the Republic of Korea and Taiwan Province of China, only Brazil, India, Singapore and possibly China are producing significant amounts of CNC machine tools and process control technology. Even in India and Brazil there is a question mark over the viability of domestic production, as local CNC machine tool producers have lost market share to imports, following trade liberalization.

#### **Scale effects constrain late starters**

Hopes that industrial automation would boost manufacturing in developing economies by lowering entry barriers, increasing scope economies and reducing scale economies have not materialized. In some instances, in fact, industrial automation has had the very opposite effect - leading to reduced production flexibility, higher optimal scales of output, increased vertical integration and higher spending on R&D. Not only will this make it harder - rather than easier - for the least developed countries, in particular, to industrialize, but it suggests that developing countries as a whole have little choice but to adopt new technologies if they are to catch up and become competitive with the industrialized countries.

From an employment generation aspect this is a disturbing conclusion, the more so since it casts doubt on the viability of SMEs in mechanical engineering-related industries. Developing countries are "relatively minor" users of electronic control knowledge and that their demand is biased towards less-advanced electronic products.<sup>2</sup> Industrial automation usage is heavily concentrated in a few developing economies with China, the Republic of Korea and Taiwan Province of China accounting for 47.6 per cent of total purchases of control and instrumentation equipment and 43 per cent of total industrial equipment.

The technological distance between developing countries and industrialized economies appears to be widening with average ratios of CNC machine tools to total machine tools in developed economies of 61 per cent (1991), and over 70 per cent in Germany and Japan, compared with 26.4 per cent in India (1993) and 52.5 per cent in the Republic of Korea (1992).

#### **Growth paths**

Despite this widening technological gap between most developing countries and the industrialized economies, the former are building market share in the global economy, expanding their share of global manufactured exports from 5 per cent in 1970 to 22 per cent 1993.

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<sup>2</sup> UNIDO Background Paper, Raphael Kaplinsky, *The Implications of New Organizational Technologies for Developing Countries*, 1995, (ID/WG.542/7 (SPEC.)).



Many developing countries have successfully penetrated world markets by using cost-leadership strategies based on the exploitation of relatively low-technology production techniques and high labour-intensity. There is no clear-cut relationship between export growth and growth in productivity, implying that countries may be able to maintain high levels of competitiveness, and expand their exports of manufactures without rapid technical progress. Indeed, while a handful of countries, (Brazil, the Republic of Korea, Malaysia, Singapore and Thailand) have successfully developed high technology exports, most developing countries have relied on a combination of mature technology, low-cost labour and some preferential market access.

#### **Lower order advantages lose ground**

In the 1990s, sustainable competitive advantage cannot be achieved through reliance on low-cost labour alone. The proportion of direct labour costs in the final product or service price has fallen and continues to decline, largely reflecting the impact of new technology - robotics, flexible manufacturing systems, advances in communications, information technology and in the organizational structure of business enterprise.

Labour productivity is driven by investment in technology and human capital - the education and training of the workforce - and by new ways of organizing and coordinating production, inventory management, distribution and marketing. In many industries, software considerations have reduced the relative importance of massive investment in highly capital-intensive operations. Increasingly quality and product innovation are the driving force underpinning competitive advantage rather than the cost and price.

#### **The role of structural change**

In the past, competitiveness has been associated with two main growth paths:

- in slow-productivity growth countries, competitiveness is achieved by exploiting static or conventional sources of comparative advantage - so-called lower order advantages, including a rich natural resource base or a large pool of low cost labour.
- other countries, especially in East Asia, have built market share in global markets by achieving dynamic comparative advantage - by climbing up the technological ladder and shifting from "inherited" or "endowed" comparative advantage to dynamic or created advantage. Technology and structural change play crucial roles in this growth strategy.

High productivity growth economies, where value-added per worker increased at over 2 per cent annually between 1970 and 1990 (the Republic of Korea, Malaysia, Mexico and India), were characterized by significant structural change -away from simple labour-intensive manufactures to more skill and capital-intensive activities.

By contrast, slower productivity growth economies, committed to static comparative advantage, experienced little structural change, though in this group there are countries (Mauritius, Sri Lanka) in which output did shift across sectors, but primarily from one relatively low productivity-growth sector to another - in Mauritius, from food and beverages to clothing and textiles.

The implication of the lower productivity growth path is that competitive advantage can be secured without rapid technological improvement. In a world of rapid technological change this implies one of two conditions:

- either the country must have access to low cost materials; and/or
- real wages must rise slowly, if at all; indeed, on the whole, real wages have tended to fall.

Some countries in East Asia achieved rapid industrialization, driven by export expansion and fuelled by heavy investment in new technology. However, not only is such technology highly capital- and skills-intensive, implying limited job creation of relatively high-skilled personnel, but it is also essential for international competitiveness. While this may be an ideal growth path for high or full employment economies, (of which there are very few) it is most unsuitable for the least developed countries of Africa and South Asia.

Invariably, a high-productivity growth path in manufacturing industry implies an unenviable combination of relatively slow employment growth and heavy dependence on external technology, skills and expertise, while the low productivity route results in stagnant or falling real wages. Furthermore, the difficulties of building export market share from a technologically backward base are formidable.

The conflict may be resolved where countries follow a Malaysian-style industrial growth path, where technology was predominantly labour-intensive in the initial period of manufactured export growth, during which surplus labour is available. Manufacturing technology subsequently switches to higher capital intensity and higher labour productivity as full employment levels are reached.

However, this may not be the case; in a number of countries rapid technological advance and rising labour productivity co-exist with large amounts of surplus labour (China, India, Indonesia, Pakistan and probably also Thailand). Outward-oriented economies that have attained global competitiveness - either via the high productivity or low productivity growth paths - "have commonly achieved very high growth of manufacturing employment because of export expansion. They have not had problems of technological unemployment".<sup>3</sup>

Both high and low productivity growth paths have positive income distribution effects, with rising real wages in the high technology countries making a positive contribution to a more equitable pattern of income distribution. In labour surplus, job-intensive export economies where productivity growth is low, two main types of cost cutting are needed to maintain competitiveness against rivals using higher-tech production methods.

- falling real wages, especially in labour-intensive industries where labour costs constitute a significant proportion of total costs; and/or
- reduced materials costs.

#### **Complementary growth paths**

A failure to upgrade condemns developing countries to the low productivity growth path dependent on the exploitation of so-called "lower order", inherited factors of production.<sup>4</sup> The issue is not whether but when, and above all how, a developing country should upgrade. Least developed countries have little choice other than to develop export-led labour intensive lines of production. Since they are labour surplus, technologically-weak economies they will, in fact, be exploiting their competitive strengths.

Historically, all developing countries that have subsequently established strong manufactured export sectors have followed this route, though the timing of the upgrade to higher productivity activities varies from early (the Republic of Korea and China) to later (Malaysia).

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<sup>3</sup> UNIDO Background Paper, *Technology, Manufactured Exports and Competitiveness*, Charles Cooper, (ID/WG.542/5 (SPEC.)). p. 36.

<sup>4</sup> Michael Porter, *The Competitive Advantage of Nations*, Macmillan, 1990.

Furthermore, this growth path is not an alternative to technological upgrading but will eventually complement it. The expansion of low technology export industries generates the foreign exchange required to finance the technology and capital imports required to move up the value-added ladder. However, given a sufficiently strong domestic skills base, countries may leapfrog this labour intensive manufactured exports stage provided enough foreign exchange can be earned from primary exports - oil, gas, minerals, and agricultural commodities.

As well as establishing a platform for subsequent upgrading, low technology exports are a hedge against the risks of technological improvement. A well-established manufacturing (or for that matter primary product) export base, enables the developing countries to cushion the impact of a failed upgrading strategy.

The low productivity route is crucial also to employment expansion, especially when world trade is growing slowly and/or global markets are highly competitive, so that developing country export expansion is relatively slow.

Technological upgrading implies creating comparative advantage where it did not exist before. Exploitation of such higher-order factors of production increases industrial flexibility, while reducing a country's vulnerability to competition from low-wage economies. Provided exports expand rapidly enough, upgrading will mean higher real wages and higher earnings growth rates, without experiencing technological unemployment. Upgrading also has positive demand implications to the extent that it implies producing goods and services with higher income elasticities of demand.

For technological upgrading to succeed :

- there must be an effective transfer of technology from, abroad, usually achieved through FDI;
- a country must possess the skills and production experience to sustain structural change which in turn necessitates a prior period of "technological accumulation", with a particular focus on investment in education and training; and
- a national system of innovation must be developed emphasising networking between technological research and training institutes and industry.

Because developing economies have made most industrial headway in mature or "technologically stagnant" industries, such as clothing and textiles, the generic nature of technical progress has far-reaching potential implications both for their ability to retain this competitive advantage and to move upmarket into higher-technology activities.

While firms in developing countries may manage to maintain their advantage without innovation - either by raising productivity or lowering real wages, or a combination of the two - the new technological order must mean growing competition even in mature industries. Indeed, such competition will intensify as the full impact of Uruguay Round trade liberalization begins to be felt early in the 21st century.

### **Path dependency**

The situation is particularly daunting for late-starter countries for whom the threshold of entry is being raised. Technological progress implies higher entry barriers for newcomers, especially when account is taken of path dependency, which implies that an enterprise's capacity to learn depends

on its past learning. The past accumulation of capabilities will influence significantly not just the costs of today's learning but also whether new learning is possible at all.<sup>5</sup>

For developing countries the lesson is that the limitations of past technological history might impose very high current learning costs and may, in fact, preclude a particular industrialization path. Hitherto, those industrial sectors in which developing countries have developed comparative advantage have been less exposed to innovative competition than others.

### **The new competition**

In the 1990s, competitive advantage - certainly for finished consumer goods - is less a function of cost or price and more one of quality, style, design, timely delivery and after-sales service. The drive to compete through customization and product variability rather than the Fordist model of mass production has forced management to implement Japanese-style production systems - quality circles and just-in-time management.

Enterprises in developing countries are at a potentially huge disadvantage. If they are unable to create or assimilate these technologies, their future capacity to participate in strategic business alliances, in international manufacturing subcontracting, particularly with value-adding design and engineering services, may be seriously undermined.

#### **Box V.A. Technology and competition in Latin America**

Technological gaps among Latin American companies are far greater than those found in the industrialized economies. Three categories of companies have been identified:

- (i) A tiny minority of firms, numbering less than one per cent of the total. These are technology-intensive firms, participating in crossborder strategic alliances and driven by experienced, innovative managers.
- (ii) A group of between 30,000 and 50,000 enterprises, motivated to implement new technologies and new quality products and processes. Such firms, however, are heavily reliant on an imitation strategy utilizing "static and shelf-ready technology" rather than continuous technological upgrading.
- (iii) Over 90 per cent of the total number of enterprises operate within local market "niches" with varying degrees of success.

A study of 100 Group (i) companies *inter alia* found:

- A high correlation between innovation, productivity, exports and profitability;
- Highly aggressive innovation strategies - a high risk approach stressing market leadership and considerable product innovation;
- The most frequent motivation for innovation is to differentiate through quality, increase productivity, and penetrate export markets;

Source: UNIDO, Main Paper, *Perspectives on Industrialization, Interdependence and Competitiveness*, 1995, (ID/WG.542/1(SPEC.)).

### **Box V.B. Industrial automation in the mechanical engineering industry**

Industrial automation in the mechanical engineering industry has had six major beneficial effects:

- Production processes are becoming more homogeneous across industry as technological diversity is reduced, so that large and small batch producers use the same core technologies.
- Productivity, especially among producers of small and medium batches, has increased dramatically. Productivity increases of 50-100 per cent were achieved when moving to CNC machine tools from conventional machines, and of 250-650 per cent when moving to FMS.
- Capacity utilization increases, with gains of up to 80 per cent, in firms using FMS.
- Unit costs fall due to reduced labour costs (although training costs rise because of increased skill requirements), as well as savings in raw materials (more precise cutting and less waste) and energy. One survey finds average unit cost savings of 41 per cent when FMS systems are introduced.
- Product quality improves, reflecting lower defect rates and enhanced product performance in terms of greater precision and durability.
- Lead times decline from as much as 90 days to only two or three days.

*Source:* UNIDO Background Paper, Ludovico Alcorta, *The Impact of Industrial Automation on Industrial Organization: Implications for Developing Countries' Competitiveness*, 1995, (ID/WG.542/11 (SPEC.)).

### **Government support for innovation essential**

Evidence from industrial countries shows that government support for technological innovation at enterprise level is essential. The type of this support may vary from technical and commercial information services to support for R&D activities to capacity-building for technology management.

### **Technology policy**

With the increasing costs of research and development and the shortage of technical research personnel in industrialized countries, several TNCs (Nestlé, Unilever, Astra, Texas Instruments, IBM, Hewlett Packard and AIWA), have set up research facilities in developing countries. This pattern is expected to grow with research activities being increasingly located in developing countries and transition economies, where R&D expenses are low by global standards, due to the presence of a large pool of scientific and technical personnel available at a much lower cost.

To strengthen the technological base in less developed countries:

- Increased foreign technology will be necessary partly by way of enhanced technological cooperation between developing countries (ECDC/TCDC). Policy and institutional measures will be necessary, both to promote technological partnerships and linkages with foreign enterprises and for rapid technological absorption and adaptation.
- Indigenous technological development must be promoted through applied research activities in enterprises, universities, and R&D institutions.
- Efforts should be made to promote the location of TNC R&D facilities in developing countries and transition economies.

- National and regional R&D institutions in developing countries and transition economies should seek to develop a strategic framework and monitoring mechanisms for dealing with new generic technologies, including through subcontracting with foreign firms.
- The competitiveness of national enterprises engaged in international services subcontracting through electronic networks should be strengthened through increase of their technological innovation capability.
- Creative financial and fiscal incentives for promoting innovations should be introduced.

Innovation and technology management must be seen as core industrial policies in developing countries. Capacity-building programmes for the proper management of technology (MOT) are essential for both private and public sector enterprises and institutions. Through such programmes, the learning process in existing enterprises would be accelerated to overcome the absence of an innovation culture that distinguishes the highly innovative companies in the industrialized countries from their developing world counterparts. Accordingly, priority should be given to policies for strengthening and regionally integrating innovation-system-supporting agents - such as R&D centres, small and medium consulting enterprises, standardization boards, and incubators.

#### **Box V.C. Technology policy orientation in Mexico**

##### **Prevailing policy orientation**

In the last decade there was an important shift from a supply side policy to one that attempts to reinforce the demand side of the equation. Thus, technology policy in the current administration has some new lines of action, such as: (i) placing the firm and the entrepreneur at the centre of the process of innovation and modernization; (ii) creating, together with other public entities, support centres for competitiveness; (iii) impelling firms to develop their "learning capacities" so that they can participate in both the process of innovation and the continuous improvement of productivity and quality. These main threads are guiding the redesign of programmes and instruments, which are now being directed: (i) to promote investment by firms in learning capacities through financial stimuli and non-economic support for the creation of centres for competitiveness, where firms should be the source and users of the innovative process; (ii) promote the elimination of bottlenecks in information flows, and the connection of scientists and technicians with firms; (iii) promote the use of international standards and norms and support the diffusion and utilization of quality control methods; (iv) support programmes for the development of suppliers in public entities; (v) promote technological centres which can offer normalization and metrology services, as well as technological services for industry in general; (vi) support linkages between firms and research institutions. As seen from these measures, the emphasis is clearly placed on strengthening the demand side of the innovation process.

##### **Specific recommendations**

A stronger and more extensive technology management practice in firms, as well as the availability of appropriate mechanisms to promote it, are at the core of almost any recommended strategy for improving Mexican firms' technological capabilities. As long as firms strengthen their managerial resources and skill in technology management, other aspects of their technological capabilities will also improve. Self-awareness, monitoring and assessment of technological opportunities from improved technology management lead to better strategy definition. Quality and productivity are better aligned to longer term R&D strategies if companies possess well trained technology management personnel. Incorporation of R&D results and new technologies into the firms' operations is another key issue to technology management. Thus, it is important to promote stronger and more diverse training programmes in MOT; low interest rates for the first stage of development of technology management skills and capabilities in micro and small firms; and more diverse and strong consulting and advisory services on technology management to tend to industrial firms and public R&D centres.

### Box V.D. Industrial technology policy in the Republic of Korea

Industrial growth in the Republic of Korea has been spectacular - 16.5 per cent annually between 1965 and 1980 and 10.8 per cent a year from 1980 to 1987. This was accompanied by far-reaching structural change within manufacturing as the share in MVA of "simple" industries (food, beverages, textiles and wood products) fell from 28.7 per cent in 1970 to 17 per cent in 1986, while that of capital- and skills-intensive activities, especially electrical machinery and transport equipment rose fivefold to 22 per cent from 4.5 per cent.

This explosive growth and structural change was underpinned by rapid productivity increases, with value-added per worker rising 6 per cent annually between 1970 and 1990 or 9.4 per cent an hour worked (1967-87). Significantly, productivity growth was far higher in the more technologically advanced sectors than the basic ones. Thus value-added per hour rose 5.3 per cent a year in food, beverages and tobacco and 11 per cent in textiles compared with 15.6 per cent and 16.8 per cent respectively in machinery and transport equipment.

An important consequence of this "optimal" growth path is the change in relative productivity across industries. In 1967, value added per worker in the Republic of Korea's textiles, food and beverages and wood sectors, were 10.8 per cent, 5.5 per cent and 7.2 per cent respectively of US levels. At the same time, in more capital-intensive electrical machinery and transport equipment the ratios were even lower - 4.8 per cent and 3 per cent of those in the US.

But by 1987, not only had relative productivity improved dramatically but the gap had narrowed far faster in electrical machinery (40.7 per cent of US levels) and transport equipment (43.8 per cent) than in textiles (34.3 per cent), food, beverages and wood (12.8 per cent).

Changed patterns of productivity were reflected also in export performance. Between 1960 and 1988, the share of simple industries fell to 10 per cent from 60 per cent of merchandise exports, while that of transport equipment and electrical machinery rose from 0.3 per cent to 38.6 per cent.

Technical progress was central to these achievements. The government promoted the involvement of national private firms in licensing technology from abroad, technology absorption and imports of equipment. Simultaneously, it stimulated firm-level training, allocating massive resources to high-level technical education (1991 - 17.6 researchers/10,000 people, goal for 2000-30/10,000), to R&D projects approved by the *chabeols* and to building-up the S&T infrastructure:

#### Republic of Korea - Evolution of R&D Investment

Year	Amount \$ million	Per cent of GNP	Ratio of public/ private expenditure R&D
1981	418	0.64	50/50
1991	546	2.02	20/80
1998		4.00 (goal)	
2001		> 5.00 (goal)	

**Criteria** for strategic national R&D projects: technological intensiveness, broad international competitive advantage, conservation of energy and resources, growth potential, spillover effect, contribution to social development.

*Sources:* UNIDO Background Paper, Charles Cooper, *Technology, Manufactured Exports and Competitiveness*, 1995, (ID/WG.542/5 (SPEC.)); Smith, *Industry Policy in East Asia*, Asian Pacific Economic Literature, May 1995.

## **CHAPTER VI. THE CHANGING ROLE OF INDUSTRIAL POLICY IN DEVELOPING COUNTRIES**

### **A new consensus**

In the new consensus of the mid-1990s, national economic policies have converged on the middle ground as policy makers eschew extreme interventionist or free-market solutions. At the same time, globalization and liberalization have narrowed the range of policy options available to governments, almost all of whom are committed to closer integration with the world economy.

While there is more disagreement about industrial than macroeconomic policy, the debate on industrialization strategies has shifted decisively over the past decade. The disagreements of the 1970s over inward-looking versus outward-oriented industrial policy have been replaced by a dialogue over the most effective strategies for building competitive advantage at a time of accelerating technological progress, global liberalization and heightened market competition.

The difficulties inherent in designing strategies appropriate for a rapidly changing global business environment, especially at a time when policy is being increasingly constrained by the globalization process, are considerable. As governments liberalize, privatize and deregulate, both the range and number of their national policy options are reduced.

Against this background, the nature and role of industrial policy are changing; the Uruguay Round Agreements limit the use of tariff and non-tariff policies to protect infant industries; TRIMs restrict the use of trade-related measures to influence the pattern of FDI; growing crossborder linkages and vertical integration, and the availability or otherwise of skilled labour exert a greater influence over industry location decisions than government fiscal incentives.

### **Supplieside measures promoted**

Policy makers have responded in four main ways:

- Industrial policy has shifted "upstream" away from interventions designed to protect and promote a specific industry or sector to more general, supplieside, strategies aimed at boosting economy-wide competitiveness indirectly - increased investment in infrastructure, education and R&D, improved transport facilities, greater support for technology development and technological transfer along with a broader and more efficient range of industry-related service activities;
- A general shift away from inward-focused intervention in support of industries serving the domestic market towards enterprises targeting export markets;
- Greater emphasis on regional objectives - policies designed to help backward regions within a country, or backward countries within a region, such as the European Union; and
- A focus on enterprises: the restructuring, including privatization, of existing industrial enterprises and the development of innovative support systems for SMEs. In the light of the new challenges of competitiveness these are arguably the areas with the most potential for growth and enhanced efficiency.

### **Outward orientation is paramount**

Since the early 1980s, the thrust of industrial strategy in developing countries has shifted from inward-focused import-substitution to outward-oriented, export-driven growth resulting in greater,



and more rapid, integration in the global economy. GDP per capita has grown far faster in "fast integrating" economies, especially in the East and South East Asian success story economies (Chapter III), highlighting the role of greater openness in accelerating economic expansion.

### **The search for an East Asian "model"**

These successes have focused policy efforts in developing economies on replicating the East and South East Asian "model". Given broad agreement on the macroeconomic fundamentals necessary for rapid growth, the policy debate has targeted the extent and manner in which developing economies as a group can apply the specific industrial policy measures adopted in East and Southeast.

The challenges are formidable; for a start there is no single, unique East Asian model for all to follow, nor is there unanimity among researchers and policy makers as to the extent to which government intervention was responsible for the East Asian achievements. Furthermore, policies that succeeded under different global market conditions in the 1970s and 1980s may no longer be appropriate.

That East and Southeast Asian regimes were interventionist is acknowledged, although the contribution of industrial policy interventions to their success remains highly controversial. Conflicting interpretations of the East Asian experience are further blurred by the changed global business environment and the rapid pace of technological change, which may have overtaken strategies that were successful in East Asia in the 1970s and 1980s.

Accordingly, the advice that industrially less developed countries should choose East and Southeast Asia as their role model begs a number of questions. While there was a common background of export-led growth and heavy investment in human capital, underpinned by strong regional spillover and cluster effects from other countries in the region, NIEs played their cards in different ways. Some relied on foreign direct investment (FDI) more than others: the Republic of Korea followed the Japanese into large-scale, capital-intensive activities (such as steel, automobiles and ship-building), Taiwan Province of China relied on smaller firms in most sectors, and both Hong Kong and Singapore were initially entrepôt exporters (Box VI.A).

### **A focus on second tier Tigers**

In the light of major structural differences between the first generation East Asian Tigers (Hong Kong, the Republic of Korea, Singapore and Taiwan Province of China) and the less developed economies as a whole, there is more to be learned from the recent experiences of the second tier Southeast Asian countries - especially Indonesia, Malaysia and Thailand. These countries with their strong natural resource base and weak (early) human capital base have more in common with late-starting industrializers, especially, but not only, in Africa.

Their achievements, especially in industrialization, indicate growth paths potentially more appropriate - and relevant - for developing countries as a whole, than the more "special" and individualistic first generation Tigers. In these Southeast Asian countries, manufactured exports grew from 6 per cent (or less) of total exports in 1965 to 77 per cent in Thailand by 1992, 61 per cent in Malaysia and 41 per cent in Indonesia.

Rapid industrialization in these three countries had its origins in:

- appropriate macroeconomic policies;
- outward orientation;
- the attraction of foreign direct investment; and
- effective selective interventions.

### Box VI.A. Hong Kong and Singapore: Different strokes, contrasting styles

The lessons of the Hong Kong industrial "miracle", often cited as a model for small, resource-poor LDCs, are ambiguous. The British colony enjoyed unique initial conditions - a long entrepôt tradition with global trading links, an established trade and finance infrastructure, the presence of large British companies and the influx of skilled entrepreneurs from mainland China.

These unique qualities enabled it to develop export-oriented light manufacturing industries in a free-trade environment - an achievement that no other country has managed to replicate.

However, the island has failed to progress in terms of industrialization, remaining heavily reliant on relatively low-technology labour-intensive manufacturing with little technological upgrading (Chapter V). Since the mid-1980s, Hong Kong has experienced massive de-industrialization, losing more than one-third of manufacturing employment between 1986 and 1992, and relocating much of its manufacturing elsewhere in the region, especially mainland China. Its geographical location and other unique features have fuelled continued growth but it is hardly a role model for least developed countries which are unable to exploit the island's unique comparative advantage.

Singapore took a different road, employing a combination of selective intervention and free trade. With half the population level of Hong Kong and higher wage levels, it deepened its industrial structure, resorting to targeted interventions to attract FDI inflows. After a brief period of import substitution, it changed track, switching to export-oriented growth that was heavily reliant on TNC investment. TNCs were induced to invest in higher value-added activities, while the Government intervened to create the specific skills required, establishing publicly owned enterprises to spearhead industrial progress where FDI was deemed unfeasible or undesirable.

Source: UNIDO Background Paper, Sanjaya Lall, *Governments and industrialization: The role of policy interventions*, 1995, ((ID/WG.542/23(SPEC.))).

### Macroeconomic stability

The five pillars of macroeconomic stability were:

- pro-savings policies;
- maintenance of sustainable fiscal positions;
- low inflation;
- competitive exchange rates; and
- rapid corrective responses to macroeconomic problems.<sup>1</sup>

### Outward Orientation

Using the Speed of Integration Index, the three Southeast Asian economies rank near the top of the league table for developing economies. Among developing economies, only Mauritius (2.35) has a greater speed of integration index than Thailand and Malaysia while Indonesia is ranked tenth in the developing world (see Table VI.1).

<sup>1</sup> World Bank, Peter Harrold, Malathi Jayawickrama and Deepak Bhattasali, *Practical Lessons for Africa from East Asia in Industrial and Trade Policies*, Discussion Paper No. 310.

**Table VI.1. Initial level of integration and speed of integration index, 1980-93**

Country	Initial level of integration index (1981-1993)	Speed of Integration Index (1980 -1993)
Indonesia	-0.17	0.81
Malaysia	1.10	1.80
Thailand	-0.06	2.12
Average for all		
Low and Middle Income	-0.45	-0.18

Source: World Bank, *Global Economic Prospects and the Developing Economies*, 1996.

### Foreign direct investment

The role of FDI in the three countries has been more clear-cut and decisive than in the East Asian NIEs (Table VI.2). With the exception of Singapore, the four East Asian NIEs were substantially less reliant on FDI inflows than their second-generation imitators. By 1995, Indonesia and Malaysia ranked third and fourth in the region in terms of inward stocks of FDI, after China (\$129 billion) and Singapore (\$55.4 billion).

**Table VI.2. Three Southeast Asian economies: FDI inflows and stock, 1980-95, selected years (\$ millions)**

Country	INFLOWS						
	1984-89	1990	1991	1992	1993	1994	1995 <sup>a/</sup>
Indonesia	406	1,093	1,482	1,777	2,004	2,109	4,500
Malaysia	789	2,333	3,998	5,183	5,006	4,348	5,800
Thailand	676	2,444	2,014	2,116	1,726	640	2,300
				Annual averages			
	STOCK						
	1980	1985	1990		1994	1995 <sup>a/</sup>	
Indonesia	10,274	24,971	38,883		46,255	50,755	
Malaysia	6,078	8,510	14,117		32,653	38,453	
Thailand	981	1,999	7,980		14,475	16,775	
<b>Comparisons:</b>							
Hong Kong	1,729	3,520	13,413		19,669	21,769	
Republic of Korea	1,140	1,806	8,424		12,536	14,036	
Singapore	6,203	13,016	32,355		50,189	55,491	
Taiwan Province of China	2,405	2,930	9,735		14,177	15,647	

Source: UNCTAD, *World Investment Report*, 1996

a/ Estimate.

### Selective interventions

There is considerable disagreement in the development literature over the role of selective interventions, with a recent study noting: "The success of East Asia has been erroneously attributed to selective strategic interventions that were undertaken by them to speed industrialization".<sup>2</sup>

According to the study, the key success factors in East and Southeast Asia were:

- high levels of technical and administrative capacity on the part of the bureaucracy involved in the implementation of industrial policy;
- clear understandings between firms, the general public, and the government about objectives and performance requirements';
- non-interference by governments in day-to-day-operations and decision-making by firms;
- use of international prices and demanding export performance criteria to measure efficiency and performance;
- extreme selectivity with regard to the amount, duration and form in which assistance was extended to firms; and
- early modification or even reversal of policies which had adverse economy-wide effects.<sup>3</sup>

While this view is rejected by structuralists who believe that selective interventions were crucial to East Asia's success, "unambiguously successful industrial policies were those functional policies that tended to reinforce ongoing transformations in industrial structure".<sup>4</sup>

Pro-market, supplyside policies that sought to strengthen and consolidate market-driven change stand out. Examples include Taiwan Province of China supporting small-scale electronics enterprises through export processing zones, research centres and industrial estates, and Singapore investing in sophisticated infrastructure, such as the first fibre-optic telecommunications system outside the OECD.

Unsuccessful strategies that did not conform with market forces such as Thailand's state enterprise programme in the 1960s, Singapore's high-wage policies in the mid-1980s and Malaysia's five-year heavy industry push in 1986 were quickly abandoned.<sup>5</sup>

There was less emphasis on selective intervention in Malaysia, Indonesia and Thailand where FDI, openness to foreign trade and investment, and macroeconomic stability have been the key ingredients of success.

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<sup>2</sup> *Ibid.*, p. 49.

<sup>3</sup> *Ibid.*, p. 50.

<sup>4</sup> Peter A. Petri, *The Lessons of East Asia: Common Foundations of East Asian Success*, The World Bank, October 1993.

<sup>5</sup> *Ibid.*, p. 18.

### Importance of the home base

One growth path open to developing countries - and exploited successfully by the second tier NIEs - is that of globalized production under the aegis of TNCs. This route will not be open to countries with narrow markets and unable to attract efficiency-seeking FDI seeking to develop "export platforms." Globalization thrives only where infrastructure, skills, supplier systems and clusters of supporting and related industries are available (Box VI.B).

#### Box VI.B. Strategic versus competitive advantage

Ultimately, it is firms, not countries or governments, that create competitive advantage. It is enterprises that manufacture and market goods and services, and the well-documented case of Japanese automobile transplants in the United States outperforming their United States counterparts in the late 1980s, while subject to the same comparative advantage conditions, highlights the crucial contribution of strategic advantage to performance. The home base is crucial. "Differences in national economic structures, values, cultures, institutions and histories contribute profoundly to competitive success. The role of the home nation seems to be as strong or stronger than ever".

Enterprises build competitive advantage in three main ways:

- By producing and selling acceptable quality products at lower prices than their rivals - a cost-leadership strategy;
- By producing better-quality otherwise or superior products and services that are different or unique to the extent that they better satisfy consumer preferences than rival products - a differentiation strategy; or
- By securing niche or focus markets for their products, thereby meeting a consumer demand neglected by other suppliers.

Globalization implies using one - or possibly more - of these three generic competitive strategies to secure advantage internationally. It means that national boundaries no longer confine an industry to a specific national location. Instead, firms break up the value-added chain of their activities across national boundaries, establishing networks of parts and component producers in different countries, supported by R&D facilities, assembly plants, data-processing, finance and marketing offices. Value-adding facilities are located where the enterprise maximizes efficiency.

Crossborder vertical integration of this kind brings together comparative and strategic advantage. National comparative advantage - the availability of low-cost labour or energy, a rich natural resource base, a well-developed, well-maintained physical infrastructure, a cluster of supportive supplier firms, a competent bureaucracy, a strong education system and consistent policies to maintain macroeconomic stability - will influence and determine how and where TNCs locate different value-adding activities.

Global competitiveness is therefore two-tier in nature, requiring a blend of national (comparative) advantage and enterprise-driven, strategic advantage. Industry-level competitiveness in global markets invariably depends on a combination of the two. Even in globalized industries - and not all industries are global - the home base, and with it national economic policy, is of major importance.

Source: Michael Porter, *The Competitive Advantage of Nations*, 1990, p. 19.

**Box VI.C. The Republic of Korea: Using the chaebol to foster technological upgrading and diffusion**

East Asian countries that developed the most diverse and technologically dynamic indigenous sectors (i.e. the Republic of Korea and Taiwan Province of China) placed the least reliance on FDI. In the Republic of Korea's case, one reason for this was the country's enormous success in creating large private-sector conglomerates, termed *chaebol*. These were "hand-picked from successful exporters and given a range of subsidies and privileges, including the restriction of TNC entry, in return for furthering the strategy of setting up capital- and technology-intensive activities geared to export markets".

However, the conscious decision to foster large firms such as Daewoo, Hyundai, Samsung, Goldstar - which could command greater access to capital, skills and technology, and which accounted for one-third of the country's exports in 1988 - should not be confused with a "national champion" strategy. Whether by chance or design, intense rivalry pervaded almost every successful Korean industry. "At least four or five companies compete in every significant industry, often including a subsidiary of each of the leading *chaebol*. A pioneer makes the initial entry but other competitors soon follow". Indeed, competition has been so fierce that on occasion the government has been forced to intervene to prevent "destructive" rivalry.

Government legislation required the *chaebol* to subcontract parts and components to small and medium-sized enterprises (SMEs) rather than manufacturing them in-house. This achieved far greater technological diffusion than would otherwise have occurred. By 1987, some 1,200 items were designated for subcontracting to more than 2,000 mainly SME suppliers.

The *chaebol* also performed the crucial role of investing heavily in new technology. Their size allowed them to develop their own R&D, set up world-scale facilities, and create their own brand-names and distribution network. The *chaebol* commitment to building their own brand-names and product models for export markets was "a unique feature of many Korean companies". However, their "awesome willingness to take risk" was even more notable.

The *chaebols'* success as diversified conglomerates contrasts starkly with the unpopularity of conglomerate diversification in Western industry, and its restructuring around core activities and competencies. Whether the *chaebol* model is appropriate for the new competition of the twenty-first century is problematic. Similarly, it is unclear whether developing countries could - or should - seek to replicate the *chaebol* experience, especially in the case of small, least developed economies, where such a strategy might all too easily give rise to complacent, monopolistic conglomerates unable to develop global competitive advantage.

Sources: UNIDO Background Paper, Lall, *op. cit.*, and Porter, *op. cit.*

Nor can foreign investment displace indigenous development - "the existence of a dynamic and competitive domestic industrial sector itself attracts 'higher-quality' foreign investment and allows the host economy to reap much larger benefits from it."<sup>6</sup>

At a time of accelerating globalization, the "home base" plays a crucial role in the industrialization process. Industrial development cannot be imposed from abroad; indigenous industry capability and productive systems are essential to long-term industrialization.

<sup>6</sup>

UNIDO Background Paper, Sanjaya Lall, *Governments and Industrialization: The Role of Policy Interventions*, 1995, (ID/WG.542/23 (SPEC.)).

"The home base shapes a company's capacity to innovate rapidly in technology and methods and to do so in proper directions. It is the place from which competitive advantage ultimately emanates and from which it must be sustained".<sup>7</sup>

## SUPPLY SIDE MEASURES

### The main constraint is skills

Industrial policy should also include measures to enhance domestic competition and eliminate biases against small- and medium-sized enterprises (Box VI.D). The main constraint on industrial development is likely to be scarce human, technical and managerial capital. Structural adjustment programmes have been weak in that liberalization has proceeded at a pace that runs ahead of the economy's capacity to provide the new skills and core competencies required by industry.

#### Box VI.D. Clusters and industrial districts: A strategy for SME development

In developing economies, export-led industrial growth is often associated with large firms, including affiliates of transnational corporations. The challenge of the late 1990s is to broaden the process so that small and medium-scale, usually labour-intensive, firms increasingly participate in the export of manufactures.

One possible route is the so-called Italian or Emilian model, in which clusters of small firms have been highly successful in the production and export of traditional manufactures such as shoes, leather goods, musical instruments, tiles and even machinery.

The Italian experience, which shows that small firms can export shoes and textiles successfully without depending on low-cost labour, offers a blueprint that developing and least developed countries could adapt to their advantage via the promotion of "industrial districts", defined as:

- Clusters of geographically concentrated and sectorally specialized SMEs;
- Firms sharing a common cultural and social background;
- Networks of forward and backward linkages with suppliers and distributors; and
- Clusters supported by government and private-sector institutions.

The underlying logic is that clusters of predominantly small firms can secure scale and scope economies, share learning and experience effects and increase flexibility through inter-firm cooperation and specialization. "If they cluster, they can be as competitive or more competitive than large firms" The important message of clusters and industrial districts development is the need to focus policy on networks of firms rather than single firms. Schmitz (1995) comments that the problems of small firms are "not that they are small, but that they are isolated". Bringing them together into clusters enables them to achieve "collective efficiency" through collaboration.

Sources: Rabellotti, *World Development*, Vol. 23, No. 1, 1995; John Humphrey, *World Development*, Vol. 23, No. 1, 1995, and UNIDO Background Paper, Raphael, Kaplinsky, *The Implications of New Organizational Techniques for Developing Countries*, 1995, (ID/WG.542/7(SPEC.)).

Obvious areas for intervention are training, skills development and technological upgrading. In the United Kingdom it costs on average £50,000 for a firm to introduce ISO 9000 quality-

<sup>7</sup>

Michael Porter, *The Competitive Advantage of Nations*, 1990, p. 577.

management systems - a sum well outside the scope of small firms in developing countries. It may be necessary for governments to promote and subsidize such programmes along with extension services to industry.

### Obstacles

Obstacles to this approach should not be overlooked. Reinforcing the role of the State in the face of global forces of liberalization, deregulation, privatization and globalization will not be easy, and will run the risk of deterring foreign investors. Many of yesterday's interventionist practices are no longer viable in the light of the Uruguay Round Agreements and liberalized global financial markets. Suggestions that governments restrict technology inflows in order to foster domestic technological capability imply that the implementors of technological progress - entrepreneurs - will be able to compete in global markets, despite a widening technology gap. The fact is that developing countries need to run even faster than industrialized States at a time when technological progress is accelerating. The example of Singapore indicates the advantages of the FDI route to technological development (Box VI.E).

Such an approach presupposes also that, in the interests of developing indigenous technological capability, governments will be willing to turn away job-creating FDI. While this argument may be feasible in a handful of the industrially more advanced developing countries of Latin America and Asia, it has little relevance to less developed economies in Africa, where the need to revitalize and develop industry is most urgent. Arguably the only sub-Saharan State capable of taking this route to industrialization is South Africa.

#### Box VI.E. FDI and technological advance in Singapore

The introduction of new technologies through the establishment of TNCs in Singapore, rather than via the licensing of foreign technologies to local firms, produced important benefits.

- Transnational corporations picked up much of the start-up risk involved in implementing new technology;
- Technological catch-up and upgrading were faster than in instances where domestic firms were forced to traverse the entire learning curve; and
- There was a spillover of learning-by-doing gains to indigenous firms. The presence of foreign TNCs may have facilitated the adoption of new technologies by domestic firms as well.

There were also spillover effects in the development of clusters of indigenous firms around TNCs, providing the latter with components and support services. To maximize the potential benefits from such spillovers, a Local Industry Upgrading Programme was adopted in 1986 whereby TNCs were encouraged to "adopt" local subcontractors and diffuse technology to them.



Less developed economies have little choice in terms of delaying liberalization to give local manufacturers time to restructure, since this overlooks the pace and extent of globalization while also limiting FDI inflows. Further, governments in less developed economies must give priority to strengthening their administrative and building the institutional capacity necessary to implement appropriate an industrial strategy.

The appeal of selective intervention is greatest where, as in many Asian economies, the administrative capacity exists to implement targeted interventions. However, several countries have progressed too far with liberalization and are too closely integrated with the global economy to be able to turn back, even assuming that they wished to do so.

### **Policy intervention and industrial organization**

The case for targeted interventions is underscored by the pressing need for developing countries to undergo a revolution in industrial organization at the plant, firm, industrial and economic levels. In turn, this revolution challenges the conventional wisdom on industrial policy. Experience in industrialized and developing countries during the 1970s and 1980s demonstrates that there is much more to industrial restructuring and the achievement of international competitiveness than investment in state-of-the-art technology. While the switchover to more flexible manufacturing techniques was the appropriate response to the new forms of global competition, spearheaded by the Japanese TNCs, new methods of industrial organization are equally crucial to building sustained competitive advantage.<sup>8</sup>

The new form of industrial organization - mass customization (Box VI.F) - has enabled manufacturers to compete on a cost-efficient basis via large-scale production while satisfying consumer demand by supplying high-quality, differentiated products.

At issue is whether mass customization is appropriate - or indeed feasible - in developing countries. On the supply side, while some leading firms in industrialized economies have reached the "successful follower" stage, the leading developing-country firms lie at the boundary of the "moderately successful/successful follower" phases. More importantly, perhaps, the bulk of developing-country industry, including key elements in the supply chain to leading developing-country firms, is lagging behind.

In addition, it is questionable whether mass customization is the appropriate strategy for low-income economies where consumer demand is driven more by price than quality or differentiation. In fact, however, mass production techniques, characterized by poor quality and large inventories, are "economically wasteful", compared with the mass customization advantages of lower-cost production, higher quality and enhanced product differentiation. In the Uruguay Round era of intensified international competition, mass production firms in developing countries will face increased competition from foreign-based TNCs, themselves exploiting the mass customization strategy on a global basis. Accordingly, mass customization is as relevant to developing countries today as mass production was in previous decades.

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UNIDO Background Paper, Raphael Kaplinsky, *The Implications of New Organizational Techniques for Developing Countries*, 1995, (ID/WG.542/7 (SPEC.)).

### Box VI.F. Mass customization versus mass production

Massive investment in state-of-the-art plant and machinery and new technologies in many Western industrial economies failed to lift productivity levels to those achieved by some Japanese manufacturers. A striking example was that of General Motors, which invested \$70 billion between 1976 and 1985 - much of it in sophisticated, electronics-based automation technology - but still continued to lose market share to the Japanese manufacturers.

This kind of investment in "embodied technology" generally fails to pay off unless accompanied by far-reaching changes in industrial organization, encapsulated in the transition from traditional mass production methods to flexible mass customization techniques.

Two models of mass customization have evolved over the years:

- the Japanese model, in which the process is undertaken within large integrated firms; and
- the European model (Italy and southern Germany), where clusters of small firms collaborate to achieve "collective efficiency".

Mass customization, with its emphasis on flexible production techniques and small batches rather than large-scale, specialized mass production is more appropriate for modern patterns of consumer demand driven by quality and differentiation attributes.

There are four crucial requirements when restructuring industrial production along mass customization lines:

- A new form of factory layout - cellular production - in which individual "mini-factories" target individual market segments;
- Utilization of multi-skilling and multi-tasking work practices;
- The introduction of quality-at-source procedures; and
- The adoption of a new "continuous improvement" system of social relations of production (the Japanese *kaizen* system).

Three of these four requirements highlight the crucial role of human capital - that is, educated and trained labour - in the production process, along with the need for a "new compact" between management and the workforce. The factory layout decision is essentially technical.

A key contrast between the two systems is the changed perception of labour. In mass production, labour is a production cost to be minimized, while in mass customization it is a resource to be augmented and is capable of making a substantial contribution to innovation.

As well as reorganizing the firm internally, mass customization implies a revolution in relationships with other companies. The conventional arms-length relationship of mass production is replaced by a closer, longer-lasting cooperative relationship with suppliers and distributors; this has potentially far-reaching and positive implications for SMEs. In the "Third Italy", for instance, mass customization has been achieved by the clustering of SMEs networking with each other in the clothing, shoe, furniture and food-processing industries. This model is one with enormous potential for industry in the developing countries.

Source: UNIDO Background Paper, Raphael Kaplinsky, *The implications of new organizational techniques for developing countries*, 1995, (ID/WG.542/7(SPEC.)).

## POTENTIAL SUPPLYSIDE CONSTRAINTS

**Human capital:** Scarce human capital is a major potential obstacle to mass customization in developing and especially least developed countries. However, research shows that:

- Educational and training barriers to the adoption of mass customization techniques are "often negligible";
- Training (mainly intra-firm) is more important than formal school education;
- The greater the degree of flexibility required in production, the more the need for multi-skilling. This is applicable to the broad range of workers and not just to an elite of skilled personnel. Accordingly, it is essential to diffuse skills across the entire workforce rather than merely increasing the proportion of skilled operators; and
- The adoption of new organizational procedures depends on the availability of a multi-skilled workforce as well as workers with a greater understanding of the underlying technical processes in the industry, though it is unclear what level and forms of education are required for appropriate in-house and other vocational training to succeed.

**Inter-firm linkages:** Western economies have experienced great difficulty in replicating the Japanese model of "clubs" of suppliers providing inputs and components. Poor supplier capability, especially where inputs are sourced from SMEs and inadequate physical infrastructure, notably transport and communications, constrain the development of inter-firm linkages in developing countries. In the early 1990s, Ford Motor Company's Mexican assembly plant at Hermosillo imported 65 per cent of initial component purchases by value (and 80 per cent by weight) from Japan because of difficulties with local suppliers and a weak transport infrastructure. Road and rail deliveries, even over short distances, took between ten and 30 days and the plant had to be located near a deep-sea port so that just-in-time (JIT) supplies dispatched by sea from Japan could be delivered to the factory.

Similar problems with suppliers and infrastructure are reported from other developing countries, which have encountered considerable difficulty in implementing the new organizational techniques.

**Managerial failure:** Transition to mass customization is dependent upon managerial commitment at all levels of the firm. Weak management, especially in small and medium-scale family enterprises, and inappropriate and outdated management training systems focused on mass production techniques are obstacles to the adoption of new organizational structures.

**Related and supported industries:** In most developing countries, manufacturing industry is not diversified to the point where a network of domestic suppliers of components and inputs has evolved. Competitive advantage can emerge from the development of close working relationships between networks of home-based suppliers, thereby reducing dependence on imported components and inputs, and facilitating the adoption of flexible production systems.

### Implications for policy

To accelerate the diffusion of mass customization techniques, State intervention is necessary in four key areas:

- (i) **Increasing the demand for organizational change in production.**  
Governments should take the lead in disseminating information about the benefits of innovation, the obstacles to be overcome and the services available to firms adopting new techniques. This is particularly important for the SME sector, whose development must be fostered as part of programmes to establish networks of domestic suppliers.

**(ii) Improving organizational capacity.**

There are three main channels for this type of technology transfer:

- Through the internal operations of TNCs, where new organizational technologies can be transferred across national borders; and
- Where the developing-country firm itself takes the initiative in adopting new organizational structures.
- Because the consultancy industry may be inadequate in several developing countries and are often working with outdated techniques, governments have an important role to play in strengthening and subsidizing access to such services by SME producers.

**(iii) Developing organizational capabilities at local and sectoral as well as national levels.**

Italy has been highly successful in developing industrial districts populated by clusters of small firms usually, but not always, manufacturing in the same sector. Indirect costs of production (i.e. purchasing, marketing and market intelligence) are shared by collaborating firms. In this situation, the transfer of new organizational techniques is best achieved by initiatives at sectoral and local government levels, as has been done in Japan and Germany as well as Italy. Often the sectoral focus is achieved by industry associations, with funding and technical support from governments and international organizations such as UNIDO.

**(iv) Providing an appropriate macroeconomic environment.**

In addition to targeted, selective interventions, macroeconomic stability is necessary for the accelerated adoption of mass customization techniques. In particular, the new organizational methods are labour-intensive, implying that their adoption will be delayed, or even dropped altogether, where the factor price regime is skewed in favour of low-cost capital rather than labour. However, this is unlikely to be a major problem since price does not appear to have been a significant issue affecting the shift towards flexible manufacturing even in countries where factor prices are distorted.

Outward-orientation of the trade regime is also important given the positive relationship between flexible production and export-led industrial growth, while physical infrastructure - and a strong telecommunications system in particular - is crucial to successful innovation.

**The role of SMEs**

A well-developed supplier network populated by small and medium-sized enterprises capable of providing quality components was crucial to the successful adoption of JIT systems in countries like Japan, Italy and Germany. Accordingly, governments should give high priority to measures to foster SMEs.

**Consultation is vital**

Consultation with the main agents of industrialization is essential to successful policy implementation, and there is a very real danger of the process failing unless the key actors are "deeply involved" in policy design and implementation.

### **The "de-sophistication" of industry**

The shift to a more open trade regime in Latin America "seems to be inducing deep changes ... bringing about a shift towards assembly-like operations, closer to the *maquiladora* industrial organization model than to the domestic fabrication model".<sup>9</sup> Latin American firms have switched from local production to importing - expanding their operations as commercial distributors of foreign brands and lowering their commitment towards local fabrication. One researcher cites the case of automobile manufacture, where import content and the range of updated models have increased as manufacturers become part of a globalized, rather than national, strategy.

This underscores the extent to which trade liberalization is contributing to the "de-sophistication" of the Latin American industrial fabric, reducing the number and range of manufacturing activities that can be undertaken locally. To restore domestic value-added and competitiveness, Latin American industry must invest heavily in both hardware and "a major upgrading in human capital and organization capabilities." This would require a more active supplyside industrial policy, focusing on cost reduction and enhancing efficiency and productivity, rather than the use of tariffs to raise output prices and protect domestic industry.

### **Industrial restructuring in the countries in transition**

Without restructuring, many enterprises in the former centrally planned economies of central and eastern Europe will not be viable. Accordingly, governments have adopted a menu of restructuring and privatization strategies, though experience has shown that it is not enough to rely on the "invisible hand" of market forces. Giving private enterprise the lead role in industrial development does not eliminate a role for the State, but assumes the existence of a competent bureaucratic machinery willing and able to work closely with individual entrepreneurs.<sup>10</sup>

In Poland, the government has played an active role in the restructuring process -offering tax incentives and low-interest credits to selected enterprises. A clearly-stated industrial strategy was needed also to accommodate organized labour, while many of the lessons learned from industrial restructuring in the West have been applied successfully in Poland and elsewhere in the region.

### **Conclusions**

- (1) Because there is no single East Asian model to emulate and no firm consensus on precisely what form of intervention will optimize industrial growth in developing countries, and especially LDCs, industrial policy is best viewed as a menu of options. The range of choice open to governments is narrowing as globalization takes hold because although globalization does not eliminate the need for industrial policy, it limits the options.
- (2) The shift in strategy on the part of the East Asian NIEs themselves, partly in response to the forces of globalization but also reflecting the evolution of industrial policy suggests that developing countries have more to learn from the recent experience of Southeast Asian economies (Indonesia, Malaysia, Thailand) than the four original NIEs.
- (3) The policy thrust has changed with the second tier tigers - Indonesia, Malaysia and Thailand, relying less on selective intervention and more on FDI and global integration than the Republic of Korea and Taiwan Province of China.

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<sup>9</sup> J. M. Katz, *Technology and Industrial Restructuring in Latin America - the New Evidence* (Mimeo), 1995, p. 13.

<sup>10</sup> H. Muegge and G. Assaf, *UNIDO and the Economies in Transition*, 1993, p. 233.

- (4) There is broad agreement on:
- the need for some selective, targeted interventions; and
  - the importance of outward-oriented strategies whereby a country's manufacturing sector is driven by the discipline of market competition.
- (5) Where selective interventions are used, these must be closely coordinated and integrated. Uncoordinated intervention in factor markets without appropriate measures in product markets will be ineffective or even counter-productive.
- (6) Because resources are limited, only a few activities should be supported at any one time. Targeting is crucial.
- (7) Incremental measures and modest technological advances are preferable. Learning is cumulative and intervention must support activities that have a base in existing skills.
- (8) The more advanced the developing country, the greater the range of choice. LDCs in tiny markets, with weak infrastructures and a poor skills and technology base have little option but to focus on simple, consumer-based industries, initially at least. Given their small markets, their prospects for attracting major FDI inflows (other than into natural resource industries) are poor. For such States the option of shutting out technology and FDI has no advantage, and they may need to concentrate on fostering labour-intensive operations and developing an export-platform strategy, as in Mauritius.
- (9) Technological upgrading and human capital investment are crucial to competitiveness beyond the year 2000. There is a clear role for the State - and for UNIDO and other international agencies - in both fields.
- (10) Domestic rivalry is a prerequisite for competitiveness.
- (11) Clusters and industrial districts have an important role in the development of globally competitive SMEs. This is an area where UNIDO can make an increasingly important contribution.
- (12) Such is the pace of technological and organizational change that policies must be flexible and dynamic. The shelf life of measures that succeeded in the 1980s may already have been exhausted.
- (13) Incentives are more likely to succeed than sanctions. Efforts to constrain FDI or limit technology imports run the risk of deterring investment altogether.
- (14) Structural adjustment programmes should include a specific strategy for manufacturing. The expectation that manufacturing will blossom in the absence of a coherent strategy has not been borne out by African experience (Chapter VII).
- (15) One of the most important lessons of East Asian experience is that intervention worked where it was carried out in close coordination with the private sector. Industrial policy responded to the problems and needs of private enterprise rather than seeking to impose elaborate schemes according to the dictates of grandiose national plans.
- (16) Ultimately, competitiveness succeeds or fails at the enterprise rather than the national level. Governments must create an enabling environment for business and investment, but the choices of what to make and sell, and how and where to do it, must be left to entrepreneurs.

## CHAPTER VII. REORIENTING INDUSTRY IN AFRICA

### A. INTRODUCTION

By any yardstick, the African economy has underperformed since the first oil price shock in 1973/74. In the sub-Saharan region, economic growth has slowed from 4.7 per cent annually during the 1966-73 period to 1.7 per cent in the 1980s and 0.7 per cent in the first four years of the 1990s (see Table VII.1). With population growing at approximately 3 per cent annually, real per capita incomes have been falling for 20 years and today are little different from their levels of the early 1960s.

In North Africa, the economic slowdown started with the sharp fall in energy prices in the early 1980s, but there too real income per head has been falling for the last 15 years. These trends are in stark contrast to the performance of developing countries as a whole where per capita incomes have increased, especially in East and Southeast Asia.

**Table VII.1. World economic growth summary and forecasts, 1966-2004**  
(Real percentage growth per year in GDP)

Region	1966- 1973	1974- 1980	1981- 1990	1991- 1994	1995 <sup>a/</sup>	Forecasts	
						1996- 1997	1995- 2004
World total	5.1	3.4	3.1	1.5	2.8	3.1	3.5
High-income countries	4.8	3.0	3.2	1.7	2.5	2.6	2.9
Developing countries	6.9	5.3	3.0	1.0	3.9	4.8	5.3
East Asia	7.9	7.1	7.9	9.4	9.2	8.2	7.9
South Asia	3.7	4.0	5.7	3.9	5.5	5.5	5.4
Sub-Saharan Africa	4.7	3.5	1.7	0.7	3.8	3.7	3.8
Latin America & the Caribbean	6.4	4.8	1.7	3.6	0.9	2.6	3.8
Europe & Central Asia	6.9	6.1	2.1	-9.0	-0.7	3.0	4.3
Middle East & North Africa	8.6	4.9	0.8	2.4	2.5	3.2	2.9

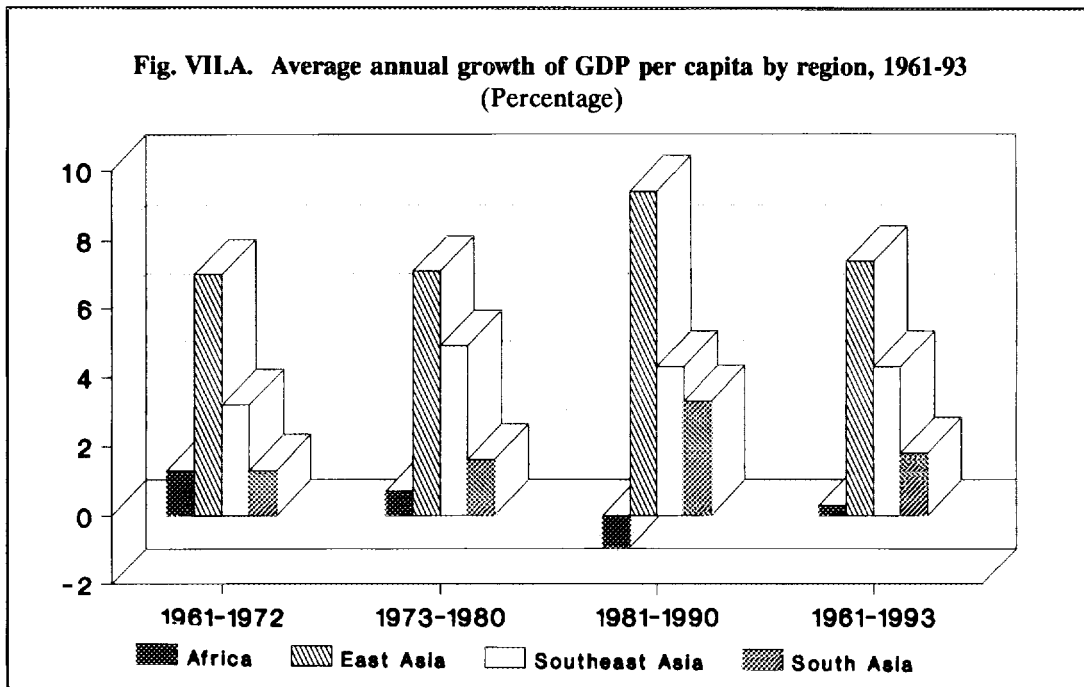
Source: World Bank, *Global Economic Prospects & the Developing Countries*, Washington D.C., 1996

a/ Estimate.

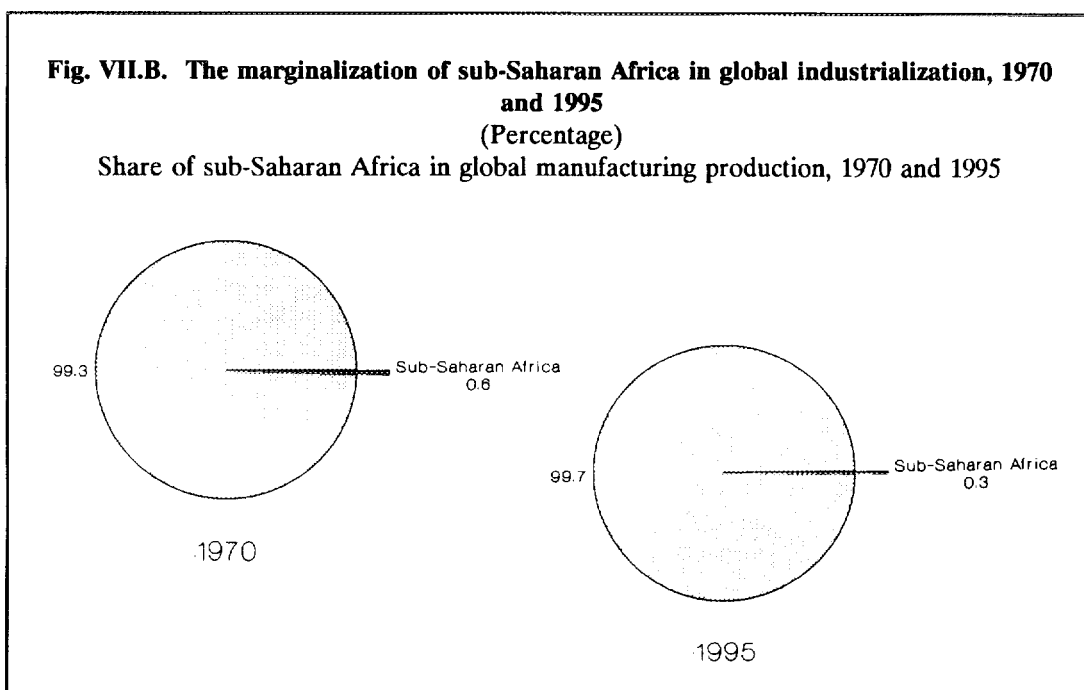
### Generalizations mislead

Generalizations concerning Africa's disappointing performance are misleading given the very diverse conditions prevailing in different parts of the continent. North Africa, with its heavy dependence on energy and its growing ties with the European Union is in a very different category from sub-Saharan Africa, and is usually treated separately with the Middle East.

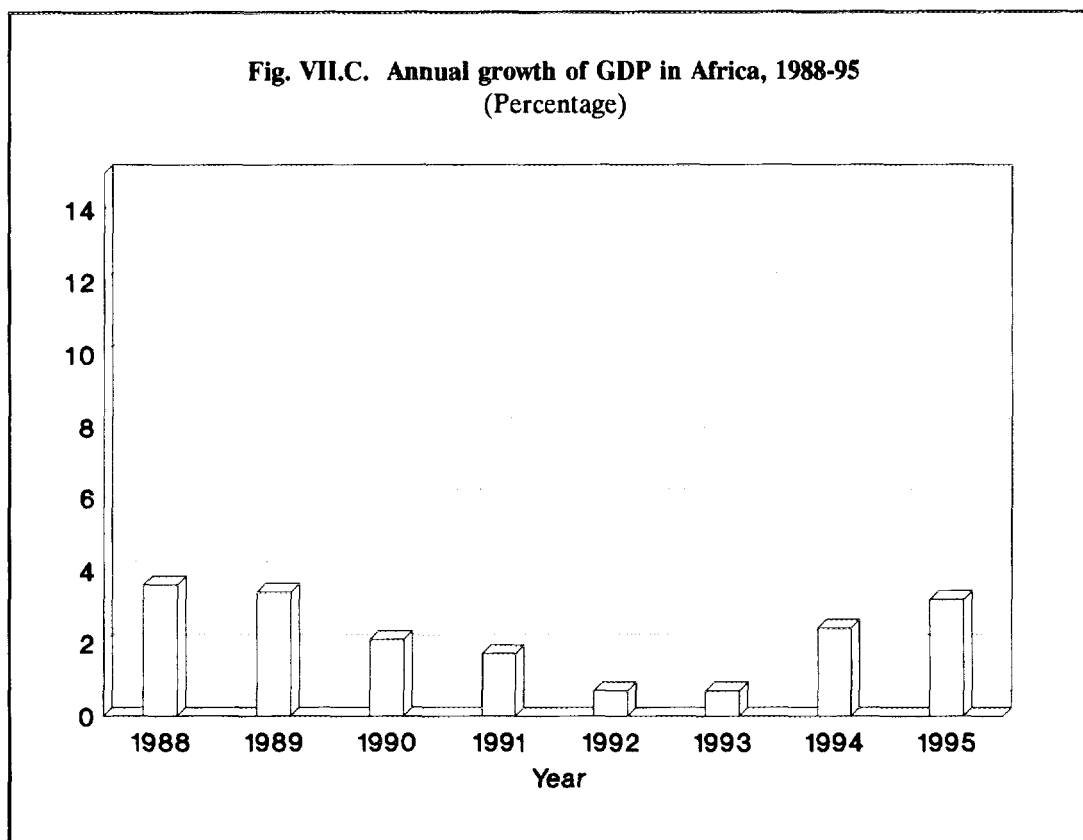
Within sub-Saharan Africa too, there are vast differences between the problems and prospects for oil exporters like Angola, Gabon, Congo and Nigeria, and the many least-developed economies without rich natural resource endowments and with small populations and markets.



Geographically also, there is great diversity. Southern Africa appears poised for significantly stronger growth than the east, west or centre, partly reflecting the positive spinoff of economic recovery in South Africa following the demise of apartheid. Continent-wide averages mask good progress made in a handful of sustained adjusters - countries that have implemented World Bank and International Monetary Fund-supported structural adjustment programmes with some success. Alongside these is a second group of atypical countries - Botswana, Mauritius, Swaziland - which maintained a strong economic performance without resort to substantial foreign aid and policy-driven adjustment programmes. Such exceptions notwithstanding however, the sub-Saharan economy has been increasingly marginalized over the past 20 years.







Although there is no single explanation for this situation, numerous studies blame economic failure in the region on an amalgam of internal and external influences:

- sharp declines in commodity prices;
- adverse shifts in the terms of trade;
- unfavourable climatic conditions;
- rapid population growth;
- high levels of political instability including ethnic conflicts and protracted civil war over the past decade in more than a dozen of the region's 47 countries;
- a crushing external debt burden;
- decreasing savings and investment rates;
- inadequate and deteriorating physical infrastructure; and
- declining institutional capacity in the form of weak governance, inefficient and corrupt administrations, and the decay of the public sector in the broadest sense, ranging from the judicial and tax systems to the administration of health and education.

Africa's economic decline is frequently blamed on external factors - especially adverse terms of trade. However, in constant prices Africa has experienced a positive income effect of terms of trade changes since 1960. African exporters have lost global market share even in products in which they have comparative advantage. In cocoa, coffee, rubber, tin and vegetable oils, African countries have lost market share to Southeast Asia - Malaysia, Thailand and Indonesia.

The growth of merchandise exports faltered from 2.8 per cent annually in the 1970s to 2.4 per cent a year between 1980 and 1992 (see Table VII.2). A major reason for this is Africa's failure - unlike Asia - to diversify its export base. Primary commodities including oil accounted for 76 per cent of total exports in 1992 compared with 83 per cent in 1970. The share of manufacturing in

total African exports has barely changed over the last 30 years, rising from 7 per cent in 1965 to 8 per cent in 1990.

**Table VII.2. Real growth in merchandise exports, 1970-92**  
(Percentage per year)

Region/Country	1970-80	1980-92
Sub-Saharan Africa	2.8	2.4
Indonesia	7.2	5.6
Malaysia	4.8	11.3
Thailand	10.3	14.7

Source: The World Bank Economic and Social Data Base (BESD).

The external environment facing any economy changes frequently. According to the IMF: "The poor economic performance of sub-Saharan African countries as a group, during the 1986-93 period, stemmed mainly from differences in policies pursued particularly in a context of a deteriorating external environment".<sup>1</sup> The IMF analysis concludes that, after population growth and unfavourable weather, inappropriate macroeconomic policies were the second most important factor contributing to the region's weak economic performance during the period. Successful adjustment occurred where macroeconomic stability was achieved but also where structural and institutional impediments to private sector development were alleviated.

While accepting the point made that generalizations mislead, it is nonetheless increasingly evident that Africa's poor performance has more to do with inappropriate policies, inadequate infrastructure and depleted institutional capacity, rather than adverse exogenous shocks.

## B. STRUCTURAL ADJUSTMENT

After 15 years and more of structural adjustment, it is widely acknowledged that the results have been disappointing, especially in spite of the very substantial support provided by the international donor community.

The relative failure of structural reform in Africa is explained by:

- flawed, inappropriate policy design;
- uncertain political commitment on the part of governments; and
- weak policy implementation reflecting the combination of inadequate institutional capacity.

Policy reform in sub-Saharan Africa has had mixed results. Performance during the last ten years of adjustment (1985-95) fell well short of expectations as real incomes continued to decline in sub-Saharan Africa and the income gap with the rest of the developing world, but especially with East and Southeast Asia, widened. Despite this, the IMF concludes that: "On average, countries that

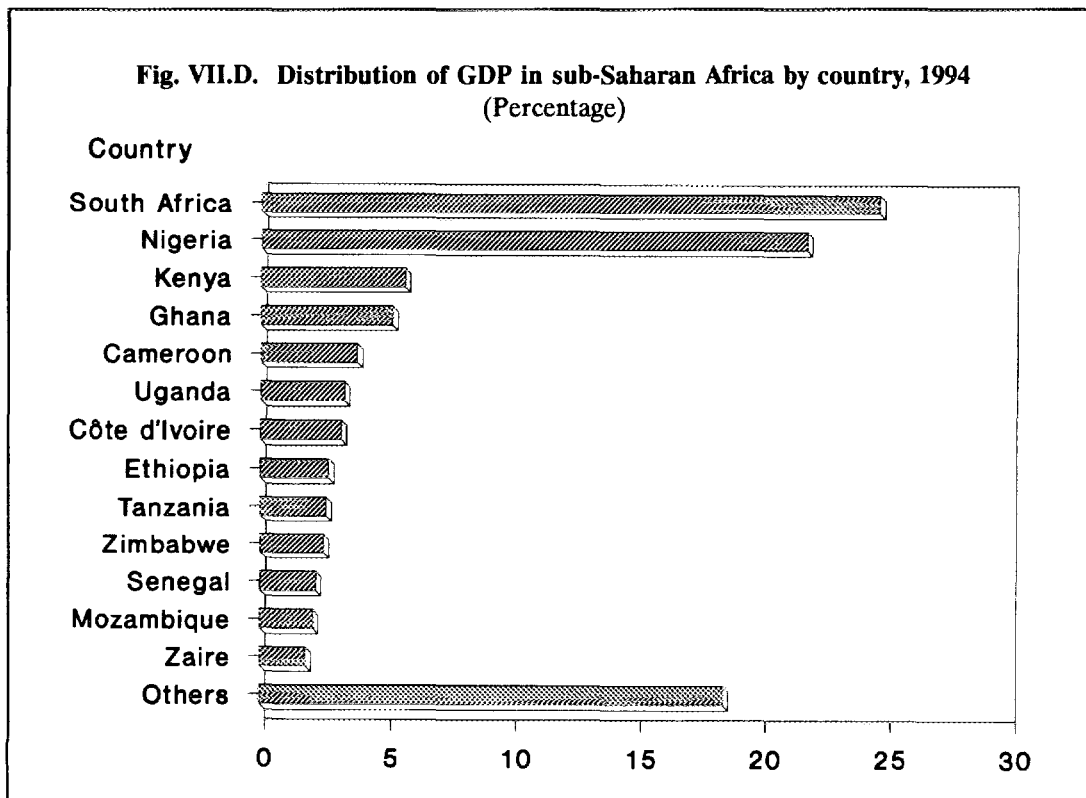
<sup>1</sup> IMF, *Sub-Saharan Africa, Growth Savings & Investment, 1986-1993*, January 1995, Occasional Paper No. 188, p. 56.

have adopted and effectively implemented broad-based macroeconomic and structural reforms have done better than others".<sup>2</sup>

This assessment begs a number of questions. Only a handful of the region's 47 countries have maintained reform programmes for a sustained period. For the CFA Franc Zone countries, the 1980s were a lost decade, as sporadic reform efforts were undermined by the overvalued exchange rate. The policy environment has improved markedly since the 50 per cent devaluation of the CFA Franc in January 1994, but this is too short a period for a meaningful assessment of the region's economic performance.

Some of sub-Saharan Africa's largest economies - in terms of population - have either failed to undertake serious reform at all (Zaire, Sudan, Ethiopia) or have abandoned the programme prematurely (Nigeria). Many countries have pursued stop-start strategies with periods of rapid reform interspersed with years of policy stagnation or regression - Kenya, Tanzania, Zambia, Malawi and Zimbabwe fit this mould.

While the region's largest economy (in terms of GDP), South Africa, embarked on a path of gradual reform in the 1980s, this was constrained throughout by a divisive social and political environment, which precluded meaningful progress until the advent of the first post-apartheid administration in May 1994.



Even the performances of the two countries most frequently cited as African structural adjustment success stories - Ghana and Uganda - are far from impressive by East and Southeast Asian standards. Both are still in recovery mode - making up some of the ground lost in the 1970s and 1980s. Ghana, which "graduated" from an IMF Enhanced Structural Adjustment Facility (ESAF)

in 1992, was unable to sustain its recovery and was forced back into the Fund's intensive care-ward in 1995.

Measuring the success of structural adjustment is bedeviled also by the fact that those who stuck to the reform path for prolonged periods - such as Ghana and Uganda - benefited from aid and debt-relief packages. The extent to which this support was responsible for economic performance, rather than a supply side response to improved policies, is unclear.

### **Critical mass**

Until the end of the 1980s, Africa's marginalization could be explained in terms of inappropriate domestic policies. But in the light of subsequent policy reform, this explanation will no longer suffice. In most cases the implementation of the reform process has been poor. There is no doubt that weak implementation, partly attributable to inadequate institutional capacity, is to blame for the relative failure of structural adjustment in Africa. Not only that, but the region's depleted and rundown infrastructure also inhibited the supply response that might otherwise have been achieved.

Civil war and social unrest (Angola, Mozambique, Liberia, Rwanda, Somalia, Sudan, Burundi, South Africa) have undermined economic reform, forcing governments and donors to divert scarce resources to security and military spending or emergency humanitarian programmes (in the case of donors).

Missing has been the "critical mass" necessary for reform to succeed. Trade liberalization, deregulation and privatization cannot thrive in the absence of a conducive enabling environment. Economic policy reform cannot succeed in the absence of political stability, the rule of law, the protection of property rights, and a stable, transparent business environment.

Whatever the achievements of 15 years of structural reform in Africa, the hard reality remains that the strategy has failed to provide a solution to the crucial development problems of the mid-1990s and beyond:

- the need to revive private sector investment, including the attraction of foreign direct and portfolio investment;
- the need to globalize - to share in the rapid growth of world trade and foreign investment;
- the need to reverse the declining role of industry in general, although there are signs of industrial recovery in some countries;
- the need to attain self-sustaining growth as distinct from an often unsustainable dependence on foreign aid; and
- the need to alleviate poverty.

### **C. INVESTMENT**

In the 1970s, sub-Saharan Africa invested almost 26 per cent of GDP (see Table VII.3) - a higher ratio than those of either all developing countries (22.4 per cent) and East Asia (24.6 per cent). But by the first half of the 1990s this had fallen to 16.3 per cent, primarily because public sector investment had more than halved, partly in response to adjustment programme pressure to cut

public sector deficits. The investment decline also reflected the drying up of foreign funding, especially in the wake of the Latin American debt crisis of the early 1980s.

**Table VII.3. Investment by region, weighted averages, 1970-94**

	1970-79	Percentage of GDP 1980-89	1990-94
Sub-Saharan Africa			
Private	12.2	9.8	10.0
Public	13.6	9.5	6.3
Total	25.8	19.3	16.3
Latin America and the Caribbean			
Private	13.2	14.1	14.7
Public	6.8	6.3	5.4
Total	20.0	20.4	20.1
East Asia			
Private	18.0	19.4	25.5
Public	6.6	8.2	8.5
Total	24.6	27.6	34.0

Source: International Finance Corporation, *Trends in Private Investment in Developing Countries 1990-94*, 1995, Discussion Paper No. 28.

It has been estimated that the African region must invest 13 per cent of GDP merely to maintain its existing capital stock but, in the first half of the 1990s, with gross investment averaging 16.3 per cent of GDP, net investment was barely positive at 3.5 per cent of GDP. Evidence shows that public sector investment is positively correlated with private sector capital formation. Investment in infrastructure and human capital "crowds in" rather than "crowding out" private sector investment. A one percentage point increase in the ratio of public investment to GDP raises the ratio of private sector investment to GDP by 0.25 of a percentage point. Accordingly, reductions in public sector capital spending, far from crowding in private sector investment, have had the opposite effect - another instance of the absence of "critical mass".<sup>3</sup>

Other deterrents to private sector investment include the weak infrastructure, high levels of policy ambivalence and uncertainty, the heavy foreign debt burden, and high levels of domestic inflation and exchange rate volatility.

Furthermore, where policy measures are perceived by the markets to be temporary, entrepreneurs will postpone investment decisions. Even where policy credibility exists and reforms are deemed to be irreversible, inadequate public sector investment - especially in infrastructure - will constrain private sector capital spending.

Throughout the region, including South Africa, external financing will be a key factor driving both public and private sector investment, since domestic savings levels are inadequate to the task. The sample of seven sub-Saharan economies presented in Table VII.4 shows the investment ratio falling in five cases, with only two, Ghana and Mauritius, showing increased capital spending and strong investment recovery in the early 1990s.

<sup>3</sup> International Finance Corporation, *Trends in Private Investment in Developing Countries 1990-94*, 1995, Discussion Paper No. 28.

**Table VII.4. Investment ratios in adjusting economies, 1970-94**  
(Percentage of GDP)

Country	1970-79	1980-89	1990-94
<b>Côte d'Ivoire</b>	..	<b>15.5</b>	<b>9.1</b>
Private		7.3	5.2
Public		8.2	3.9
<b>Ghana</b>	..	<b>10.1</b>	<b>14.8</b>
Private		3.8	5.9
Public		6.3	8.9
<b>Kenya</b>	<b>21.5</b>	<b>19.9</b>	<b>19.0</b>
Private	12.7	11.6	10.3
Public	8.8	8.3	8.7
<b>Malawi</b>	<b>23.7</b>	<b>15.0</b>	<b>14.4</b>
Private	8.7	5.4	5.7
Public	15.0	9.6	8.7
<b>Mauritius</b>	<b>27.5</b>	<b>21.4</b>	<b>29.6</b>
Private	18.8	14.0	19.9
Public	8.7	7.4	9.7
<b>Nigeria</b>	<b>24.9</b>	<b>15.3</b>	<b>14.4</b>
Private	9.2	6.3	6.2
public	15.7	9.0	8.2
<b>South Africa</b>	<b>26.9</b>	<b>23.5</b>	<b>17.0</b>
Private	13.9	13.7	11.7
Public	13.0	9.8	5.3

Source: International Finance Corporation, *Trends in Private Investment in Developing Countries 1990-94, 1995*, Discussion Paper No. 28.

More than half of recovery in the Ghana is attributable to public sector investment, with private investment remaining depressed. In the remaining five countries, the decline in investment is attributable to lower private and public sector investment, except in Kenya where public investment has risen in the most recent period. The decline in public investment is most marked in South Africa, where the trend in declining private investment has been reversed since 1994.

### Foreign capital

More than 90 per cent of net inflows to sub-Saharan Africa (excluding South Africa) emanate from official sources, mostly on concessional terms. Official Development Assistance (ODA) flows to Africa rose substantially during the 1980s, but have recently stabilized at just over 35 per cent of global ODA (see Table VII.5), while Asia - with a far larger population - accounts for 30 per cent. More recently, ODA flows to Africa increased to \$16.9 billion in 1995 from \$15.4 billion the previous year, and the region has been the largest recipient of official assistance throughout the 1990s.

The region's heavy dependence on official flows allied with the continuing build-up of arrears in respect of foreign debt servicing has imposed a huge, and in many cases unsustainable, burden on individual countries. In 1995, the debt to export ratio was 270 per cent and that for debt to GNP was 74 per cent. However, if South Africa is excluded, the position deteriorates dramatically to

389 per cent for exports and 119 per cent for GNP, as compared with ratios of 150 per cent and 38 per cent for developing countries as a whole.

Excluding South Africa the debt service ratio deteriorated to 19.5 per cent in 1995 from 17.4 per cent the previous year. Interest arrears have more than doubled since 1990, rising from \$9.9 billion to \$20.4 billion in 1995, while principal arrears rose 130 per cent over the same period to \$41.3 billion.

**Table VII.5. ODA flows to sub-Saharan Africa, 1983-94, selected periods**  
(Per cent of total ODA)

	Per cent of total ODA			ODA as percentage of GDP 1993-94
	1983-84	1988-89	1993-94	
Sub-Saharan Africa	30.8	39.4	36.6	11.3
Mozambique	0.9	2.3	2.4	87.8
Côte d'Ivoire	0.6	1.1	2.4	14.0
Ethiopia	1.4	2.3	2.2	17.6
Tanzania	2.3	2.6	1.9	38.2
Kenya	1.6	2.5	1.6	11.8
Zambia	0.9	1.1	1.6	25.2
Somalia	1.4	1.1	1.4	85.4
Uganda	0.6	1.1	1.4	19.7
Cameroon	0.6	1.0	1.3	6.6
Ghana	0.6	1.7	1.2	8.2
Rwanda	0.6	0.6	1.1	35.7
Zimbabwe	1.0	0.7	1.1	9.2
Sudan	3.2	2.3	0.9	6.8
Madagascar	0.7	0.9	0.7	10.8
Congo	0.4	0.2	0.5	10.5
Nigeria	0.2	0.6	0.5	0.7
Zaire	1.2	1.7	0.4	2.6

Source: OECD, *Development Cooperation*, Report of the Development Assistance Committee 1995, OECD, 1996.

#### D. EXPORTS

Post-1975 developing country success stories have, without exception, been export driven. From the mid-1950s to 1990, sub-Saharan Africa's share of global exports declined more than 60 per cent to 1.2 per cent from 3.1 per cent. As a result, the region "lost" foreign currency earnings equivalent to some \$65 billion at 1990 prices. OECD protectionism was not to blame. Pre-Uruguay Round (URA) tariffs facing African exports to the TRIAD regions of the EU, the USA and Japan averaged almost 20 percentage points lower than those facing the Asian NIEs when they embarked on their highly successful export-led growth strategy. Furthermore, Lomé preferences give African exporters an edge over their non-ACP competitors (Chapter IV).<sup>4</sup>

Nor can OECD non-tariff barriers (NTBs) be held responsible, since the share of African exports subject to non-tariff barriers (11 per cent) is less than half that for other developing countries.

<sup>4</sup> This section draws heavily on Azita Amjadi, Ulrich Reinke and Alexander Yeats, *Did External Barriers Cause the Marginalization of Sub-Saharan Africa in World Trade?* World Bank, March 1996, Policy Research Working Paper No. 1586.

As a result of Uruguay Round tariff reductions, the NTB coverage ratio for sub-Saharan Africa's non-fuel exports will fall from 11 per cent to around 3 per cent.

Three features of sub-Saharan Africa's export trade stand out:

- a higher concentration of sales to developed country markets - and especially to Europe - than for developing countries as a whole;
- a heavy dependence on commodity trade, with exports of manufactures accounting for only 19 per cent of the total compared with 54 per cent for all developing countries; and
- a strong concentration of exports within a handful of countries. Two countries, South Africa (42 per cent) and Nigeria (16 per cent) account for some 58 per cent of regional exports (see Table VII.6).

In the early 1990s, sub-Saharan Africa's exports totalled \$54.7 billion of which just over 80 per cent was sold to developed economies, with Europe accounting for 51.2 per cent. North America was the region's second largest market (22.1 per cent), with Japan accounting for 5.6 per cent and other developing regions 16.1 per cent (7.5 per cent being intra-African trade).

**Table VII.6. Sub-Saharan Africa's main exporters, 1990 and 1994**

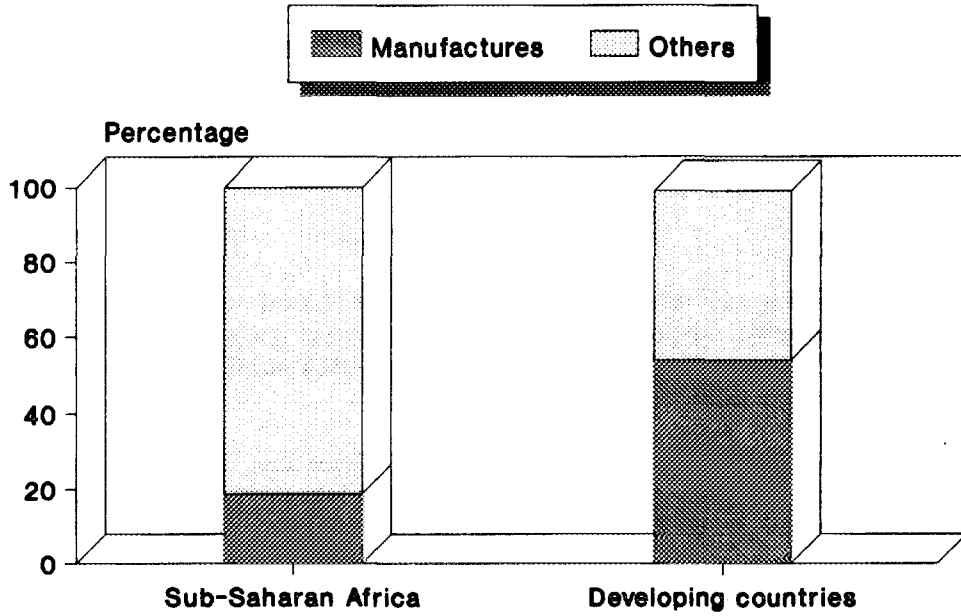
Country	Value 1994 (\$ billions)	Share of manufactures in total exports, 1990 (Percentage)
South Africa	15.0	34.4
Nigeria	9.4	2.1
Angola	3.6	1.0
Côte d'Ivoire	2.7	16.8
Gabon	2.3	3.4
Cameroon	2.0	15.2
Botswana	1.8	
Kenya	1.6	17.3
Zimbabwe	1.3	30.9
Ghana	1.3	13.4
Zambia	1.1	11.2
Mauritius	1.2	68.1

*Sources:* World Bank, *Global Economic Prospects 1996*; Amjadi, Reinke and Yeats, *Did External barriers Cause the Marginalization of sub-Saharan Africa in World Trade?* World Bank, March 1996, Policy Research Working Paper No. 1586.

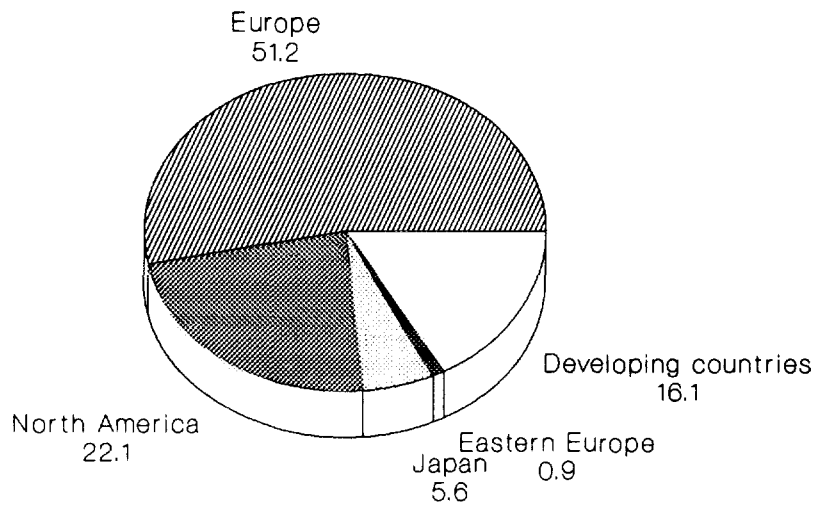
The structure of Africa's exports is crucial because raw materials typically face low or zero tariffs with relatively few NTBs, except, of course, for food and agricultural products. The region's four largest exports to the OECD, accounting for two-thirds of sales to industrialized countries (crude petroleum, precious stones, cocoa and coffee) are not subjected to non-tariff measures in the EU, Japan or the USA, although Japan does apply quantitative restrictions to some refined petroleum products. Most of the items enter OECD markets duty free, although the EU does impose tariffs of 8 per cent to 16 per cent on some coffee extracts and coffee products above the roasted bean stage of processing.



**Fig. VII.E. Structure of exports, sub-Saharan Africa and developing countries, 1990**  
(Percentage)



**Fig. VII.F. Destinations of Africa's exports, 1991**  
(Percentage)



Most of Africa's exports to the EU are concentrated in relatively few tariff lines and EU trade preferences cover a substantial share of these items. Preferences result in at least 97 per cent of each sub-Saharan country's exports entering the EU duty-free. The comparisons with Taiwan Province of China and the Republic of Korea are striking. Only 4 per cent of Taiwanese exports have duty-free access to the EU, while the figure for the Republic of Korea is similar.

In Europe, the average pre-URA tariff facing Africa typically ranges from zero to 0.3 per cent, while the average preference margins received are in the range of two to four percentage points. Although margins vary, the average tariffs faced by African exporters were "well below" those paid by other exporters.<sup>5</sup>

### Clothing and textiles

However, the situation is very different for Africa's clothing and textiles sector, primarily because the USA does not provide any preference for these items except quota-free access for selected African countries. As a result, African countries face post-URA tariffs on textiles and clothing that may exceed 25 per cent.<sup>6</sup>

Unlike agriculture where the removal of most NTBs is occurring immediately, a high proportion of existing restrictions for clothing and textile exports from Africa could remain in place until the end of the ten-year phase-out period. Sub-Saharan exporters will face increased competition when barriers facing other, rival, exporters are liberalized. Accordingly, the ability of African countries to develop and maintain viable textile and clothing exports will depend on their improving their cost competitiveness while also enhancing quality, style, design and delivery. The protracted phase-out period will give governments and firms ample time to make the necessary adjustments.

The experience of North African and sub-Saharan exporters to the EU has been very different. In 1983, North Africa exported garments worth \$540 million to the EU. Ten years later, this had increased 557 per cent to \$3.6 billion. In contrast, sub-Saharan exports, which increased a mere 25 per cent between 1985 and 1992, fell slightly in 1993/94, though in part this reflected recession in the EU.

Sub-Saharan garment exporters to the EU benefit in two main respects:

- clothing exports are not subjected to quantitative restrictions; and
- under the Lomé Convention they are exempt from tariffs, provided the garments qualify as originating products.

The phase-out of the Multifibre Arrangement (MFA) could have far-reaching consequences for Africa because it will remove an existing incentive for TNCs to source products from quota-free countries in the region. In the past, such quantitative restrictions (QRs) on clothing imports have led TNCs to seek new sources of supply, mostly in Eastern Europe and North Africa.

The only sizeable sub-Saharan exporter of garments to the EU is Mauritius with exports of \$500 million in 1993. Over 60 per cent of these exports were in product categories currently covered by quotas, but as a Lomé signatory, Mauritius is exempt from such quantitative restrictions.

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<sup>5</sup> *Ibid.*, p. 19.

<sup>6</sup> *Ibid.*, p. 19.

The fact that sub-Saharan Africa is currently exempt from QRs offers a window of opportunity for developing clothing and textile exports, especially to the EU, over the next ten years. But the eventual abolition of the MFA in 2005 means that African exporters have only ten years to take advantage of this privileged position.<sup>7</sup>

Unfortunately, while the Fourth Lomé Convention provides duty-free access for "originating products", African exporters often find difficulty in satisfying the rules of origin. The elimination of tariff ceilings and fixed duty-free amounts in the revised 1995 EU-Generalized System of Preferences (GSP) means that Lomé signatories and least developed countries (under the GSP) are now the only nations with duty-free access to the EU market. But the advantages of this depend on meeting the rules of origin. This means that a garment exporting country is virtually required to have an upstream textile industry to qualify for duty-free access.<sup>8</sup> Furthermore, the general tariff reductions under the URA have further reduced the importance of duty-free access because the existing tariff level is both low and declining.

### **Impact of the Uruguay Round on tariffs**

Overall, the Uruguay Round Agreements reduced industrial countries' tariffs by some 40 per cent. For 44 sub-Saharan countries, pre-URA most-favoured-nation (MFN) tariffs averaged 4.56 per cent. As a result of the URA, the MFN tariff on African exports will fall to 2.68 per cent - a reduction of 1.78 percentage points in the average preference margin for the region as a whole.<sup>9</sup>

### **Non-tariff barriers**

Approximately \$5.9 billion of African exports to OECD countries face NTBs. The URA is likely to have little impact on most African countries, which fall into three distinct categories. The largest group (21 countries), with very low NTB coverage ratios before the Round are unlikely to gain much, although they could suffer from aggressive competition from countries previously constrained by the MFA or by voluntary export restraints (VERs).

A second group of eight countries with high NTB coverage ratios stand to benefit significantly - Cameroon, Cape Verde, Congo, Malawi, Mauritius, Reunion, Seychelles and Zimbabwe - though they too will face more aggressive international competition.

A third category of 15 "moderately NTB affected" countries, have relatively high NTB coverage ratios that were not reduced by the URA. Despite this, the Round has had a major impact in reducing the non-tariff barriers facing African exporters.<sup>10</sup>

### **Implications of the Uruguay Round**

Different views prevail on the impact of Uruguay Round Agreements on the industrial prospects of the African countries. While some researchers make optimistic claims about the benefits accruing to African countries, other treat such claims with caution in the light of increased

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<sup>7</sup> Tyler Biggs, Margaret Miller, Caroline Otto, and Gerald Tyler, *African Can Compete!*, World Bank, June 1996, Discussion Papers No. 300.

<sup>8</sup> *Ibid.*, p. 42.

<sup>9</sup> Amjadi, Reinke and Yeats, *op. cit.*, p. 24.

<sup>10</sup> *Ibid.*, p. 56.

competitive pressures from potential competitors. The industrial implications of URA at the industrial subsector level will need to be analyzed, with a focus on the required industrial capacity to seize trade and investment opportunities unveiled by URA in an increasingly competitive trade environment.

The World Bank argues that Uruguay Round Agreements are unlikely to have a major impact on sub-Saharan Africa, either in terms of lost preferences or of major increases in demand for the region's traditional exports. Africa's gains will be indirect - the spin-off of increased trade with other beneficiaries.

The reality is that Africa already has favourable access to TRIAD markets, especially in the EU and Japan. A recent analysis by the World Bank<sup>11</sup> concludes:

- That any loss of preferences as a result of the Uruguay Round Agreements is unlikely to be great and "may well be compensated by gains in other markets through trade creation". The only measurable losses are likely to be in the EU, but these will be "more than compensated" by trade creation gains in other markets. However, the net gain is likely to be "so small as to be unnoticeable in comparison with other factors influencing exports and development in Africa".
- That average tariffs faced by African countries after the Round will be "very small indeed" and that least developed countries will enjoy essentially duty-free market entry.
- That the coverage of non-tariff barriers will be reduced very considerably from around 11 per cent before the Round to 3 per cent afterwards.
- That the burden of higher food bills "appears overstated".
- That the conversion of NTBs to tariffs for agricultural imports should increase export opportunities for African countries while substantially reducing the level of price instability in global markets for agricultural goods.
- That tariffs do not appear to have been a major constraint on the further processing and export of African commodities. "Tariff escalation" is not a general problem though it does apply to some value-adding activities.
- That the demands placed on African countries in terms of their own commitments under the Round are "very modest" and should not pose serious transitional difficulties.
- That African countries have chosen to bind their tariffs at "very high levels" and well in excess of actual tariffs, with many above 100 per cent.

#### **Policy is the problem - not trade barriers**

Accordingly, the overriding policy conclusion - and one that applies to many other aspects of African development - is that the Uruguay Round will create future opportunities for those countries that undertake the necessary domestic economic and trade reforms. It is inappropriate domestic policies that have undermined the region's economic performance, rather than adverse external conditions.

In this sense the Uruguay Round represents a missed opportunity. In the words of one analyst: "Sub-Saharan Africa has not used the Round to support domestic efforts at trade policy reform.

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Peter Harrold, *The Impact of the Uruguay Round on Africa*, World Bank, 1995, Discussion Papers No. 311.

As most models showed that most gains from the Round would come from countries' own liberalization efforts, sub-Saharan Africa, by not making liberalization commitments in the Round, may have thereby lost one opportunity for gains".<sup>12</sup>

However, there are measures that OECD countries could - and should - take that would improve Africa's growth prospects. These include:

- Including labour-intensive manufactures (textiles, clothing, footwear) in preference schemes from which they are currently excluded, as in the case of the USA.
- Given the obvious - and continuing - importance of resource-based industrialization in Africa, OECD preferences should be extended to cover those processed product stages currently subjected to MFN tariffs.
- Quotas and ceilings should be removed from preference schemes.

### Openness

However, even without changes, the external environment for exports facing Africa today, especially once Uruguay Round reforms take effect, is considerably more favourable than that which was overcome by the Asian NIEs.<sup>13</sup> At root, Africa's poor economic performance has more to do with the region's inability - or failure - to implement appropriate policies that would enable its exporters to exploit favourable global developments. The relative degree of openness can be gauged from the global openness rankings of countries presented in Table VII.7.

This trend is forecast to accelerate over the next decade in both sub-Saharan and North Africa, although trade ratios (exports plus imports as a percentage of GDP) are forecast to increase to around 45 per cent by 2004 from 38 per cent at the end of the 1980s.

Domestic reform is contributing towards greater integration with the global economy. Table VII.8 illustrates the major reforms undertaken by selected sub-Saharan countries since the mid-1980s.

The lesson to be learned from the low ratios for most African countries is that there is enormous scope for the region to step up its involvement in global business. Table VII.9 shows the contrast in the success of Asian countries in increasing their market share of global trade with that of other developing regions.

As a proportion of global trade, Asia's exports to OECD countries virtually trebled between 1970 and 1994 from 3.3 per cent to 9.5 per cent. Over the same period, developing countries as a whole increased their market share of global trade from 19.1 per cent to 31.4 per cent. This was almost entirely the result of Asia's 13.1 point gain in its share in global trade, from 4.9 per cent in 1970 to 18 per cent in 1994. Indeed, Asia's market share gain (13.1 per cent) more than offset the 11.4 per cent market share loss of the OECD countries, indicating that Asian countries took share from other developing regions as well as from the OECD.

Africa's share of trade with its main market - the OECD - more than halved from 3.1 per cent to 1.3 per cent, while both the Middle East and the Western hemisphere also lost ground. Similarly, almost all the growth in intra-developing country trade was the result of increased exports from Asia to other developing regions.

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<sup>12</sup> Piritta Sorsa, "Sub-Saharan Africa and the Uruguay Round", *World Economy*, March 1996, p. 304.

<sup>13</sup> Amjadi, Reinke and Yeats, *op. cit.*, p. 17.

**Table VII.7. African economies: openness rankings**

Country	Percent	Global ranking
Botswana	64.1	16
Swaziland	62.5	17
Seychelles	61.9	19
Gabon	61.8	20
Mauritius	40.2	37
Côte d'Ivoire	39.5	38
Gambia	36.3	42
Equatorial Guinea	35.8	43
Liberia	33.0	45
Congo	31.7	47
Zambia	31.0	49
Guinea	30.0	51
Mauritania	28.4	54
Tunisia	27.7	55
Togo	26.7	57
Senegal	20.9	67
Zimbabwe	20.8	68
Comoros	20.1	69
Cameroon	18.4	72
South Africa	17.7	78
Lesotho	16.9	81
Sao Tomé & Príncipe	16.9	82
Morocco	16.2	84
Chad	15.8	86
Mali	15.7	88
Burkina Faso	15.3	89
Algeria	14.1	93
Malawi	13.9	94
Niger	13.2	97
Nigeria	12.6	101
Kenya	11.6	103
Central African Republic	11.0	105
Guinea-Bissau	10.9	106
Egypt	10.9	107
Tanzania	10.9	108
Madagascar	9.9	110
Zaire	9.6	111
Ghana	8.9	112
Burundi	8.5	113
Uganda	8.3	114
Sierra Leone	7.8	116
Ethiopia	7.8	118
Rwanda	7.6	119
Somalia	5.7	126
Sudan	4.5	129

Source: Shigeru Otsubo, *Globalization - A new Role for Developing Countries in an Integrating World*, World Bank, July 1996, Policy Research Working Paper No. 1628.

Note: The openness rankings are compiled using real (1987 US\$) values of exports and imports of merchandise for the period 1990-92 and calculating the trade ratio as a percentage of GDP evaluated using IMF purchasing power parity (PPP) scales.

**Table VII.8. Representative trade reforms in selected African countries since the mid-1980s**

Country	Year began	Year of major reform	Average tariff rates		Quantitative restrictions	
			Pre-reform	Post-reform	Pre-reform	Post-reform
Ghana	1986	1986	30.0	17.0	all <sup>a/</sup>	2 <sup>a/</sup>
Kenya	1988	1988	40.0	34.0	71.0	0.2
Madagascar	1987	1987	46.0	36.0	all	0.0
Malawi	1988	1988	25.5		all	few
Nigeria	1986	1986	35.0	32.7	all	17.0
Tanzania	1984	1984	30.0	33.0	nearly all	100.0
Zaire	1983	1986	23.8	24.7	100.0	100.0

Country	Black Market premium		Real effective exchange rate		Trend in imports/GDP ratio	
	Pre-reform	Post-reform	Pre-reform	Post-reform	Pre-reform	Post-reform
Ghana	984.6	16.5	-7.0	-11.1	-4.5	5.9
Kenya	16.3	18.8	-1.3	-5.4	-1.4	-6.0
Madagascar	37.4	13.0	-7.7	-11.2	-5.9	-2.2
Malawi	50.7	12.1	5.2	5.4	3.7	-1.7
Nigeria	209.7	27.4	-62.3	-71.2	-19.5	2.9
Tanzania	241.8	118.7	28.8	-145.2	-3.3	-2.2
Zaire	71.1	9.4	-5.6	-13.1	-5.0	-2.4

Country	Trend in exports/GDP ratio		Trend in trade/GDP ratio	
	Pre-reform	Post-reform	Pre-reform	Post-reform
Ghana	-3.7	-0.3	-4.1	2.9
Kenya	-2.0	-0.6	-1.6	-3.9
Madagascar	2.7	3.1	-1.7	0.1
Malawi	-1.7	-2.7	0.6	-2.3
Nigeria	-9.2	1.2	-13.7	1.8
Tanzania	-6.2	-1.3	-4.3	-1.9
Zaire	-2.2	-0.2	-3.5	-1.2

Source: S. Otsubo, *Globalization*, World Bank, July 1996, Policy Research Working Paper.

a/ Estimate.

### The impact of transport costs on manufacturing

In contrast to the "relatively minor" role of tariffs and NTBs in constraining African exports, transport costs have a "significant negative impact" on African exports and the location of manufacturing activity. Freight rates for African exports are some 20 per cent higher than those faced by the region's competitors (see Table VII.10). For some exports in which Africa has a potential competitive advantage (clothing, textiles and footwear) African transport costs range between 15 per cent and 20 per cent.

Indeed, average *ad valorem* transport costs for all sub-Saharan exports (8.7 per cent) are more than eight points higher than the average import tariff on such goods (0.5 per cent).

With the post-URA average tariff on US imports from all sources at less than 4 per cent, freight costs of 15 per cent to 25 per cent are a far greater barrier to export growth than either tariffs or

NTBs. The implications for industrialization are stark. International freight costs are a major deterrent to value-added processing in Africa.

**Table VII.9. Shares in world trade, 1970-94, selected years**  
(Per cent of total)

Export from	Export to	1970	1980	1990	1994
OECD	OECD	58.1	46.8	55.2	47.9
	Developing countries	19.3	20.2	16.6	19.3
	Africa	3.6	3.2	1.7	1.3
	Asia	5.3	5.4	7.2	9.4
	Middle East	2.2	4.6	2.3	2.1
	Europe	3.3	3.0	2.7	2.6
	Western Hemisphere	4.8	4.1	2.8	3.8
Developing countries	OECD	14.1	20.2	16.9	18.1
Africa	OECD	3.1	2.3	1.7	1.3
Asia	OECD	3.3	5.3	7.6	9.5
Middle East	OECD	2.1	7.6	2.7	1.9
Europe	OECD	1.2	1.2	2.1	2.3
Western Hemisphere	OECD	4.3	3.7	2.7	3.1
Developing countries	Developing countries	5.0	8.9	9.9	13.3
Africa	Africa	0.4	0.2	0.2	0.2
Asia	Asia	1.1	2.2	4.5	7.1
Middle East	Middle East	0.2	0.5	0.4	0.2
Europe	Europe	1.5	1.6	1.0	1.4
Western Hemisphere	Western Hemisphere	1.0	1.2	0.7	0.9
			Shares in global exports		
OECD		77.4	67.0	72.1	66.0
Asia		4.9	8.6	13.2	18.0

Source: IMF, Direction of Trade Statistics, 1995.

**Table VII.10. African transport costs for exports to the USA, 1990/91**  
(Percentage)

Region	Average nominal freight rate	
	Africa	Other Countries
All sub-Saharan Africa	8.7	7.2
East and southern Africa	6.8	5.3
Mauritius	7.1	5.8
Nigeria	5.8	7.6
West Africa	11.3	10.0
South Africa	4.5	4.3

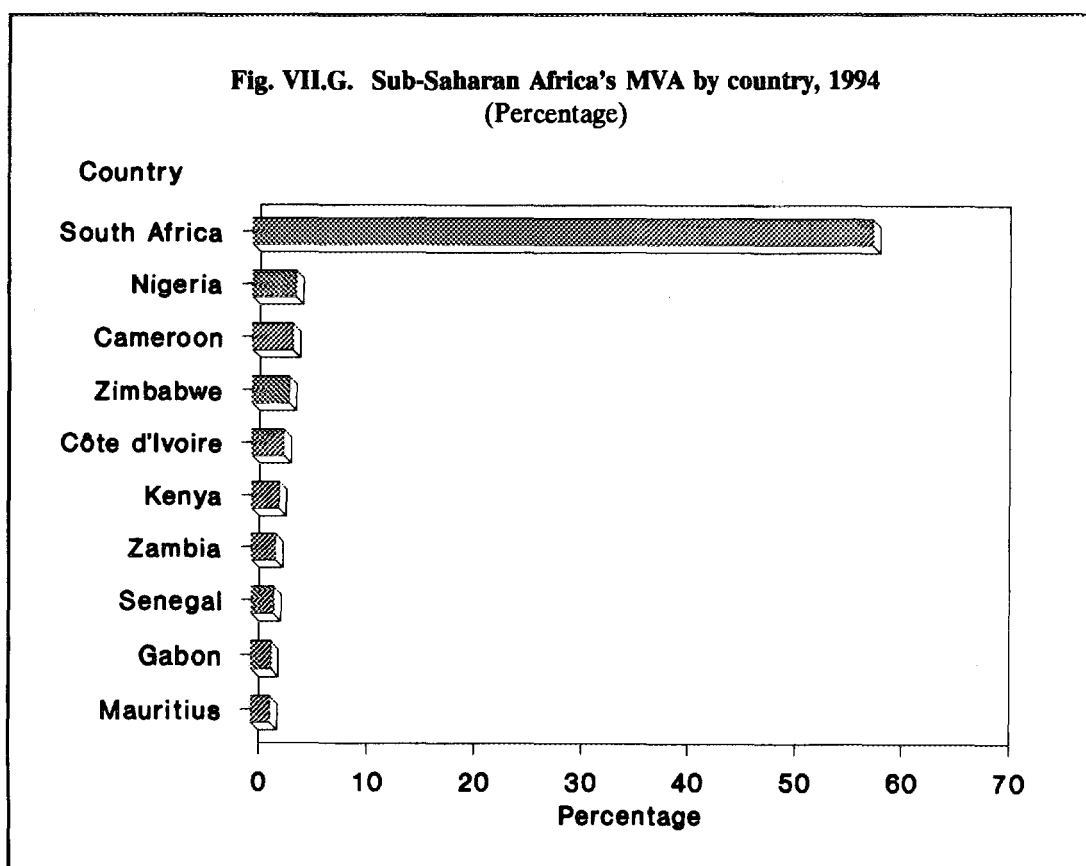
Source: World Bank, *Global Economic Prospects 1996*; Amadi, Reinke and Yeats, *Did External barriers Cause the Marginalization of sub-Saharan Africa in World Trade?* World Bank, March 1996, Policy Research Working Paper No. 1586.



It has been estimated that sub-Saharan Africa's net freight and insurance payments totalled \$3.9 billion in 1990/91 - about 15 per cent of the region's export earnings. Net transport and insurance payments average more than 25 per cent of total exports for 10 of the 30 countries for which data were available. For ten landlocked countries, the ratio was high as 42 per cent. For all developing countries, the net transport cost to export ratio is 5.8 per cent compared with Africa's 15 per cent.<sup>14</sup>

#### E. INDUSTRIALIZATION

Sub-Saharan Africa has lost market share in terms of manufacturing value added (MVA) with its share of global manufacturing production halving from 0.6 per cent in 1970 to 0.3 per cent in 1995. While the share of manufacturing in GDP increased during the 1960s from 7 per cent to a peak of 12.3 per cent in 1973, it has since declined to 9.8 per cent. Between 1970 and 1994, MVA (at constant 1990 prices) grew by 2.0 per cent annually - well below the population growth rate - so that MVA per capita declined significantly (Table VII.11).



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Azita Amjadi and Alexander Yeats, *Non-tariff Barriers Africa Faces*, World Bank, March 1995, Policy Research paper No. 1439.

**Table VII.11. Industry in Africa, 1970 and 1994**

Country	Manufacturing value added			MVA per capita	
	1970 (\$ million in 1990 prices)	1994	Growth (1984-94) Per cent per year	1970 (\$ in 1990 prices)	1994 (\$ in 1990 prices)
Angola	2,365	326	-9.2	423	31
Benin	122	180	5.8	45	34
Botswana	25	175	6.5	39	121
Burkina Faso	155	287	2.0	28	29
Burundi	40	167	2.4	11	27
Cameroon	444	1,437	1.0	67	125
Central African Republic	94	166	-4.2	26	27
Congo	112	200	-2.3	89	87
Côte d'Ivoire	677	1,141	-3.0	123	84
Ethiopia	178	385	2.3	6	7
Gabon	286	722	-0.1	566	517
Ghana	644	582	5.4	74	34
Guinea	47	122	7.3	12	18
Kenya	208	976	4.6	18	36
Lesotho	8	95	10.6	8	44
Liberia	50	61	-2.8	36	21
Madagascar	278	268	1.4	41	19
Malawi	89	267	1.2	19	25
Mali	58	227	4.0	11	22
Mauritania	45	160	6.9	36	69
Mauritius	105	667	9.9	127	604
Mozambique	606	477	4.7	65	27
Namibia	109	142	1.4	137	95
Niger	109	184	3.4	26	21
Nigeria	457	1,559	2.7	8	16
Reunion	102	313	4.0	221	486
Rwanda	153	132	-7.0	41	17
Senegal	374	766	2.1	90	95
Sierra Leone	43	85	2.7	16	19
Somalia	27	42	3.4	6	5
South Africa	13,511	22,657	-0.1	602	559
Sudan	408	453	-0.5	30	17
Tanzania	76	107	2.2	6	4
Togo	159	87	-3.3	79	21
Uganda	276	259	9.0	28	13
Zaire	70	35	-4.3	4	0.8
Zambia	508	856	1.9	121	93
Zimbabwe	644	1,313	2.6	122	119
<b>TOTAL (including others)</b>	<b>23,563</b>	<b>39,106</b>	<b>2.0<sup>a/</sup></b>	<b>39<sup>a/</sup></b>	<b>32<sup>a/</sup></b>

Source: UNIDO Database.

a/ Excluding South Africa.

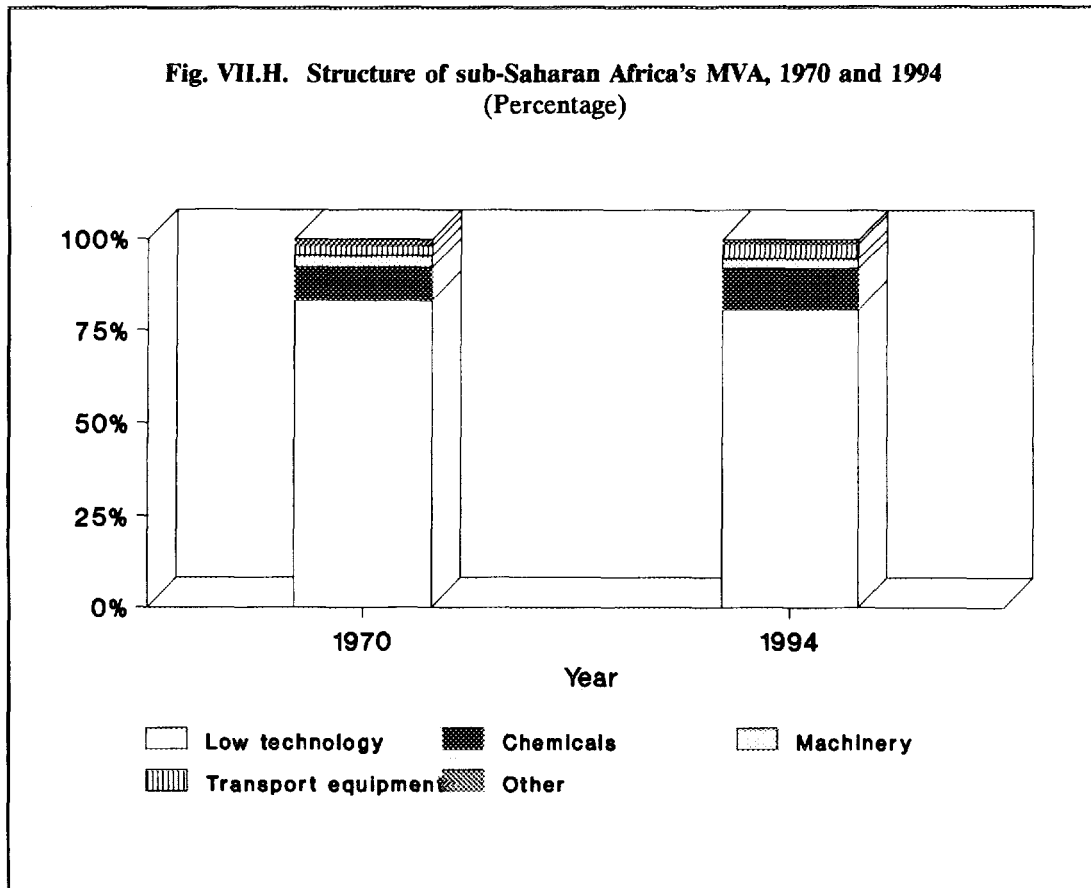
The pattern of industrialization is very lopsided with six countries contributing almost three-quarters of regional MVA. One country - South Africa - accounts for 58 per cent of regional MVA, while the five next most industrialized states - Nigeria, Cameroon, Zimbabwe, Côte d'Ivoire and Kenya - account for another 16.5 per cent.

**Industrial structure**

Four-fifths of sub-Saharan Africa's industrial production is classified as low-technology. This proportion has increased since 1980, while the shares of capital-intensive and higher technology subsectors have declined.

The concentration of activity in low- and mature-technology activities in the region's more industrialized countries highlights the degree of dependence on food, beverages and tobacco, which account for between a quarter and a half of MVA in all countries other than South Africa and Gabon.

The chemicals and fuel refining sector accounts for at least a fifth of production in more than half the countries listed in Table VII.12, while clothing and textiles are a major industry in Mauritius (46 per cent) and Zimbabwe (almost 20 per cent). In the more technology- and capital-intensive subsectors (ISIC 38 - metal products, machinery and transport equipment), South Africa, Gabon, Zimbabwe and Kenya, are significant manufacturers.



**Table VII.12. Proportion of MVA by two-digit ISIC  
(Latest Available Years)**

Country/ISIC	31	32	33	34	35	36	37	38	39
South Africa	13.9	8.3	3.4	9.1	22.4	4.4	11.7	24.8	1.8
Nigeria	57.8	1.9	0.9	3.6	30.0	2.1	0.3	3.2	0.1
Cameroon	43.9	8.1	11.1	2.6	22.1	3.9	5.3	2.5	0.9
Zimbabwe	29.0	19.2	4.3	9.6	10.6	3.4	8.0	14.7	1.1
Côte d'Ivoire	41.5	10.6	3.5	-	28.2	1.3	-	10.9	3.8
Kenya	37.7	9.4	2.6	6.8	20.7	5.9	-	14.8	2.1
Zambia	45.8	10.0	2.4	4.8	16.1	5.6	2.5	12.5	0.3
Senegal	53.3	2.1	0.1	2.9	23.5	9.8	-	8.1	-
Gabon	23.5	3.1	22.7	2.2	14.1	7.4	3.4	20.6	2.9
Mauritius	30.4	45.7	1.8	3.0	5.8	2.0	0.8	7.6	3.0

*Source:* UNIDO Database.

*Note:* Two-digit ISICs: 31: Manufacture of food, beverages and tobacco; 32: Textile, wearing apparel and leather industries; 33: Manufacture of wood and wood products, including furniture; 34: Manufacture of paper and paper products, printing and publishing; 35: Manufacture of chemicals and chemical, petroleum, coal, rubber and plastic products; 36: Manufacture of non-metallic mineral products, except products of petroleum and coal; 37: Basic metal industries; 38: Manufacture of fabricated metal products, machinery and equipment; 39: Other manufacturing industries.

In 1995, over 40 per cent of sub-Saharan industrial production consisted of food manufacturing, beverages and tobacco products. Textiles, with 8.4 per cent is the region's third largest industrial branch after foodstuffs and beverages.

### Capacity utilization

There are no reliable data on capacity utilization but statistics from different countries on the volume of industrial production point to high levels of spare capacity. In the region's second largest industrial economy, Nigeria, capacity utilization is estimated by the Manufacturers Association of Nigeria at under 30 per cent. In Zambia, manufacturing production in 1995 was lower than in 1980, while in Zimbabwe industrial output in 1995 was at its lowest point for ten years.

Given the history of sub-Saharan industrialization - a mix of import substitution, over-valued exchange rates, heavy investment in "strategic" state-owned enterprises, and widespread controls covering foreign currency allocations, prices, wages and investment - substantial industrial restructuring was inevitable. Just how much of existing industrial capacity is obsolete is not known. A number of state-owned industrial enterprises have been closed but many others have been rehabilitated as part of privatization programmes. Zambia's privatization programme has attracted investment by multinationals - Unilever, South African Breweries, Lonrho and Tate & Lyle - all of which are investing in the rehabilitation and expansion of manufacturing operations

### Box VII.A. Competitiveness in African manufacturing industry

While nominal wages in sub-Saharan Africa are relatively low - with the exception of CFA countries, African manufacturers tend to have higher costs than those of their competitors in India. Table VII.13 shows the FOB costs for shirts exported to Europe. Both Zimbabwe and Kenya are more expensive than China (EPZ firms) and India, while Ghana is on a par with India.<sup>15</sup>

Similar cost comparisons for jean manufacture show Zimbabwe only 3 per cent cheaper than Chinese EPZ producers but 2 per cent more expensive than an Indian exporter. Table VII.14 shows that production efficiencies are lower in Africa than in both India and China, but because African wages are lower, unit labour costs are lower in both Ghana and Kenya than in India. Zimbabwe's unit labour costs are higher than in India but lower than in China.

In furniture, both the costs of timber and labour were lower in Zimbabwe than in Brazil. Timber costs in 1994 were 7 per cent lower in Zimbabwe, while labour costs were only about half as high as those in Brazil. Despite this average selling prices for Brazilian bunkbeds were 20 per cent lower than for Zimbabwean-manufactured products.

The reasons included much higher productivity in Brazil. Although Brazilian wages were 2.4 times higher than in Zimbabwe, the task level efficiency of Brazilian workers was 2.8 times greater, so that unit labour costs were lower in Brazil. Furthermore, Brazilian manufacturers used their raw materials more efficiently so that there was less wastage. Shipping costs were also much higher for the Zimbabwean manufacturer - \$3,255 a container compared with \$2,800 for the Brazilian firm.

Labour productivity differences are explained by:

- the relatively lower level of managerial skills in Zimbabwean factories - one estimate suggested that there were only ten technically-qualified managers in the entire industry;
- a general lack of interfirm cooperation in sharing technical knowledge;
- a lack of specialization - one Zimbabwe furniture company has a product range of over 350 different items;

Source: Tyler Biggs, Margaret Miller, Caroline Otto and Gerald Tyler, *Africa Can Compete: Export Opportunities and Challenges for Garments and Home Products in the European Market*, World Bank, Discussion Paper No. 300.

**Table VII.13. Cost comparison for men's casual long sleeved shirt for export to Europe, Autumn 1994 (\$)**

	Zimbabwe	Kenya	Ghana	India	China EPZ
Fabric	3.09	3.00	3.18	2.90	2.78
Miscellaneous materials	0.57	0.65	0.52	0.65	0.65
Washing	0.13	0.14	0.11	0.12	0.16
Labels/packaging	0.18	0.47	0.36	0.40	0.25
Dir/indir labour	2.09	1.68	1.22	1.22	1.83
Transport to port	0.21	0.16	0.05	0.15	0.05
<b>Total (FOB)</b>	<b>6.27</b>	<b>6.10</b>	<b>5.44</b>	<b>5.44</b>	<b>5.72</b>

Source: Tyler Biggs, Margaret Miller, Caroline Otto and Gerald Tyler, *Africa Can Compete: Export Opportunities and Challenges for Garments and Home Products in the European Market*, World Bank, Discussion Paper No. 300.

### Box VII.B. Botswana - A manufactured exports success story

The impressive performance of manufactured exports is a notable feature of Botswana's economic recovery from the recession of the early 1990s. Non-traditional exports, defined as everything except diamonds, copper, nickel and beef, have risen 140 per cent in two years, reaching P700 million (\$260 million) in 1994.

The share of non-traditional goods is also increasing because of the downturn in traditional goods (and diamonds in particular); thus non-traditional items now account for 20 per cent of Botswana's total exports, up from less than 10 per cent in 1992.

The new exports are dominated by two industries - textiles and clothing, and locally assembled vehicles - although the latter actually involves a high level of re-export, since the semi-knocked-down kits are imported from the Republic of Korea.

Nine firms account for the bulk of the country's manufactured exports. They include three clothing and textile businesses, a Korean vehicle-assembler, a diamond-cutting and polishing business, a flour-milling firm and manufacturers of water pipes, biro pens, matches and pasta. Four are foreign-owned, and the rest are joint ventures, only two of which are majority Botswana-owned. A recent survey, undertaken by the Bank of Botswana, of these nine companies, came up with some surprising results. Contrary to the received wisdom, most manufacturers do not regard government bureaucracy, low levels of productivity or relatively high utility costs as major problems. Instead, industrialists cite high interest rates, difficulties in securing work permits for expatriate employees and high levels of tariffs on materials imported from outside the southern African Customs Union (comprising South Africa, Botswana, Namibia, Lesotho and Swaziland) as their main difficulties.

In contrast, there is broad agreement on the benefits of operating in Botswana, which are perceived to be:

- free access to the large South African market and the Gauteng region, which accounts for 40 per cent of South Africa's GDP, in particular. Gauteng is only 350 kilometres from Gaborone, and Botswana's competitive position is boosted by the fact that years of high levels of protection have undermined the efficiency and competitiveness of much of South African industry;
- a positive business climate;
- a low rate of corporate tax (set at 15 per cent for manufacturing industry);
- political stability;
- low labour costs; and
- good labour relations.

Most of the successful firms are targeting the South African market; Owens Corning, which produces glass-reinforced pipes, is the only firm to focus on the domestic market. (Indeed, the firm has recently won a \$75 million tender to supply 250 kilometres of pipes to the north-south water carrier project and is doubling its capacity in order to meet demand.) Only one of the companies, Lazare-Kaplan, which cuts and polishes diamonds, has its main market outside southern Africa.

Some exporters have managed to secure a significant share of the South African market - Hyundai has almost 10 per cent of the passenger vehicle market, Bolux has 25-30 per cent of the country's pasta business and Owens Corning is aiming to secure 20 per cent of the pipe market. Only three of the exporters rely on locally based marketing departments.

The rest prefer to exploit the expertise of a larger, sometimes international, group of which the local firm is a member (examples of this approach include Lazare-Kaplan and Bic in the biro business) or bring in foreign expertise to take charge of marketing (like Owens Corning). Alternatively, some firms (such as Hyundai, Bolux and Ramotswa Garments) have set up a marketing arm (usually in Johannesburg) to handle sales.

Most are paying production workers P250-400 (\$75-120) a month, although some salaries are well above these levels. Botswana's labour costs are competitive by South African standards, because while productivity tends to be relatively poor, average wages are significantly lower.

**Table VII.14. Number of garments produced per machine operator in 8 hour shift, 1994**

	Zimbabwe	Kenya	Ghana	India	China EPZ
Men's casual shirts	12-14	12-15	12	16	18-22
Men's jeans	10-12	..	..	..	14
Index of Unit Labour cost	0.034	0.026	0.022	0.027	0.040

Source: Tyler Biggs, Margaret Miller, Caroline Otto and Gerald Tyler, *Africa Can Compete: Export Opportunities and Challenges for Garments and Home Products in the European Market*, World Bank, Discussion Paper No. 300.

### Manufactured exports

Even where the region has a comparative advantage in labour intensive products, sub-Saharan Africa has failed to penetrate global markets. In the 10 years to 1995, sub-Saharan Africa's share in global production of clothing increased only marginally from 0.4 per cent to 0.6 per cent. Its capital- and human capital-intensive industries, such as chemicals and transport equipment, which have only a negligible share of global MVA, have lost ground to account for only 0.1 per cent each of global MVA in 1995.

Since 1985, the region's share in global exports of manufactures to industrialized countries has failed to grow, remaining unchanged at a tiny 0.3 per cent. Of five industries assessed by UNIDO, the region gained market share only in clothing where its export share doubled from 0.4 per cent to 0.9 per cent.

#### Box VII.C. Lesotho's niche market success in clothing exports

Export-oriented garment production has been the most dynamic branch of Lesotho's small industrial sector. Low wages, coupled with access to low-priced fabrics from international suppliers on a duty free basis, have been the central plank of Lesotho's comparative advantage. Other contributory elements included the absence of quantitative restrictions on exports to both the US and EU markets. Of major significance also was the intensification of economic sanctions against South Africa, especially by the USA, in the mid-1980s, which gave rise to some relocation of activity from South Africa to Lesotho.

Between 1984 and 1993 the clothing and textile industry's share of MVA increased from 4 per cent to 21 per cent, while the share of garment exports in total exports rose from 44.3 per cent in 1989 to 55.5 per cent in 1992. The main export markets are South Africa, the USA, Canada and the EU.

Although by international standards the value of garment exports is small - \$67 million in 1992 - some exports to the USA have been subjected to quota since 1992 in terms of the MFA.

While the phasing out of the MFA by 2005 will eliminate quota problems for Lesotho, it will also mean much-intensified competition from other suppliers currently constrained by the MFA regime. However as an ACP member, Lesotho will retain one important advantage in the form of duty-free access to the EU. In theory, most Lesotho garments should not qualify for duty-free access under Lomé because of rules of origin constraints, but it has been able to negotiate derogations from the Lomé rules which may well be extended.

## **F. INDUSTRIAL POLICY**

### **New approach needed**

The crucial challenge facing policy makers in government and the multilateral agencies is that of framing a new industrial strategy for sub-Saharan Africa in the 21st century. Whatever its limited success in other fields, structural adjustment has failed signally not just in reversing the recent trend towards de-industrialization but also in creating an appropriate policy environment for sustained industrial growth.

Adjustment programmes "assumed" - wrongly - that getting prices right was sufficient to ensure industrial recovery and growth. Competitiveness, the need for technological upgrading, a focus on style, quality, design and timely delivery - none of these elements found their way into traditional adjustment programmes, where it was automatically assumed that comparative cost - in the form of cheap labour - would do the trick. Yet almost all of the evidence shows that this was not the case. A fresh start - a new approach - is needed.

### **Obstacles to industrial development**

Obstacles to successful industrialization in low income African countries include:

- their comparative advantage lies chiefly in low labour costs (and sometimes also relatively low raw materials and energy costs). These "lower order" comparative advantages are increasingly less important in global competition today (See Chapter I and Chapter V).
- their main competitive strengths are in precisely those industries where demand growth is slowest and where international competition, especially from low-cost Asian suppliers is increasingly intense;
- they are not part of any cluster; there is no Japan, Hong Kong or Singapore to undertake FDI on the scale witnessed in East and Southeast Asia;
- they are at a serious disadvantage in respect of infrastructural costs, but especially transport;
- they are at the bottom of the global league in terms of industrial sophistication and technology.
- the private sector is very weak in Africa, dominated by a relatively small number of major multinationals at one extreme and by a mass of small and micro-enterprises at the other, The "middle" - comprising medium-sized indigenous firms - is missing;
- the "technological terms of trade" have moved against late-starters. The "admission fee" for the acquisition of new technology has risen both in money terms and, more importantly, in terms of the skills needed by operators, technicians and managers (Chapter I);
- the increasing importance of labour quality in the attraction of FDI counts against Africa when TNCs consider offshore investment in manufacturing ( See Chapter I); and
- the region has become excessively and unsustainably dependent on external support including foreign technology and expatriate skills.



#### Box VII.D. Industrial development and structural adjustment

It has been argued that liberalization has proceeded too rapidly, resulting in deindustrialization, especially in sub-Saharan Africa. UNIDO estimates that 15 African countries experienced deindustrialization in the first half of the 1980s.<sup>16</sup>

Table VII.15 lists 23 sub-Saharan countries for which estimates of manufacturing share in GDP are available for 1980 and 1994, showing that in ten cases the contribution of manufacturing to GDP declined during this period. The weighted average for all low income countries is 13 per cent, but in 15 of the 23 sub-Saharan economies the share of manufacturing in GDP is below 13 per cent.

Unfortunately, the length of period covered masks the adjustment effects of structural reform, most of which have only been felt since the mid-1980s. At the same time, it shows not only that the region has failed to industrialise but that in a significant number of cases industry's share has actually fallen.

During the structural adjustment phase sub-Saharan manufacturing experience has been mixed, though fragmentary anecdotal evidence, some of it supported by official statistics, points to significant de-industrialization. This evidence includes complaints from manufacturers in Ghana, Nigeria, Kenya, Tanzania, Zambia and Zimbabwe that, following trade liberalization, they are unable to compete with imports:

- In Uganda, MVA growth averaged 10 per cent a year during the reform period (1987-94), albeit from a tiny base. However, much of this represented recovery rather than breaking new ground.
- In Nigeria, MVA growth averaged 2.4 per cent annually between 1985 and 1993. As a ratio of GDP, manufacturing contracted from 8.5 per cent in 1985 to 7.4 per cent. In 1994, the volume of industrial production was 30 below its 1982 peak, while capacity utilization declined from 40 per cent at the time of the introduction of structural adjustment in 1986 to 28 per cent in 1994.
- In Kenya, industrial output grew at 5 per cent annually during the 1980s and early 1990s, though much of this preceded the sweeping trade liberalization of 1993/94. In the three years to 1995, the industrial growth rate was estimated at 2.5 per cent a year and manufacturing's share of GDP has remained at 13 per cent for the past 14 years.
- In Ghana, industry's share in GDP collapsed from over 20 per cent in the mid-1970s to a pre-reform low of 6.6 per cent in 1982. It has since recovered to 8 per cent in 1994.
- In Zambia, manufacturing production has shrunk by a third since 1990 though, as in Zimbabwe, this is partly attributable to severe drought. Manufacturing's share of GDP declined to 22 per cent in 1994 from over 25 per cent in the late 1980s. In 1995, manufacturing production was lower than in 1980.
- Zimbabwe's experience is summarized in a recent study:<sup>17</sup>The nearest sub-Saharan Africa has come to a successful protectionist strategy for manufactures was in Zimbabwe where the strategy delivered modest growth. High protection gave rise to an infant industry which produced small quantities of almost every product needed in Zimbabwe. Trade liberalization in 1991 produced a severe short-term contraction in output "as most firms were out-competed by foreign products". The study considers that the strategy of starting with import substitution and then switching to export is proving both costly and slow even in this most favourable of African environment. Manufacturing's share of GDP has shrunk marginally from 23 per cent in 1991 to 18 per cent in 1995, while industrial output in 1995 was 21 per cent below its pre-adjustment peak in 1991.

<sup>16</sup> UNIDO, *Industry and Development, Global Report 1989/90*, p. 24.

<sup>17</sup> Paul Collier, *The Marginalization of Africa* (draft).

**Table VII.15. Changing share of MVA in sub-Saharan Africa, selected countries, 1980 and 1994**

	Percentage share of 1980	Manufacturing in GDP 1994	Change in percentage points (1980-94)
Côte d'Ivoire	15	26	+11
South Africa	23	23	0
Zambia	18	23	+5
Mauritius	15	22	+7
Zimbabwe	25	20	-5
Chad	17	16	-1
Malawi	12	14	+2
Senegal	15	14	-1
Burundi	7	12	+5
Cameroon	8	12	+4
Kenya	13	11	-2
Mali	4	9	+5
Togo	8	9	+1
Tanzania	11	8	-3
Ghana	8	8	0
Niger	5	7	+2
Nigeria	8	7	-1
Guinea Bissau	21	7	-14
Uganda	4	7	+3
Botswana	4	4	0
Ethiopia	6	3	-3
Rwanda	17	3	-14
Sierra Leone	6	2	-4

Source: World Bank, *World Development Report*, 1996.

In the least-developed sub-Saharan economies with tiny markets, weak infrastructures and a poor skill and technology base, the role of manufacturing is largely confined to the production of simple consumer goods for the domestic market, possibly supplemented by the production of some inputs for agriculture. Given their small markets, their prospects for attracting major FDI inflows (other than into natural resource industries) are poor.

For a handful of the more industrialized countries - South Africa, Nigeria, Cameroon, Zimbabwe, Côte d'Ivoire, Mauritius - there is far greater scope for industrialization, though here too the current emphasis continues to be on resource-intensive, rather than skill-intensive, or even labour-intensive, activities.

In the mid-1990s there are two main routes to global competitiveness:

- technological upgrading to improve productivity, raise quality standards and cut costs;
- enhanced cost competitiveness achieved by maintaining or raising productivity while cutting costs, and specifically cutting the real cost of labour through rightsizing.

Because it forces firms and governments to seek out and develop new techniques, new products and processes and new skills, technological upgrading is the optimal route to dynamic comparative advantage. While the low-wage industrialization strategy has immediate attractions in terms of job generation, it also has very serious limitations because of the diminished significance of low-cost labour in investment decisions.

With a small handful of exceptions, specifically South Africa, the region is virtually excluded from the technologically-driven strategy. This is the phenomenon of path-dependence, which implies

that even were the technology to be made available (itself problematic), the quality of labour and invariably also management, is simply not up to the task (See Chapter I).

This forces industrializing sub-Saharan countries to focus on technologically mature, labour-intensive industries, where they may have a competitive advantage. But like the natural resource growth path, this is littered with drawbacks because such industries - clothing, textiles, footwear etc. - are growing more slowly than high-technology, skill-based operations; the technology threshold of these industries is rising too, thereby raising new entry barriers in terms of cost and skill requirements; labour-output ratios are falling, so that even in these labour-intensive industries the rate of job generation is declining as capital - especially computerized equipment - replaces labour.

Furthermore, a strategy that seeks to build competitiveness on falling real wages has potentially serious long-run socio-political implications as well as locking a firm, industry or country into a low-skill, low-wage syndrome, from which it becomes increasingly difficult to escape.

### **Collective efficiency**

Two possible solutions are available, both of which emphasise **collective efficiency**, albeit at very different levels.

**Regional economic integration** could pave the way for efficiency-seeking FDI, cross-border vertical integration and the exploitation of comparative advantage through specialization by different African countries. Industrial restructuring based on cross-border vertical integration with South African companies and foreign multinationals offers a brighter industrial future than an inward-focused, go-it alone strategy, behind tariff walls. The longer the delay in restructuring the region's industries on the basis of a reconfigured regional market, the greater the probability of more pain and possibly more closures and unemployment later.

**Small Enterprises.** If collective efficiency via regional integration offers one possible solution to the region's industrialization dilemma at national level, the fostering of small and medium scale enterprise offers a way forward at industry and sector levels. A vibrant small-medium-scale enterprise (SME) sector focusing on subcontracting and other supplier linkages with domestic and international firms while also satisfying domestic demand for goods and services will soften the pain of restructuring. Because small firms are typically more labour-intensive, the SME sector can play a vital role in poverty alleviation by generating jobs and income for the most vulnerable communities, as well as providing an essential element in the value-added chain of manufacturing industry.

For sub-Saharan Africa to secure these collective efficiencies - at both levels - there has to be greater acceptance of globalization that would encourage multinationals to subcontract or locate offshore manufacturing activities better suited to developing country conditions and factor endowments. But for this to happen, Africa must climb aboard the globalization bandwagon - by opening up its economy to linkages of different kinds with multinationals or indeed with medium-sized firms in the developed market economies and South Africa.

## **G. EMPLOYMENT**

There is strong evidence of a substantial decline in modern-sector employment since the 1980s and urban unemployment now ranges between 15 per cent and 20 per cent compared with around 10 per cent in the mid-1970s. At the same time, real wages in manufacturing fell sharply through the

1980s. In 15 countries for which data are available, real wages fell in 12, with the mean rate of decline being 12.3 per cent a year.<sup>18</sup>

The unemployment problem is most acute in sub-Saharan Africa which has by far the highest rates of population and labour force growth as well as high rates of rural-urban migration. The long-run challenge facing Africa is to expand both employment and real wages, despite a number of structural factors militating against higher earnings and increased employment. Present trends point to an acceleration in the supply of labour in Africa with projections predicting that labour force growth will accelerate from 2.2 per cent in the 1970-90 period to 3.3 per cent in the 30 years to 2020.<sup>19</sup> This implies that the region needs to create an additional 380 million jobs (more than twice the number of workers actually employed in 1990) over the subsequent 30 years at a rate of 12.6 million annually.

Only 20 million (5 per cent) of these jobs will be created in the modern wage sector (Table VII.16) with the bulk of new employment being created in agriculture (163 million jobs) and small-scale enterprise (167 million). A disturbing aspect of these projections is the conflict between informal (agriculture and small-scale enterprise) sector employment growth and economic development. As GDP per worker rises, so the share of urban informal sector employment in the total falls. Thus, middle income developing economies (Argentina, Mexico) have far smaller urban informal sectors than low income countries in sub-Saharan Africa.

Economic growth delivers higher wages and encourages the shift of workers from low-productivity, low-paid informal sector employment to higher-paid, high productivity jobs in the formal economy. Malaysia's experience, often cited as a model for sub-Saharan countries, shows a dramatic shift out of informal sector employment to the formal wage economy. In 1957, one in two employees worked on the plantations but by 1989 this ratio had fallen to one in ten workers. Formal sector wage employment trebled between 1957 and 1989 while the share of the workforce employed in agriculture halved from 58 per cent to 26 per cent.

**Table VII.16. Employment in sub-Saharan Africa, 1985-2020**  
(Millions of persons unless otherwise specified)

	1985	1990	2000	2020	Annual Growth rate 1990-2020 (per cent)
Population	423	497	677	1,107	2.8
Labour force	198	230	318	610	3.3
Employment	168	199	279	549	3.4
Employment rate (per cent)	85	87	88	90	-
Agricultural sector	131	148	190	311	2.5
Modern wage sector	10	12	17	32	3.4
Small & micro enterprise	27	39	73	206	6.0

Source: World Bank, *From Crisis to Sustainable Growth*, Washington D.C., 1989.

<sup>18</sup> ILO, *Promoting Employment*, Geneva, 1996, p. 35.

<sup>19</sup> World Bank, *Sub-Saharan Africa, From Crisis to Sustainable Growth*, Washington, 1989.

Table VII.17 illustrates the region's failure to create industrial jobs on a scale consistent with that of developing countries as a whole, let alone East and South-East Asia.

**Table VII.17. Structure of employment by region, 1965 and 1989-91**  
(Percentage)

	Agriculture		Industry		Services	
	1965	1989-91	1965	1989-91	1965	1989-91
World	57	48	19	17	24	35
Industrialized countries	22	7	37	26	41	67
Developing countries	72	61	11	14	17	25
East & South-East Asia	73	50	9	18	18	32
Sub-Saharan Africa	79	67	8	9	13	24

Source: ILO, *Promoting Employment*, Geneva, 1996.

## H. AFRICA'S ECONOMIC AND INDUSTRIAL PROSPECTS

The binding constraints on economic growth in Africa are likely to continue to be:

- Management and institutional capacity. Even where countries have managed to get the policy framework right, it has proved impossible to exploit those appropriate policies because of poor and uncommitted implementation, though there are exceptions, such as Botswana and Mauritius. For the most part however, institutional capacity is weak.
- Inadequate levels of savings and investment which must be remedied by higher levels of domestic savings, supplemented by improved domestic resource mobilization; reduced public sector dissaving, and enhanced inflows of foreign direct investment.
- Policy ambivalence; even where appropriate policies are adopted in the form of an IMF ESAF programmes, the depth of political commitment has invariably been problematic. To take just one example, the region is well behind in the global privatization drive - Zambia being an exception.
- Political uncertainty and civil and social unrest.
- Weak, poorly maintained, physical infrastructure.
- An increasingly severe shortage of skills especially in the field of high-tech activities.

Given these constraints, growth will depend on the region's ability to:

- accelerate the pace of reform, with particular emphasis on increasing Africa's integration with the global economy;
- increase the rate of investment, particularly in physical infrastructure, communications and industrial capacities;

- attract substantial foreign direct investment;
- develop non-equity linkages with enterprises in the TRIAD regions but also in East and South-East Asia and South Africa; and
- strengthen regional economic ties, thereby boosting intra-African trade and cross-border investment.

### **Competitive advantage**

At present, sub-Saharan Africa's competitive advantage is chiefly restricted to:

- resource-based activities, oil, energy, mining, agriculture, and processing industries, with tight primary sector linkages, such as food processing and minerals beneficiation;
- low wage - though not necessarily low-cost - labour; and
- tourism.

The kind of investment most likely to attract foreign capital includes:

- mining and oil, tourism, privatization and some agriculture - although there is a question mark over the latter because of the sensitivity of land ownership issues; and
- manufacturing projects that have a high labour content, close linkages with the primary sector or limited scale economies because of high transport costs such as beverages, cement and construction materials etc.

At least for the immediate future, natural resource investments, domestic as well as foreign, are likely to dominate, although a handful of countries - such as South Africa, Zimbabwe, Botswana, Mauritius, Kenya, Nigeria, Côte d'Ivoire, Ghana, and others may succeed in developing a more broadly-based growth path targeting manufacturing and services.

Such a resource-driven development strategy will be most effective if it is based on agricultural processing. Industries based on the processing of mineral resources are often less appropriate because they tend to be highly capital-intensive, generating relatively few jobs per dollar invested. Linkages with the rest of the economy are weak, while technology transfer is limited since the technologies transferred are far from the cutting edge of modern knowledge-based activities. Furthermore, the size of projects is often such that there is little opportunity for indigenous equity participation, other than by the State, which is an increasingly unsuitable option.

Although such a resource-driven growth strategy may be suboptimal, it has the obvious merit of being soundly-based in terms of comparative advantage. But in the context of the region's desperate need for both jobs and technological advance, there is much to be said for strategies targeting manufacturing and services. A resource-driven growth path becomes self-sustaining only when resource rents are reinvested either in new physical assets, in the form of economic diversification, or, perhaps preferably, in human resource development.

**Box VII.E. Can sub-Saharan Africa follow an East Asian growth path?**

Thirty years ago, several East and South-East Asian economies were viewed in a very similar light to sub-Saharan Africa today. Their growth potential was questioned and very few, if any, analysts foresaw the dramatic industrial gains that the Asian Tigers have since achieved.

If Asia can do it, then why not Africa? The challenges are formidable. With the accelerated pace of technology change and the new world trade order of the Uruguay Round, the development gap has widened between Asian nations in the fast lane and their African counterparts in the slow lane.

For policy makers there is no single, unique Asian strategy to replicate (see Chapter VI). Recent research suggests that African governments have more to learn from the experiences of second wave newly industrialising countries (Indonesia, Malaysia and Thailand) with their strong natural resource base and weak (early) human capital base than from Hong Kong, Singapore or the Republic of Korea.

Rapid industrialization in these three countries (see Chapter VI) had its origins in:

- appropriate macroeconomic policies;
- outward orientation;
- the attraction of foreign direct investment;
- high savings and investment rates;
- high rates of expenditure on education and skill promotion; and
- effective selective interventions.

As late-starters, the Africans have a number of disadvantages:

- the technology and skills "entry fee" has increased compared with 30 years ago;
- when the East Asians were industrializing competition was less intense than in the mid-1990s, while the pace of technology change was slower;
- the scope to use selected interventions (import quotas, protective tariffs, trade-related investment sweeteners or requirements) has narrowed following the URA;
- ACP countries will lose some of the trade preference advantages that they currently enjoy under the Lomé Convention;
- the region's comparative disadvantage in respect of transport costs, which is a major obstacle to export growth;
- most important of all perhaps, sub-Saharan countries do not have the high levels of domestic savings, institutional capacity, the physical infrastructure or the human capital to compete on even terms with the Asians.

Formidable though existing constraints may be, they are not insurmountable. Not only have successive waves of Asian Tigers overcome them, but they managed to do so despite the severe restrictions on their exports imposed by industrialized countries - restrictions that Africa will not face. Both China and Taiwan Province of China managed to increase their exports dramatically, despite being outside the GATT system.

Africa can do it, but only if it gets the policy basics right, with macroeconomic stability, outward orientation and the attraction of FDI being the keys to accelerated industrialization. In pursuing this objective the African countries will have the advantage of being able to learn the lessons and avoid the mistakes of the Asian countries.

## I. THE WAY AHEAD

### Good policies are not enough

Good policies are a necessary, but not a sufficient, condition for strong economic performance. Invariably in sub-Saharan Africa, performance has been poor, not because the policies were inappropriate but because implementation has been weak. Reform programmes have neglected infrastructural development as well as investment in human and institutional capacity, underlining the need for long-term industrial visions.

If there is one single element that separates successful from unsuccessful adjusters, it is high, and sustained, levels of efficient private sector investment. Sub-Saharan Africa's unimpressive economic growth has been driven by foreign borrowing. Over 90 per cent of net capital inflows to the region come from official sources, mainly on concessional terms. In the first half of the 1990s, Africa was the largest recipient of official development aid, but it attracted only \$3.7 billion of foreign direct investment - little more than three per cent of the total FDI flows to all developing economies. The region's failure to attract sizeable FDI inflows has contributed significantly to its poor growth record.

### Capacity building

Industrial development in Africa will take off only when governments succeed in creating the enabling environment necessary to boost domestic investment confidence and attract foreign participation in the form of direct investment and non-equity relationships.

In essence this means building the institutional capacity, and developing the technical, professional and managerial skills without which modern industry cannot function efficiently. An enabling environment for industrialization in the mid-1990s implies political stability, the rule of law, guaranteed property rights, an adequate, well-maintained physical infrastructure, and heavy investment in human capital and in skills and technology development. The need for "critical mass" is paramount - progress must be made on several fronts simultaneously. Policy makers must tackle trade, fiscal policy, law and order, transparency and accountability, infrastructure, human resource development, privatization, agricultural development and industry strategy. Progress on one or two fronts alone is insufficient

One of the crucial lessons of the East Asian experience is that government intervention in the economy is successful where it is carried out in close coordination with the private sector within a framework of a market-driven economy. Economic policy responded to the problems and needs of private enterprise rather than seeking to impose solutions dreamed up by politicians and bureaucrats.

Given these three pre-requisites of:

- capacity-building,
- an enabling environment, and
- coordination between government and business,

specific supply-side strategies to foster industrialization should be implemented.

- Openness is crucial. Industrial growth and investment must be mainly export-oriented. Alliances, licensing agreements, joint-ventures and other kinds of non-equity links must be fostered.



- There is excellent potential for investment and growth in location-specific, resource-intensive activities - agriculture, mining, tourism and those manufacturing industries and service activities that have tight linkages with agriculture and in some cases mining.
- There will also be increasing investment, financing and service-sector opportunities (consultancy) as a result of privatization programmes.
- In manufacturing and services generally, firms must focus on links within the value-added chain rather than standalone, vertically-integrated operations.

The South African role could be pivotal - not just as an exporter to, and investor in sub-Saharan Africa, but also as the economy at the heart of - and driving - the region, especially southern Africa. However, it is doubtful whether South Africa - given the daunting developmental challenges it faces at home - has the capability to do the same for the sub-Saharan region, but the scope for increasingly integrated linkages will increase, whether South Africa is the source of the flow or merely the conduit through which global firms penetrate the region. Furthermore, the process will not be one-sided, but will also take the form of reverse flows as other sub-Saharan countries come into their own as suppliers of raw materials, components, intermediate and final goods to South African manufacturers for final processing or assembly and subsequent re-export. Also likely is transplant activity, with factories being relocated from South Africa to other parts of the region as dictated by transport, energy or labour costs.

## **CHAPTER VIII. CAPACITY BUILDING FOR INDUSTRIAL COMPETITIVENESS: A NEW ROLE FOR UNIDO**

The new world order of liberalization, deregulation and globalization is changing the nature and role not just of national economic policies but also of international agencies. The levelling of the playing field between countries with massively different resource endowments and capabilities - especially in terms of technological know-how, human capital and physical infrastructure - imposes enormous, albeit divergent, challenges for national governments and multilateral institutions.

Some developing countries, especially the least developed, are being marginalized by the globalization process. Market forces will not solve the problems of inequitable development on their own. Market failure is a very real problem in the least developed states. Aid - in the sense of a crutch that creates dependency - is not the solution. Instead, what is needed is a new kind of international assistance - a partnership that will enable late-starters in industrial development to catch up by helping them build the capacity necessary to compete successfully in a globalized economy.

### **A three-tier approach**

International assistance must be considered at the three levels of strategies and policies, institutional development, and enterprise-level assistance. As the specialized agency within the UN system with specific responsibility for industrial development, UNIDO is in a uniquely advantageous position to provide a comprehensive programme of assistance and services in all these three fields, based on its multi-disciplinary personnel, including technical experts in various subsectors of industry. UNIDO also has an important field presence, both in developing countries through its network of country directors, and in several industrialized countries where investment promotion offices have been established. Through its field representation UNIDO ensures that its programmes are effectively tailored to specific country needs and priorities. In a world of focus, core competencies and specialization, UNIDO plays a vital role as a highly specialized niche player, providing the important service, expertise and backup support in industrial development not available from other agencies.

Global economic and technological trends require more complex and realistic industrialization strategies, particularly for countries that are disadvantaged. In addition to market reform and liberalization, appropriate industrial policies for implementing such strategies are required in order to ensure the right environment for a competitive industrial sector, mainly based on private enterprise. Although the nature and extent of government interventions - whether functional or selective - through a proactive industrial policy remains a matter of debate, there is a growing consensus on the critical role of the private-sector and small-scale enterprises, which suggests that policies must be formulated and implemented with the participation of the main actors involved. This requires an adequate capacity for analysis, dialogue and negotiations both in the government and in the private sector. UNIDO's long experience in facilitating these activities and its unique network encompassing governments and their industrial organizations, private sector institutions and public and private enterprises in all regions enables the Organization to transfer experience and know-how on industrial policy-making and strategy formulation across borders.

Ultimately competitiveness arises at the enterprise level, which poses a special challenge in terms of capacity-building. Support can be provided in three main ways:

- Through consultancy services - management and financial advisory services, market research, technological and engineering back-up;

- Through information networks designed to give entrepreneurs access to technical, market and financial information not readily available. This would include information on sub-contracting arrangements, on export market opportunities and openings for cooperation and alliances with other enterprises in marketing or technology development;
- Through industrial investment services - information on investment opportunities, technical assistance in project appraisal and the preparation of bankable projects; contacts with potential joint-venture partners and sources of investment capital.

UNIDO plays an important role in the strengthening of private-sector organizations dealing with industrial development. While organizations such as chambers of commerce and industry exist in several developing countries, they have extremely varied levels of competence and representation. The strengthening of such bodies through assistance with training programmes for staff and personnel, development of market and technology information systems, and increased participation of association representatives in local institution-building will constitute an increasingly important area of UNIDO's activities. Measures will also be taken to promote increased cooperation between these organizations and the national authorities, which will increasingly come to accept them as vital intermediaries for private-sector development.

UNIDO has reformed and restructured itself to tackle the challenges of the 21st century, identifying five development objectives that were endorsed by the General Conference at Yaoundé in December 1993. These objectives are closely linked with the broader economic and social development goals of member countries and the relevant support programmes of the United Nations and the bilateral aid agencies:

- Industrial and technological growth and competitiveness;
- Development of human resources for industry;
- Equitable development through industrial development;
- Environmentally sustainable industrial development; and
- International cooperation in industrial investment and technology.

Responding to the demands of developing countries and countries in transition and reflecting UNIDO's core competencies and capacities, the Organization is focusing its activities in three key dimensions:

- within its universal approach, a geographical focus on the poorer among the developing countries, most of which are in Africa;
- a sub-sectoral focus on 32 out of 77 industrial sub-sectors, with the main emphasis upon agro-based industries and those serving other basic industrial needs; and
- a thematic dimension with a focus on seven "Thematic Priorities" that capture the organization's new thrust:

**(1) Strategies, policies and institution-building for global economic integration**

In the post-Uruguay Round era, developing countries increasingly require UNIDO's services to help them build the capacity necessary to exploit the opportunities created by globalization. The Organization's industrial strategy and policy services target:

- capacity-building for the formulation and implementation of sound industrial policy based on industry analyses;

- facilitating industrial restructuring and privatization;
- helping dialogue between the public and private sectors;
- ensuring that the necessary training and knowledge infrastructure is provided.

**(2) Environment and energy**

UNIDO has developed a unique capability in the broad field of environmentally sustainable industrialization, with a special emphasis on preventative rather than corrective action. The harmonization of environmental norms with industrial activities is expected to assume growing importance during the next decade, and UNIDO's role in achieving more sustainable industrial growth will become increasingly important. Special emphasis will be given to the implementation of international agreements and protocols for environmental protection, such as the Montreal Protocol.

The Organization's services in this field include capacity-building to support national strategies for environmentally-sound industrial development, the establishment of national cleaner production centres, the promotion and transfer of clean technologies and techniques to enhance the efficiency of energy use in industry.

**(3) Small and medium-sized industrial enterprises: policies, networking and basic technical support**

SMEs make up the vast majority of industrial enterprises in developing countries. Their needs are greatest in respect of technological upgrading and human capital development. There is enormous potential for SMEs to share in the globalization process through networking and sub-contracting arrangements with TNCs and through the development of collective efficiency in the form of industrial clusters.

With its long and proven record in the promotion of small, medium and micro industrial enterprises UNIDO is uniquely placed to provide the necessary policy advice and institutional support. Its advisory and support functions for SMEs include:

- Promotional policies aimed at creating a conducive climate for local SMEs to prosper;
- Development of specialized institutional support for SMEs, such as entrepreneurial and managerial training for local entrepreneurs and guidance in metrology, standards and quality control;
- Creating effective industrial information systems and linkages with industrial databases
- Development of clusters of SMEs in various subsectors;
- Promotion of the contacts and linkages with large-scale industries and foreign enterprises required for the development of joint ventures, and for subcontracting arrangements.

**(4) Innovation, productivity and quality for international competitiveness:**

This paper argues (See Chapters III and VI) that technological upgrading is crucial for industrial competitiveness in the 21st century. UNIDO is able to provide specialized assistance in this field - working with research agencies, universities, the private sector and government organizations.

Technology transfer is one area where market failure is endemic. It is also an area where developing countries are exposed to severe competitive disadvantage, highlighting the need for UNIDO to facilitate technology transfer and assist in technology upgrading and human capital investment. Institutional assistance through UNIDO for technological development and new technological applications, including informatics and biotechnology, will be of crucial importance in most developing countries. Support facilities with respect to industrial technology can be provided by UNIDO at various levels:

- provision of information on alternative technologies including environmentally suitable technologies;
- adoption and adaptation of new technologies, particularly for small and medium enterprises, including the guidance in the use of computer-aided designs for traditional industries, such as textiles, shoes and other consumer goods is illustrative of this approach;
- technical support for the development of applied research capability in selected industrial subsectors and in local R&D institutions.

With respect to the operationalization of new technological applications and management techniques, UNIDO can provide a package of technological support in selected priority sectors and ensure that this package is disseminated to local enterprises, through national institutions. UNIDO can play an important role in identifying emerging technological trends and assessing the likely impact of technological change in different country situations.

#### **(5) Industrial information, investment and technology promotion**

In its investment and technology promotion programmes, UNIDO focuses on those developing countries that - to date - have not benefitted from inflows of FDI and foreign technology. UNIDO has established Investment Promotion Services Offices to work closely with private enterprise in promoting FDI and technology transfer. In addition, the Organization provides specialized training and capacity-building in project appraisal and feasibility studies.

UNIDO's programme on investment forums, "Techmarts" and more recently "Intechmarts" (combining investment and technology promotion) has already had a considerable impact in several developing countries and regions as well as economies in transition. This programme can play a key role in the promotion of both FDI and non-equity linkages for enterprises in developing countries. UNIDO plans to develop networks, where industrial enterprises can request linkages with potential partners on identified projects. No international institution is providing such a facility with a focus on manufacturing industries.

#### **(6) Rural industrial development**

Rural industrial development has a vital role to play in job creation, in slowing - or reversing - rural-urban drift, in ensuring food security, alleviating poverty and promoting a more balanced spatial development. With its in-house expertise and specialists from all over the world, UNIDO has been instrumental in reducing rural poverty through industrialization. While focusing its activities in support of rural development towards employment creation and income generation, UNIDO also places great emphasis on ensuring that the developmental activities it promotes are ecologically sound. In this context, technical assistance is being provided in the fields of waste management and recycling, the exploitation of new and renewable energy resources such as solar power, and the adoption of clean production technologies. High priority is also being given to industrial training and skill development in order to enable the rural workforce, both male and female, to take advantage of the many new opportunities that such enhanced skills provide.

An important objective of UNIDO's activities in the field of rural industrial development is the promotion of micro and small activities aimed at stimulating the emergence of a sustainable industrial base in the rural areas of developing countries. In pursuit of this aim, UNIDO seeks to develop local technical capabilities and promotes networking and self-help initiatives. Special attention is given to strengthening the capacity of the entrepreneurs in such fields as business and financial planning, the preparation of loan proposals, and the use of information or referral services. Drawing on its ability to integrate technical and economic expertise with a knowledge of markets and its experience in investment promotion, UNIDO has been particularly active in promoting the development of food-processing, leather, wood, textiles, and construction materials industries in rural areas.

#### **(7) Africa and the least developed countries: linking industry with agriculture**

The need for an acceleration of the industrial development process is particularly urgent in the least developed countries, which are faced with the prospect of being marginalized even further in the coming years due to their inability to compete in the increasingly integrated global economy. With the majority of the least developed countries being located in Africa, UNIDO is placing particular emphasis on promoting the pace of industrial development in this continent, which, as shown in Chapter VII, has recorded a very discouraging economic and industrial growth performance during the past two decades. Recognising the prevailing human, institutional and infrastructural capacity constraints prevailing in Africa, as well as the continued heavy dependence of many African economies on primary commodities and the persistent threats to food security faced by much of the continent, UNIDO will, at least in the initial stages, focus its attention on the promotion of resource-based industries in general and agro-related industries in particular.

### **THE ALLIANCE FOR AFRICA'S INDUSTRIALIZATION**

As a complement to the UN System-Wide Special Initiative on Africa and in order to supplement and enhance the impact of the Second Industrial Development Decade for Africa, UNIDO is launching an *Alliance for Africa's Industrialization*, adopted by the Organization of African Unity (OAU) Council of Ministers in July 1996. The goals of the Alliance are:

- To develop African-generated industrial development strategies addressing the region's principal economic problems of low industrial output and domestic value-added, unemployment, poverty and food insecurity;
- To stimulate increased international commitment to African industrial development and generate increased support to promote sustainable industrial growth and competitiveness through capacity-building at the policy, institutional and enterprise level.
- To promote regional industrial partnerships aimed at the attainment of economies of scale and meeting growing demand in regional and global markets.

In tackling these goals, special emphasis is laid on:

- Capacity-building for industrial policy formulation, institution building, industrial restructuring, privatization, technological upgrading and human resource development to enhance industrial competitiveness both in export and domestic markets, and to create an enabling environment for private-sector industrial development with particular reference to SMEs, and rural and village industries.
- Linking industry and agriculture in the initial phase of the *Alliance for Africa's Industrialization* through production, income and investment linkages as a dynamic mechanism for increasing domestic value added, ensuring food security, integrating the

formal and informal sectors, enhancing export competitiveness and alleviating rural and urban unemployment and environmental degradation.

- Promoting private investment and other forms of international industrial cooperation and policy support for key industrial subsectors enjoying comparative advantages through the facilitation of partnerships between African and international business partners, promotion of SMEs and enhancing the role of women entrepreneurs.

Agro-industry is targeted in the initial phase since its development will have powerful linkage and poverty reduction effects throughout the continent's economy. Although the focus will be on agro-business, the drive to rejuvenate African industry will encompass other sectors where the region has comparative advantages, and with a special emphasis on export-led growth.

The Alliance will be based on solid African ownership and commitment, with private sector involvement crucial to its credibility. Three key approaches will form the main pillars of the Alliance:

- Capacity building along with the provision of technical and management assistance.
- Programme flexibility and responsiveness. The *Alliance* programme will be sufficiently flexible to respond to fast-changing demands and conditions in the global economy.
- Effective institutional linkages - essential to achieve maximum impact and efficiency and avoid duplication.

An acceleration of the industrial development process is a crucial prerequisite for economic revitalization and social progress in Africa. The *Alliance for Africa's Industrialization* is committed to ensuring a reversal of marginalization of Africa that has taken place during the past decades with a view to enabling African countries to participate in, and share the benefits of, the rapidly advancing globalization of industry.

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