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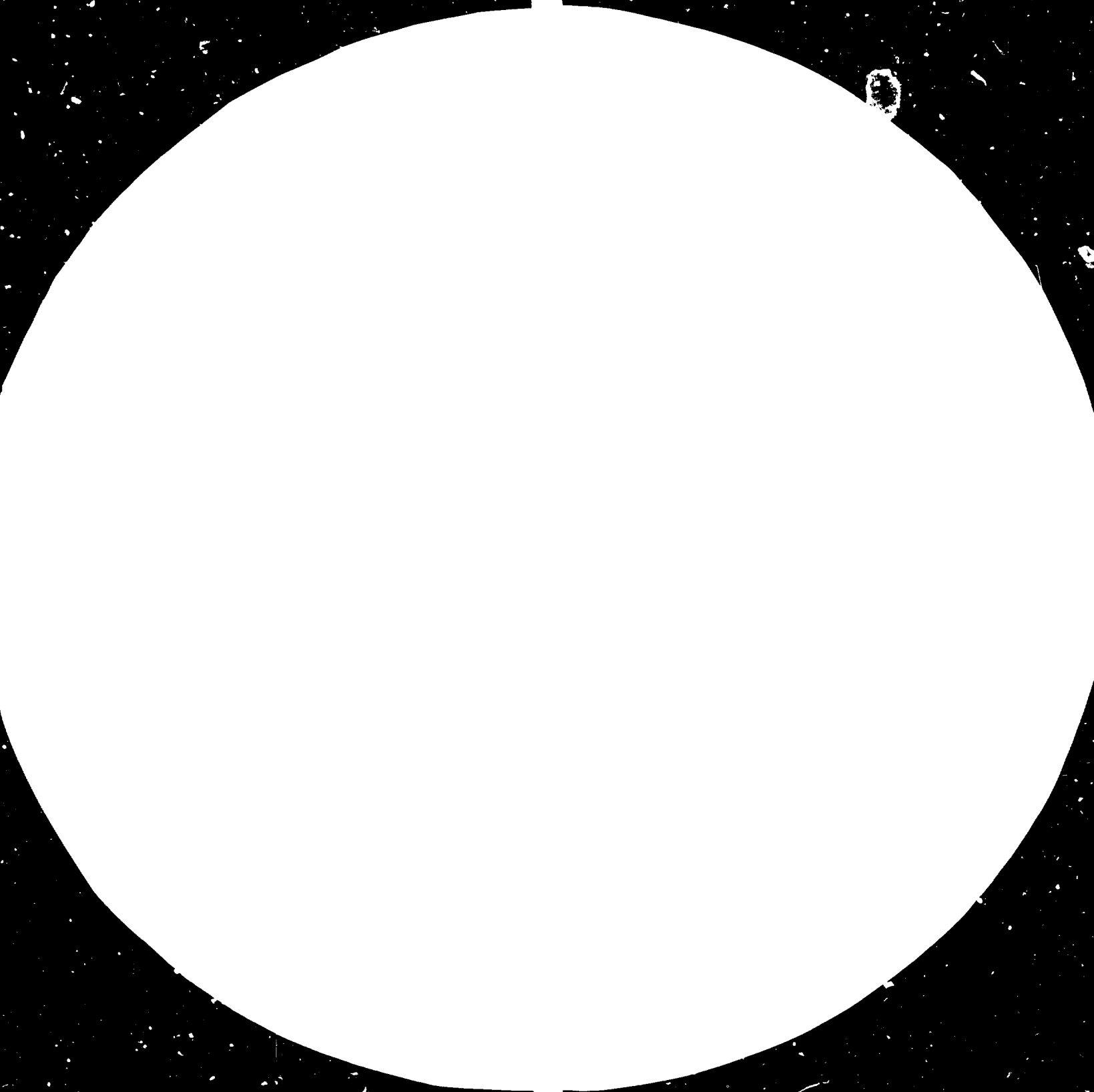
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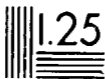
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INDUSTRIAL DEVELOPMENT STRATEGIES AND
POLICIES FOR DEVELOPING COUNTRIES*

PAPERS FROM THE HIGH-LEVEL EXPERT GROUP MEETING HELD AT LIMA IN APRIL 1983
PREPARATORY TO THE FOURTH GENERAL CONFERENCE OF UNIDO

VOLUME I

Introduction, basic and general documentation

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FOREWORD

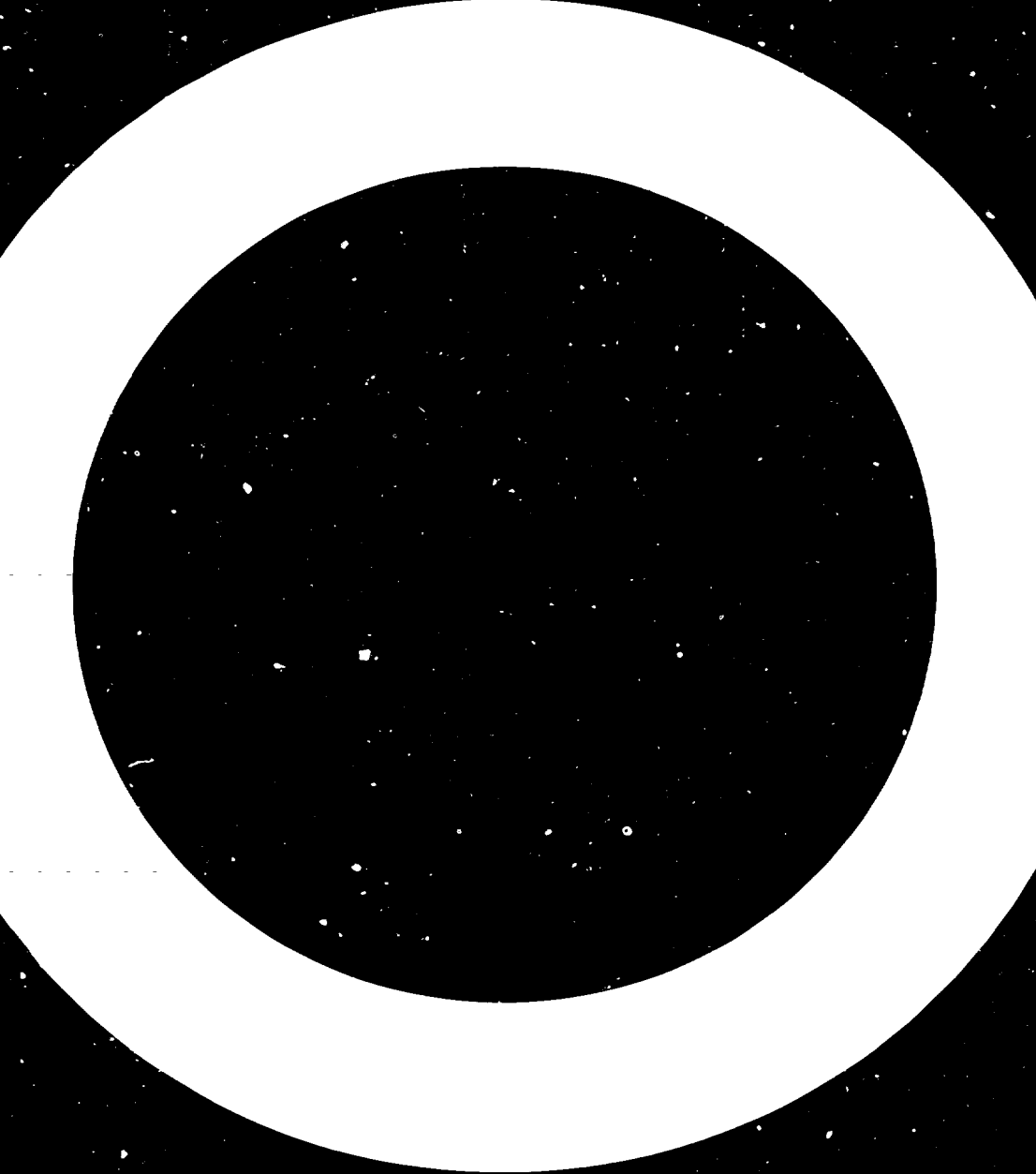
It gives me great pleasure to be able to introduce this volume of collected papers on industrial development strategies and policies for the developing countries as presented to the High-level Expert Group Meeting Preparatory to the Fourth General Conference of UNIDO at Lima, Peru, in April 1983.

The Fourth General Conference of UNIDO (UNIDO IV) is being held at a time when the world economy is undergoing drastic changes and the developing countries are facing tremendous challenges to their industrialization. Development in the third world has virtually come to a halt, and the developing countries find themselves at cross-roads. This situation requires that previous industrial strategies and policies be assessed anew, and new approaches to resuscitating and enhancing their industrial development identified. To this end, the provisional agenda of UNIDO IV covers a number of issues pertinent to such approaches.

In preparing for UNIDO IV it is deemed essential, first, to reassert to policymakers the critical nature of the world economic situation and emerging patterns in global economic development so that an assessment can be made of the implications these bear for the industrial development prospects of the developing countries; secondly, to initiate a dialogue on the issues pertaining to a reorientation of strategies and policies for industrial development in the developing countries; and, thirdly, to evolve suggestions for policies and strategies at the national, regional, and global level conducive to augmented international industrial restructuring and to sustained industrialization in the developing countries in the 1980s and 1990s. I am confident that the papers assembled in this volume can provide an essential input to this formidable task.

I very much hope that, by publishing the rich collection of material contained in these 42 studies, UNIDO will be able to further reinforce the attempts of the Lima Preparatory Meeting to initiate a dialogue with Governments in this area that will bear fruition in the policy recommendations made at UNIDO IV. In addition, it is hoped that the papers will contribute to a purposeful and constructive debate at the forthcoming General Conference as well as strengthen the continuous endeavours of UNIDO to support the developing countries in their industrialization.

Abd-El Rahman Khane
Executive Director

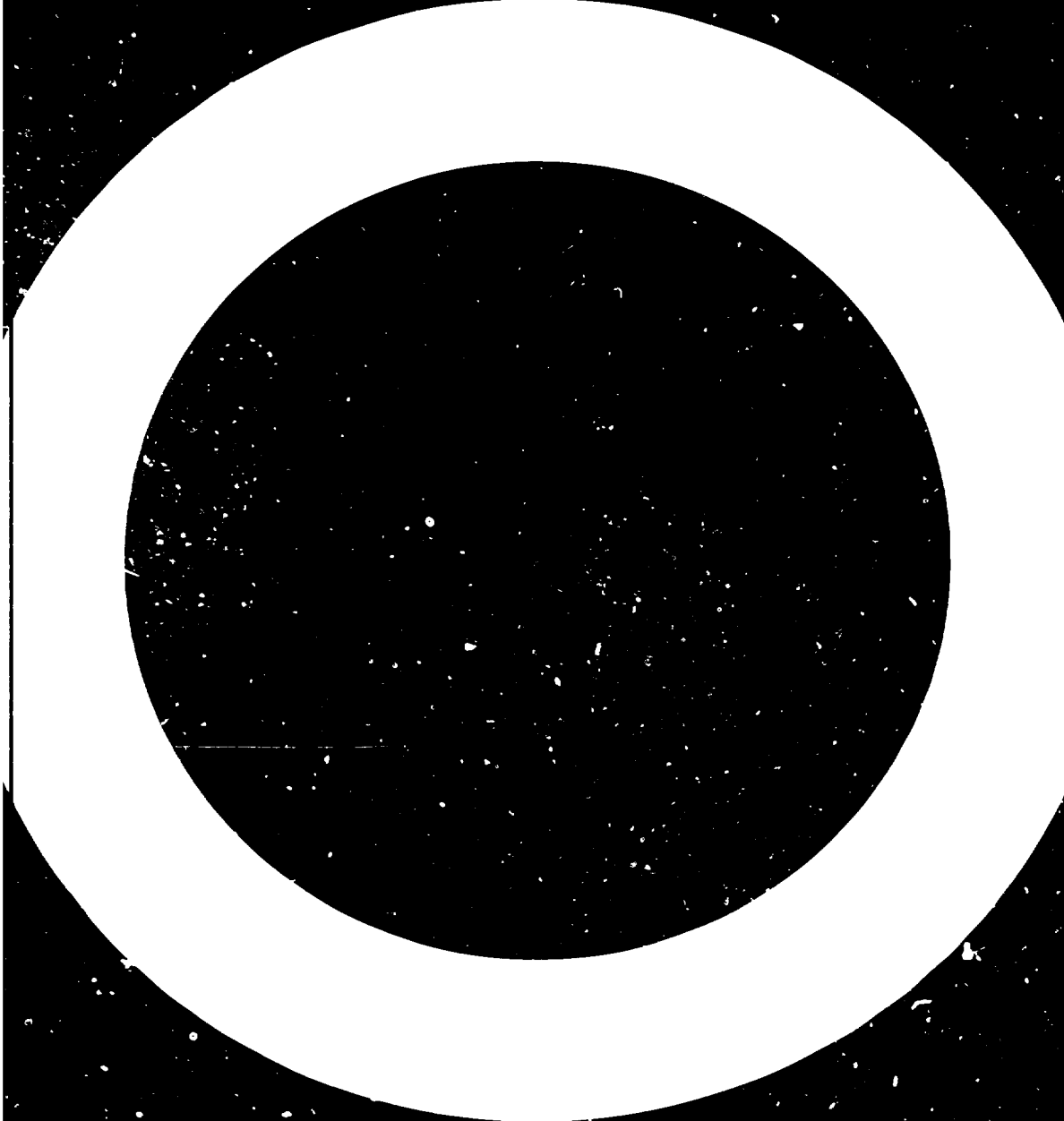


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PREFACE

The High-level Experts Group Meeting Preparatory to the Fourth General Conference of UNIDO on Industrial Development Strategies and Policies for Developing Countries, jointly organized by the Government of Peru and UNIDO, was held at Lima, Peru, from 18 to 22 April 1983.

The objectives of the Meeting were to generate ideas and other inputs in the field of industrial development strategies and policies to aid in the preparation of the issue and background papers for the Fourth General Conference of UNIDO (UNIDO IV), and to initiate a dialogue with Governments in this area preparatory to UNIDO IV.

The Meeting was attended by some 50 experts from 32 countries, and 20 observers from 15 international organizations and national authorities. Documentation submitted to the Meeting consisted of 5 papers by the UNIDO secretariat and 37 prepared by the participating experts. A consensus was reached on the report of the Meeting, which was subsequently issued as document ID/WG.391/11.

The present two-volume document collects the basic papers prepared by the UNIDO secretariat and the background papers submitted by the participating experts to the Meeting. Volume I contains a foreword by the Executive Director of UNIDO and summaries of the opening and closing statements made at the Meeting by the President of the Republic of Peru, the Peruvian Minister of Industry, Tourism and Integration, the Deputy Executive Director of UNIDO and the Chairman of the UNIDO IV Task Force, as well as an introduction to the collected papers by the UNIDO secretariat. This is followed by a set of general background papers on industrial development strategies and policies for the developing countries, representing documents prepared by the secretariat for the Meeting and papers submitted by experts before the Meeting. Volume II presents background documentation prepared and submitted by experts to the Meeting on specific problems and topics in the area of strategies and policies, on the industrialization experience in specific developing countries, and on the policies of individual developed countries towards the developing countries, with only minor editing to create a uniform presentation for the collection.

It is very much hoped that the papers presented in these volumes will contribute in a positive way to the international debate and to the discussions at the Fourth General Conference of UNIDO, and thereby strengthen the efforts of the developing countries in designing strategies and policies for industrialization in the 1980s and 1990s to respond to the enormous challenges currently facing policy makers in those countries.



Summary of the statement by Mr. Fernando Belaúnde Terry, President of Peru

In his speech closing the meeting, Mr. Fernando Belaúnde Terry, the President of Peru, emphasized that industrial development in the world was taking place in a few growth poles characterized by larger market potentials and by the availability of natural resources, including energy resources. Latin America was richly endowed with resources and other natural potentials for industrial development in terms of transportation and energy. In this respect the President specifically emphasized the industrial potential of the Andean Group and of Peru. Richly endowed with minerals and with a well-established agricultural sector, Peru possessed a solid basis for industrial development. The country was thus committed to pursue its industrialization and also its full involvement in all matters pertaining to the industrial development of the third world.

The President further explained that Peru's view of industrialization was through integration at the regional level, with special emphasis on the Andean Group. Industry was a matter of markets and markets could not be atomized for they needed enormous amounts of energy. Peru, Mr. Belaunde asserted, would remain a pioneer in Latin American integration, and he called upon the industrialized countries to give their support to the development of the Amazon Basin, which he considered to be the future industrial centre of South America.

The President remarked that South America was richly endowed in energy and other resources; for example, the Amazon River carried 15 per cent of the planet's total fresh water. In the case of Peru, various studies had revealed that an electrical power of 60 million kilowatts could be obtained from the water resources of the Peruvian Amazon region; that figure meant six times the capacity of the Itaipu hydroelectric power station located between Paraguay and Brazil. The President added that South America would have its way open to intense multilateral trading if it exploited its raw material resources and processed them in the region. He then called for further co-operation from the developed countries in favour of South America and the third world in general.

Summary of the statement by Mr. Farlan Carré, Deputy Executive Director of UNIDO

In opening the meeting, Mr. Farlan Carré, the Deputy Executive Director of UNIDO, took the opportunity to express the appreciation of UNIDO for the attendance of all participants and thanked the Government of Peru for the facilities they so generously provided. He reminded his audience of the importance of Lima, not just for UNIDO, but for a most important development aspiration of the international community, since it was there, eight years ago, that the Second General Conference of UNIDO had adopted the Lima Declaration and Plan of Action.

It was regrettable to have to say, however, that progress towards the goals espoused at Lima in 1975 had been slow. And current international economic difficulties had not only brought the long-term development plans of developing countries into question, but also, in some cases, entailed a severe disruption of their economic systems.

The Deputy Executive Director then argued that the present difficulties - which had their roots in the existing structure of the world economy as a whole - had also provided an opportunity for the reconsideration of national policies and international economic relations. It was his belief that the industrialization of the developing countries could constitute a major component of such a strategy for the world economy, and his hope that the Fourth General Conference of UNIDO, to be held in the summer of 1984, could form part of the process by which international action would return the world economy to a more dynamic and efficient course.

The Deputy Executive Director concluded by stressing that the resolution of the problems currently facing the developing countries represented a complex task but one which would be made much easier if a genuine climate of international co-operation became a full reality. The Meeting must therefore be regarded as of prime importance since, by assessing the nature and current role of industrialization policies, and by identifying new areas for action, particularly in the field of international co-operation, the deliberations could provide valuable overall guidance in the preparations for UNIDO IV.

Summary of the statement by Dr. Gonzalo de la Puente, Peruvian Minister for Industry, Tourism and Integration

Dr. Gonzalo de la Puente, the Peruvian Minister for Industry, Tourism and Integration, extended his heartiest welcome to the city of Lima, and reminded the participants that, eight years ago, in March 1975, his country had had the privilege to be the venue of the Second General Conference of UNIDO, in which far-reaching agreements had been reached for the industrial development of developing countries, agreements contained in the Lima Declaration and Plan of Action. The Minister then delved into some thoughts on the industrialization process in the developing world, and in his country in particular.

A basic premise for industrial development, which should be clearly established, was the difficulty of reaching that goal with a small market such as that of Peru. A healthy industrialization therefore required the support of foreign trade, and ran, out of necessity, parallel with access to larger markets, which consequently called for the abandoning of protectionist measures, especially by the developed countries.

Dr. del la Puente reminded the participants that in 1982 the national parliament had passed the Law of Industries, in which the industrial future of Peru was outlined. In that law, contrary to the former one, priorities for industries were not set according to types of products but depended on the size and geographical location of the industries, with higher tax incentives given to the small-scale industries and to the industries located in the most backward areas of the country. Under the new law, the State's exclusive role disappeared and more freedom was given to the private sector. It was to be hoped that the abolition of differential treatment of certain industrial branches and the higher external competitiveness due to appropriate import tariffs, would in the future enable the Peruvian industry to develop more efficiently.

But there were still great challenges ahead, and to overcome them required that the developing countries acted on a more united basis. The Minister stressed that those countries would have to widen and deepen their co-operation, intensify economic integration agreements, and, like Peru, give special attention to economic co-operation among developing countries. That constituted an essential element for the establishment of a new international economic order, that was a complement to, and not a substitution for, co-operation between North and South.

Summary of the statement by the Chairman, UNIDO IV Task Force

The Chairman of the UNIDO IV Task Force opened his address by thanking the Minister of Industry, Tourism and Integration, and through him the Government of Peru, for so warmly hosting the meeting. He then recalled that the Fourth General Conference of UNIDO was to be held in the summer of 1984, and that the Conference would take place not so much under the "glow of world growth" as in Lima some eight years before, but under the "shadow of recession". That recession had destroyed liberalism, strangled the monetary system and stifled trade as the engine of growth. It had also created new attitudes. UNIDO IV, then, must look not so much at the causes that brought about the changes as at how to respond to the changes - at the national, regional and international levels. It would therefore be an occasion to initiate a dialogue that would be continued in subsequent forums.

In order to start the dialogue and at the same time to prepare a sound basis for all to reflect, respond and readjust, the Chairman stressed that an effort had been made to look at the situation in its component parts, to single out its critical elements. Those could be seen to be human resource development, technology, energy, industrialization strategies and policies, and industrial co-operation among developing countries. He stressed that all of those were - with the exception of strategies and policies - specific agenda items at UNIDO IV, and all of them were the subjects of the High-Level Expert Group Meeting Preparatory to the Fourth General Conference of UNIDO.

The Chairman emphasized that the topics were clearly all interrelated, each building on the other. As an example of that interlinkage he recalled the preparatory meeting on technology which had been held a week before at Tbilisi. That meeting had stressed the importance of the impact on the developing countries of new technologies such as micro-electronics, genetic engineering and biotechnology, and energy technologies, but had also strongly emphasized the need to harmonize industrial and technological policies. Thus strategies and policies for industrial development remained the core of the thinking in preparation for UNIDO IV and the basis for visions of the future. It was in that context that he hoped that the Meeting could generate new impulses for the industrialization of the developing countries.

INTRODUCTION

The High-level Expert Group Meeting Preparatory to the Fourth General Conference of UNIDO that was concerned with industrial development strategies and policies for developing countries aimed at establishing a dialogue with experts in that key area of greatest concern to policy-makers and directly related to almost every item on the agenda of UNIDO IV. The Meeting addressed itself to the following questions:

(a) What lessons for the future could be drawn from the experience of strategies and policies and from the pattern of industry established in the last decade in the developing countries?

(b) What strategy options emerge for industrial development in the third world in the 1980s and 1990s in light of the current crisis and changing global conditions?

(c) What new possible approaches could be conceived at the international level to support national endeavours by the developing countries and to respond to emerging challenges?

It was felt that by raising those key questions and initiating an in-depth discussion along those lines, the Meeting fulfilled an important task. In the sessions of the Meeting a number of essential observations and recommendations were made which will undoubtedly be complemented and substantiated in the further preparatory work for, and in the actual debate at, UNIDO IV. In this respect, the recommendations made by the working groups on policy and strategy issues relating to developing countries with potential for increased export of manufactures, for developing countries with potential for domestic market-oriented industrialization, and for developing countries in the initial stages of industrialization could be particularly valuable. From these discussions it was evident that prevailing external forces and lessons drawn from past experience call for a reassessment of past, and a search for new, approaches for industrial strategies and policies for the 1980s and 1990s by developing countries.

From the deliberations a number of essential messages can be singled out.

First, the increased economic interdependence, the far-reaching internationalization of industrial production arising from developments in the past decades, and the international operations of large and powerful transnational entities have narrowed the options for individual developing countries in their choice of industrial development strategies and policies. Currently, the international economic crisis is hampering industrial growth for the developing countries and directly influencing their strategy decisions.

Secondly, most developing countries seem to have relied extensively on external growth prospects, to the relative neglect of internal potentials and requirements. New tensions in the international trading system are prompting an increasing attention to potential internal-growth dynamics, while at the same time severe balance-of-payments problems dictate that exports of manufactures be promoted. A new approach for pursuing both external and internal market-orientation is therefore required.

Thirdly, most developing countries are currently facing increasingly serious external financial problems - including higher borrowing costs with lower maturities and the transfer of exchange risk and interest rate fluctuations to them, together with an extraordinary heavy debt service burden and dwindling development assistance. These constraints require the introduction of new policies and strategies, including the use of new forms of international industrial co-operation so as to enable the resumption of industrial growth.

Fourthly, it is becoming increasingly clear that the developing countries face growing constraints in terms of the access to external markets, compounded by growing difficulties in obtaining the required imports from developed countries. For this reason, regional and interregional co-operation and joint action by the developing countries to allow them to capitalize on their complementarities in factors of production, industrial production and trade are a necessary response by the developing countries at the international level if they are to overcome some of the short-term and long-term difficulties they face at the national level.

Fifthly, rapid advancement in technology evolution is of the highest priority for developing countries wishing to become internationally competitive in a wide variety of manufactured products. When conceiving technology policy it is crucial to ensure that product and process flexibility be built into the production structure and to realize that technological advances bring with them socio-economic impacts that must be duly allowed for in the process of policy and strategy formulation.

Finally, the current crisis has revealed the vulnerability of established production structures in developing countries and the need for greater efficiency in the management of resources, operation of industrial plants and planning of new investments. It has also demonstrated the need to harness human-resource development to help solve the problem of unemployment in the developing countries that threatens their growth and stability.

Against this background, and on the basis of the discussions, a number of observations can be made. Given the external pressures on the developing countries, a global move towards economic recovery, the resolution of international financial problems, and a halt in protectionism of developed countries are fundamental issues to be attended to by the international community. Without an international economic environment conducive to continued industrial development of the third world, no national strategies and policies can overcome the prevailing problems.

At the level of national measures, it can be concluded that there is obviously no one strategy applicable to all - or even many - developing countries. Rather, the specific conditions, resources, and prospects of individual countries are decisive for the choice of the particular approach. It is also evident that in the future a developing country cannot confine itself to a homogeneous industrial strategy. Rather, the strategy must reflect a complex pattern of short- and long-term considerations and be a mix of a number of different development priorities.

The complex of industrial strategies and policies being perceived by national policy-makers in the third world for the 1980s and 1990s are characterized by multifaceted approaches. These aim at:

(a) Establishing a socially and economically viable industrial base and structure of production;

(b) Adjusting previously established production capacities and structures to the new demands of the current and emerging international environment;

(c) Increasing economic co-operation with other developing countries, on the principle that particularly for small developing countries co-operation is imperative;

(d) Designing an industrial policy for those countries facing an acute financial constraint that reduces the propensity to import while enhancing external liquidity to the extent possible;

(e) Creating flexible production systems better able to be adapted to changing external conditions;

(f) Introducing a fundamentally long-term approach to industrialization that emphasizes the role of transferred high, adapted, upgraded traditional and newly generated indigenous technology;

(g) Allocating a greater priority than heretofore to investments in human resources.

To this end, industrial strategies are being conceived which can no longer be categorized in the traditional manner (e.g., export-orientation, import-substitution). Instead they will encompass for instance both low and high technology, both domestic and foreign inputs, both external and internal market orientation, both North-South and South-South trade and financial co-operation and assistance, and both industrial and agricultural priorities.

Whereas these strategies may be characterized as overall integrated approaches, it seems likely that they will be applied differently, leading possibly to the emergence of two kinds of industrial activities: that is oriented more towards employment, the domestic market and domestic input, and a modern, high-technology segment that is internationally oriented. A fundamental consideration in formulating these strategies is the creation of a harmonious co-existence and interaction in a reinforcing and dynamic relationship between these two segments both in terms of international trade and financial relations and national development policies.

It was against the background of such an increasing complexity of national, regional, and global industrial strategies and policies and the rapidly changing international conditions that the Meeting called for:

(a) An expanded role for the international community in supporting the industrial development aspirations of the developing countries;

(b) Augmented international industrial co-operation - both North-South and South-South - to supplement and support individual national strategies and policies;

(c) Greater transparency of national policies for development and adjustment in both developed and developing countries;

(d) Increased activity by UNIDO in examining the prospects and features of global economic and industrial co-operation designed to accelerate industrialization in the developing countries;

(e) Greater participation by UNIDO in the surveillance and conception of industrial development strategies and policies at the global, regional, and national level for the developing countries.

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**HIGH-LEVEL
EXPERT GROUP MEETINGS
PREPARATORY TO THE
FOURTH
GENERAL CONFERENCE
OF UNIDO**

*Industrial Development Strategies and Policies
for Developing Countries*

Lima, Peru, 18-22 April 1983

**INDUSTRIAL STRATEGIES AND POLICIES
OF THE DEVELOPING COUNTRIES IN THE EIGHTIES:
SOME ISSUES FOR CONSIDERATION**

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INDUSTRIAL STRATEGIES AND POLICIES OF THE DEVELOPING
COUNTRIES IN THE EIGHTIES: SOME ISSUES FOR CONSIDERATION

1. There is an apparent paradox, verging on absurdity, in the international economic system today. Most industrialized countries, in the grip of an economic recession, are unable to find adequate markets for their manufactured products; most developing countries, on the other hand, are unable to finance their industrialization process due to lack of adequate purchasing power. In the world economic system today, a high degree of unutilized productive capacity and unemployment coexists in the North with unfulfilled demand for industrial goods in the South. This, in essence, is the sad paradox of the current situation.
2. There are different perspectives - historical as well as analytical - from which one may try to explain how this absurd situation has come into existence, resulting in the most serious economic recession facing the world since the Second World War. The economic recession, in turn, is further aggravated by the threat of a massive financial crisis, the origin of which lies in the so-called "recycling operations" conducted by international private banks during the 1970s. Their lending on an unprecedented scale to a few newly industrializing, middle income developing countries in the South resulted in a situation where some of the major borrowers are now in a state of manifest insolvency to service their outstanding debt. The banks, on the other hand, are forced to lend, reschedule and roll debt to avoid a "crisis of confidence" in the international financial markets that might result from technical default by one or two major borrowing countries. The world-wide economic recession, therefore, has been vastly accentuated by uncertainties of an impending financial crisis.
3. It is against this bleak background of the international economic situation, that individual developing countries have to formulate their industrial strategies and policies at a national level for the 1980s. Naturally, longer-term economic strategies are formulated and shorter-term policies are made in terms of perceptions of problems and constraints by individual countries. The individual perceptions are bound to differ among developing countries depending on their specific historical situations and experiences. And yet, there are some common elements that must be

taken into consideration by each individual developing country, although the relative weights which a country assigns to those common elements must vary depending on its particular situation. In this context, the formulation of a longer-term economic and industrial strategy is also a dynamic concept: each country has to identify the immediate and most pressing problems facing it and by overcoming them, it can also hope to relax other constraints that will be more pressing at a future date. In essence, strategic economic thinking then consists of (a) identifying the problems and constraints facing a country; (b) assigning relative importance to these problems and constraints; and (c) formulating policies in a sequential manner over time to overcome these problems gradually to the best of its ability.

4. With this view of national economic strategy and policy formulation, it is analytically convenient to start by distinguishing between problems and constraints that are external to a developing country, arising from its international environment over which it has little control and problems and constraints that are more internal in nature, arising from the domestic economic structure over which, in principle at least, the country has more control. It hardly needs emphasizing that this distinction is only a matter of analytical and expository convenience and may not hold in the ultimate analysis.

5. At the level of external problems and constraints, a most significant change has taken place during the 1970s. The international capital markets have become increasingly "privatized" in the sense that private sources of credit have increasingly become more important than public sources. The so-called international debt crisis and the vulnerability of private banks with heavy foreign exposure are largely a reflection of this phenomenon. Thus, during the period 1976-1981, total debt of developing countries grew at 20 per cent per year, while private debt grew by 25 per cent and short-maturing private debt at the phenomenal rate of almost 30 per cent. In 1967, only about 33 per cent of developing countries debt was from private sources, while that share steadily grew to over 60 per cent by early 1980s. Of the total outstanding debt of 630 billion dollars in 1981, about 490 billion was long- and medium-term debt, out of which private banks accounted for slightly over one-third; but, of the remaining short-maturing debt of 140 billion (of less than one year maturity), over 90 per cent was owed to commercial banks.

6. The implications of this systematic process of privatization of world capital markets for the formulation of development strategies and policies needs to be fully comprehended. It has meant (a) higher borrowing cost with lower maturity; (b) transfer of risk of exchange and interest rate fluctuations to the borrowing developing countries, particularly due to the flexible interest loan arrangements widely practised by commercial banks during the late 1970s and early 1980s; (c) an extraordinarily heavy debt service burden, which in effect is steadily reducing the net flow of foreign private loan to developing countries which came down from nearly 6 billion dollars in the first quarter of 1981 to 3 billion dollars in the same quarter in 1982 and only to 0.3 billion dollars in the first quarter of 1983, for private banks reporting to the Bank of International Settlement; and (d) finally, it has also meant heavy discrimination among developing countries, where the poorer ones among them have simply not been considered sufficiently creditworthy by private banks, leaving them largely out from access to private credit. The first issue that arises for the development strategy is how to finance the "foreign exchange" component of existing productive capacity as well as setting up of new industries in developing countries under these circumstances of systematic privatization of world capital markets. It not only emphasizes the need for multilateral lending/ financial assistance to developing countries on an official basis, but more fundamentally requires them to press for new forms of international payments arrangements (e.g., in local currencies and 'clearing house' arrangements) which will at least partly relax this vicious grip of the so-called "foreign exchange constraint" on their development strategies. It needs emphasis that all signs indicate that during the 1980s commercial banks will be far more cautious regarding foreign exposure in developing countries, while net flow will dwindle simultaneously on account of debt servicing. The urgency of this issue therefore cannot be overemphasized for strategic economic thinking in developing countries during the 1980s.

7. It has to be recognized, nevertheless, that the impact of an acutely constraining foreign exchange position can be very different on different groups of developing countries. Because, that impact would largely be transmitted through the nature of vulnerability and dependence of developing countries of the South to their external economic environment. To illustrate this point, one could classify developing country/countries groups according

to the nature of their external dependence and degree of vulnerability, e.g.

- (a) Groups of countries with heavy concentration of export earnings from a few primary products and mineral resources whose international prices are subject to wide fluctuations. The terms of trade rapidly moves against these countries (e.g., price of sugar dropped by 78 per cent, copper by 35 per cent and rubber by 37 per cent only in the single year of 1981) to leave their longer-term development strategies more or less at the mercy of movements in terms of trade.
- (b) Groups of countries without self-sufficiency in food production where worsening of foreign exchange position often implies starvation. Frequently, these are small islands and land-locked countries whose communication and transport network also depend on their ability to pay for the international "trade and transport margin" in terms of foreign exchange on an emergency basis.
- (c) Countries with a reasonably large domestic industrial base, whose ability to maintain a satisfactory degree of capacity utilization depends on adequate foreign exchange for maintenance imports. A worsening of the foreign exchange position not only means a slower pace of industrialization in these countries, but it inflicts heavy and disproportionately large damage on them through sharp drops in the degree of utilization of installed capacities; and finally
- (d) Countries with reliance on exports of manufactures (a sub-group of the so-called newly industrialized countries) who depend mostly on the North to sell their products, obtain commercial loans and obtain industrial technologies. In many instances, they obtain both such industrial technology and commercial loans through multinational companies with branches located in these countries. The large trans-national banks lend to the multinational companies through public or privately guaranteed credit arrangements. Any shrinking of the international commercial market for loans will make export-based strategies of industrialization highly problematic on the supply side in these countries, while on the demand side they increasingly face the problem of lack of markets.

8. The above four-fold classification of country groups is neither meant to be exhaustive nor exclusive; indeed, there would be a considerable degree

of overlap among country groups in terms of the nature of their external vulnerability. However, the discussion suffices to point to a second issue for the formulation of development strategies and policies during the 1980s: it relates to each developing country recognizing the primary nature of its external dependence and degree of vulnerability on that count in formulating strategies and policies for development during the 1980s.

9. In many instances, it would appear that the extent of flexibility in formulating national development strategies during the 1980s is severely limited by the constricting nature of external dependence. With such limited options available, it would be natural to look for new options that may become available through greater co-operation, co-ordination and group action. It is here that individual developing countries may find it worth their while to consider strategies and policies, set in the wider context of co-operation in trade, investment and finance among nations or groups of nations. The theoretical possibilities here are many ranging from traditional possibilities of customs union and joint ventures in investment to less explored arrangements. There are, however, two less explored possibilities that seem quite compelling. It will not only tend to relax the balance of payments constraint on formulation of national strategies to some extent, but will also create a greater degree of reciprocal demand through trade bilateralism. At a time when the world market for exports is shrinking and the prospects for foreign aid/finance on commercial terms are bleak, local currency payment, at least on a partial basis, provides a new institutional arrangement to break out of the vicious circle. One also needs to be reminded that this is not an impossible task - the "Committee on Payments Agreement" (in Paris, September 1947) among war-devastated economies of Western Europe provides a historical precedence for developing countries in the South. A second option is to co-operate in the field of international trade and investment with particular reference to trade and transport. The "trade and transport margin" in international price formation - including such items as shipping and insurance charge - has been one of the most important factors tilting the terms of trade against most Southern countries. It is a natural sphere where co-operation among Southern countries could improve their collective balance of payments position without making any individual member worse off.

10. Although these particular suggestions may or may not find acceptance, the significant underlying issue must be considered in the present international economic context. This third issue relates to the role which individual developing countries would like to assign to group action/international co-operation in formulating their development strategies during the 1980s. It is to be clearly understood that such co-operation must arise from recognized needs by the individual countries concerned; consequently, it will not clash with economic sovereignty and self-interest of nations. Instead, such international co-operation or more limited group action on the basis of South-South co-operation will strengthen national economic interest by reducing the degree of vulnerability arising from external dependence from which many developing countries suffer today. Imaginative economic co-operation would be only another name for increasing their range of options in formulating national development strategies.

11. Although the degree of external dependence could make national development strategies highly vulnerable to the external economic environment, in many instances, there also exist internal constraints and problems in terms of which such strategies have to be formulated. At the cost of oversimplification one could identify two broad areas here - the past history of evolution of the domestic economy structure and the nature of the domestic market. It is well known that the domestic production structure often has serious imbalances and distortions, inherited from past history. Many developing countries of the South bear even today unmistakable marks of a colonial past in terms of their economic administration, nature of trade and financial relations, information and communication network, etc. Their problem has often been compounded by an inefficient industrial structure. It often shows itself in terms of high cost domestic industries needing protection, poorly managed infrastructure of economic and social overheads essential for industrialization, relative price structure that can be neither justified on grounds of allocative efficiency nor on grounds of income distribution, etc. It is not the purpose here to try to list the variety and range of problems that individual developing countries accumulate in the course of the evolution of their industrial structures. The central issue here is to recognize these problems explicitly in relation to the formulation of strategies. Perhaps one broad way to capture some of these problems is to examine the implications of these various inefficiencies and distortions of

the domestic industrial structure in terms of the strain it generates on public finance in general and government budget in particular. The fourth issue therefore is to ascertain how much of a national development strategy can be domestically financed - both in terms of money and in terms of availability of domestic resources and in this way, to come to a clearer formulation of both the scope and the limits of instruments of public finance available with the government in the context of formulating strategies. It should perhaps be emphasized here that this fourth issue of assigning a clear role to fiscal and monetary policy in the formulation of development strategies is often missed in practice. The longer-term or perspective plan in some developing countries are typically based upon material balances or input-output analysis in some degree of detail, but the supporting financial plan of how to achieve these physical balances are often far less clearly spelled out. The latter is managed on a more ad hoc basis of government annual budgeting which does not always fit in with the longer term or perspective plan. This issue of understanding more clearly both the limits and the possibilities of the domestic fiscal and the monetary system in relation to the national development strategy is therefore also essential for a better integration between the material (or physical) aspects of national planning with its financial aspects, particularly in developing mixed economies.

12. If the domestic production structure of most developing countries suffer today from serious imbalances and distortions in many instances their domestic consumption structure is at least equally distorted and imbalanced. The domestic consumption structure reflects the pattern of demand generated by the distribution of income inside the country. Both the size of the domestic market and the pattern of demand it generates needs to be broadly balanced with the domestic production structure, adjusted for international trade. This presents another central issue - the role to be assigned to the domestic market in the formulation of development strategies. At a more aggregate level, conventional characterizations like export promotion versus import substitution strategy essentially indicate the varying importance of the domestic market in the two respective stereotypes of strategies. But, it is not always explicitly recognized that particularly for many types of industrial products in developing countries, the size of the market for a

product is crucially influenced by the nature of domestic income distribution. It also bears emphasis here that income distribution is a multidimensional concept - it involves personal distribution of income, distribution of income by occupation and region and, in many developing countries, it also has a crucial dimension in terms of the distribution of income between the town and the countryside. The fifth issue of assigning a clear role to the domestic market in formulating development strategies therefore has to involve explicit considerations on the role of domestic income distribution in its various dimensions on the development strategy. Since both the limits and the possibilities of fiscal policies are closely related to such income distribution considerations, the preceding issue (see the fourth issue) and the present issue of the role of the domestic market in a development strategy tend to merge here.

13. The domestic market however also has certain given dimensions in terms of the size of a country. On the supply side, the breadth of natural resource base and skill formation of a country tends to have some relation to its size. On the demand side, the size of a country tends to affect the size of the domestic market. Developing countries with relatively small population (the majority of developing countries have a population size of less than 5 million) will tend to have rather limited domestic market at low levels of per capita income, in many cases their small size also entails a rather narrow natural resource base and limited skill formation. The size of a country, defined in a broad manner, thus must exert some influence on both the size of the domestic market and on the domestic supply possibilities. It is probably true that conventional economic theory has somewhat exaggerated the importance of "economies of scale" in industrial production. Nevertheless, constraints of country-size on the development-strategy, of which the size of the domestic market or narrow resource base often appears as particular manifestations, needs to be emphasized in formulating national development strategies. It is also worth considering here what role can be assigned to the service or tertiary sector, which typically has less pronounced effects on economies of scale. An explicit recognition of the importance of enormous differences in country-size and their implications for formulating national development plans at least serves as an antidote to the vice of overgeneralization in formulating national development strategies. Perceptions of problems have to be highly

country-specific by its very nature and a development strategy must therefore be formulated at the national level. It is only when perceptions by various nations of their individual problems begin to show the common elements, the need for group action without sacrifice of national self-interest begins to become a historical compulsion. And despite the diversity in perception of problems and the varying nature of their external dependence and vulnerability that developing countries are perhaps feeling today historical compulsions of co-operation. It is the duty of strategic economic thinking at national levels not to be oblivious to such historic compulsions.

Summary:

14. In formulating strategies and policies for development, developing countries usually have to face a set of related issues. Five such major issues have been identified in this paper, namely:

- External Issues:
- (i) The increased importance of private sources of international credit and its implications for formulating development strategies during the 1980s.
 - (ii) The nature and extent of dependence/vulnerability of individual developing countries to changes in the external economic environment and its role in strategic economic thinking.
 - (iii) The role of collective action - by special country-groups, on the basis of South-South co-operation or on an even wider scale - in formulating national development strategies.
- Internal Issues:
- (iv) The limits and possibilities of the domestic monetary and financial system in relation to national development strategies. This also implies closer examination of the extent of integration achieved between material/physical and financial plan at the national level.
 - (v) The role to be assigned to the domestic market - as influenced by per capita income, distribution of income and the size of the country - in formulating national strategies.

15. It needs emphasis that the above is not intended to be an exhaustive list; there are many more factors which each individual developing country has to reckon with in formulating its national strategy. Nevertheless, they illustrate some of the most relevant and typical common elements that need to be considered. A development strategy also involves attaching relative weights/significance to these various elements and sequencing them over time. Thus, one particular issue may be perceived as the most relevant at a point of time by an individual country and only the resolution of that immediately pressing problem allows the country concerned to then move on to other sets of issues. From this point of view, strategic economic thinking is essentially dynamic: it is not only influenced by historical experience continuously, but must also sequence issues in order of priority over time.

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PREPARATORY TO THE
FOURTH
GENERAL CONFERENCE
OF UNIDO**

*Industrial Development Strategies and Policies
for Developing Countries*

Lima, Peru, 18-22 April 1983

**INDUSTRIALIZATION STRATEGIES AND POLICIES:
POSSIBLE OPTIONS FOR DEVELOPING COUNTRIES**

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INTRODUCTION

UNIDO IV and the issue of industrial strategies and policies

1. The Fourth General Conference of UNIDO (UNIDO IV) will be held at a time when the world economy is undergoing drastic changes and the developing countries are facing tremendous challenges to their industrialization. Development in the third world has come to a virtual halt, and the developing countries find themselves at a crossroads. This situation requires that previous industrial strategies and policies be assessed anew, and new approaches to resuscitating and enhancing their industrial development identified. To this end, the provisional agenda of UNIDO IV covers a number of issues pertinent to such approaches. (See Annex 1)
2. Under item 4 on the UNIDO IV agenda, a review is to be made of progress towards and constraints on industrial development in the third world in the 1970s and an outline given of the perspectives for the achievement of the Lima target, while item 5 will cover international and national actions in critical areas of industrial development over the period 1985-2000. The critical areas specifically referred to are human resources, technology, finance, and energy, as well as such issues as industrial restructuring and redeployment and food supplies.
3. It was considered essential to the preparations for UNIDO IV that policy makers and specialists from as many developing and developed countries as possible analyse jointly with the UNIDO Secretariat these critical areas and present their views of future developments and the actions required. To this end, five preparatory expert group meetings are being organized. Four meetings will be on specific areas covered by the provisional agenda for UNIDO IV (technology, energy, economic co-operation among developing countries, and human resources), while the fifth will be devoted to industrial strategies and policies for developing countries: the broad issue that runs across all agenda items and is likely to constitute the leading theme at UNIDO IV.
4. In preparing for UNIDO IV it is deemed essential, first, to re-assert to policy makers the critical nature of the world economic situation and emerging patterns in global economic development so that an assessment can be made of the implications these bear for the industrial development prospects of the developing countries; secondly, to initiate a dialogue on

the issues pertaining to a reorientation of strategies and policies for industrial development in the developing countries; and, thirdly, to evolve suggestions for policies and strategies at the national, regional, and global level conducive to augmented international industrial restructuring and to sustained industrialization in the developing countries in the 1980s and 1990s.

5. The meeting on industrial development strategies and policies is designed to provide a major input to these endeavours. As can be seen from the provisional agenda for this meeting (see Annex 2), the approach chosen is to combine broad analyses in a plenary sessions with the more specific analyses conducted in working groups. Plenary will devote itself to a broad assessment of developments in the 1970s, of the current crisis, and of the prospects and strategy options for the 1980s and 1990s. While the working groups will enter into the specific issues peculiar to developing countries faced with different industrialization options in the formulation of their strategies and policies for industrial development.

6. The meeting will attempt to synthesize the perceptions of international and national developments and indicate new concepts and approaches in strategy and policy formulation by the developing countries, acting both individually and collectively. This will be done in terms of the key agenda item of UNIDO IV on "International co-operation, relevant national actions including industrial policies, and UNIDO's contribution in critical areas of industrial development 1985-2000."

7. The preparatory meeting represents an important step in providing UNIDO IV with a set of observations on current and probable future developments in the industrial sphere and their driving forces - in both the North and South, as well as globally, regionally, and nationally. It will also provide a preliminary set of proposals related to appropriate and necessary policy and strategy responses by the developing countries at those levels. As a result of these deliberations, the meeting may also propose the further elaboration of key issues for presentation to UNIDO IV.

THE RECENT PAST, THE CURRENT CRISIS, AND FUTURE POLICY AND STRATEGY OPTIONS

The recent past

8. Up until the end of the 1970s, the industrialization of most developing countries proceeded at a relatively rapid pace: an advancement that was reinforced and supported by the international trade and financial system.
9. The end of the 1970s marked the beginning of an ever-deepening world economic recession, the impact of which was particularly felt in those countries least able to respond - the developing countries. This slowdown in overall economic growth was more pervasive than ever before in the post-World War II period, and as the process of world industrial development came almost to a standstill, the frailty of established industrial structures was revealed.
10. In order to understand the present situation it is necessary to examine the forces that evolved during the mid- and late-1970s and led to a vicious circle of international contraction. The international economy was in a state of turmoil owing to the all-pervasive uncertainties resulting from the volatility of exchange and interest rates, as well as the prices of primary commodities, oil and food. The fundamental changes in the international economy as against the previous decades were not clearly perceived by economic policy makers. The need for profound structural change and restructuring in industry was generally met by the adoption of short-term economic adjustment policies at the domestic level. Little consideration was given to the international or long-term implications of such policies - both of which were of paramount importance to the developing countries.
11. In the recession of the mid-1970s, despite the contraction of the developed countries, a small group of developing countries maintained the momentum of their industrialization by virtue of their access to international capital markets. However, for many developing countries - and particularly the poorer countries - no such opportunities existed. During this period the reality of inflation - and the monetary policy-based response - in the developed market economies was not yet fully manifest and thus government economic policies did not centre on combating inflation. Moreover, attitudes and policies towards aid and international co-operation were still open, and a trend towards increased protectionism was not apparent.

12. The persistent inflation, growing unemployment and prolonged recession that marked the beginning of the 1980s gave rise in some developed countries to varying deflationary domestic monetary and fiscal policies and restrictive foreign economic policies. These policies combined to have a deflationary impact on the world economy. This negative effect on the economies of the developing countries was heightened by increased international interdependence and the integration of national economies into the international economy that had come about as the result of development patterns prevailing in the previous decades.

13. The vulnerability of developing country industries led to general uncertainty in all areas of economic activity, with a resultant drop in capital formation. It also complicated to a significant degree the task of those concerned with the formulation of policies and strategies for economic and industrial development in those countries. This was particularly true in the case of project planning, where the determination of project viability became very difficult in the face of fluctuating exchange and interest rates. The difficulty of this task should be viewed in relation to the dependence of the developing countries on the developed countries, a factor which restricted their freedom of choice in the design of appropriate policies.

14. The marked deterioration in the terms of trade of the majority of developing countries had a significant negative impact on the availability of financial resources, thus limiting the scope for expansion in the elaboration of industrial development policies and strategies. Expansion was also limited by the need to introduce short-term adjustment policies.

15. This situation was aggravated by the significant indebtedness of the developing countries. The recycling of petrodollars, which had delayed the impact of certain recessionary trends in some developing countries, resulted in a significant debt-servicing burden at an inordinately high cost to both the international financial system and the medium-term development process of numerous developing countries.

15. The above notwithstanding, it should be recognized that part of the responsibility for the impact of the present crisis lay with the structures

prevailing in the developing countries. A number of developing countries could have developed, by means of appropriate policies, structures that were less vulnerable to external pressures and more responsive to internal dynamics, thus ensuring a wider distribution of the benefits of development and more sustained industro-economic growth. The least developed countries, however, were in no such position, and they continue to depend upon external assistance and support. Furthermore, whereas some developing countries - either individually or through membership of producers' associations, regional free trade areas and customs unions - have accrued certain benefits, they have not been able to ensure the distribution thereof to poorer nations. Redistribution of the benefits of development among the developing countries calls for effective inter- and intra-regional cooperation in trade and finance.

The current crisis

16. The current crisis has demonstrated in almost all developing countries the vulnerability to external change of the structure and organization of industrial production which were based on policies and strategies drawn up under different conditions. Furthermore, these policies and strategies did not incorporate an explicit recognition of the implications of global interdependence.

17. The current crisis also demonstrates the need for national strategies and policies that take due account of long-term and global development. Moreover, the far-reaching integration of the majority of national economies into the world economy calls for joint approaches and the co-ordination of policies of all countries, developed and developing alike.

18. The recession brought about a sharp drop in import demand by developed countries and a collapse in primary product prices. It gave rise to strong pressure in the developed countries to turn their attention inwards to domestic economic problems and away from the problems confronting the developing countries. It also meant turning away from restructuring their industry in accordance with the changing international pattern of comparative advantages. This redirection of policy led to the adoption of a money and credit policy in the leading developed countries that bore severe consequences for those developing countries that had chosen to rely heavily on foreign credits in their industrialization endeavours.

19. Given the absence of a secondary market for loans to developing countries, the international banks had no choice but to lend more money to service existing loans, when their developing country clients met with difficulties. Whereas these loans helped maintain the momentum of industrialization in the developing countries in the 1970s, this is no longer a viable option for either the banks or their clients.

20. The recent tendency in leading capital markets for interest rates to fall could be of major benefit to all developing countries, just as the current fall in world oil prices could benefit developing countries that import oil. However, neither the long-term direction nor the intensity of either trend is clear: a factor which greatly exacerbates the process of long-term policy and strategy formulation.

21. At the same time, the developing countries seem to have underestimated the long-term cost of externally-financed industrialization. Their development planners failed to make allowances for risk and uncertainty in the international goods and capital markets.

22. The collapse in commodity prices at the outset of 1980 aggravated the serious deterioration in the current account position that had been facing non-oil developing countries since the late 1970s. These developments lend emphasis to the need for structural change in the nature of material inputs, the pattern of capital investment, and the structure of output.

23. This break in the industrialization process of the developing countries is generating enormous social pressure and uncertainty as to the appropriate pattern of long-term policy and strategy response in many countries.

Future policy and strategy options

24. At this juncture two fundamental questions arise: the first relates to the optimal routes for international recovery, the second to the short-term industrial policy and long-term industrial strategy options most appropriate to the industrial growth of the developing countries over the next two decades. This paper can only raise certain key issues relevant to the process of strategy and policy formulation for industrial development in the coming years.

It is expected that in the preparations for the Fourth General Conference of UNIDO these issues will be subject to analysis by policy makers in developed and developing countries and that some convergence of views in terms of national, regional and international action may emerge.

25. The first issue relates to the need to demonstrate that the present world economic environment is not conducive to meeting the pressing requirements of the developing countries. While the situation will not improve in the medium term without direct and concerted efforts by developed countries.

26. The second issue refers directly to the process of strategy and policy formulation, implementation and management in the developing countries and the scope for national action within an international framework. If the developing countries are to achieve sustained industrial growth, their policy makers must first take full account of both growing international interdependence and internal development potentials. They should also devote greater attention to the better utilization of existing industrial bases so that the industrial capacities built up under different premises over the past two decades can be adjusted to new conditions in the 1980s and 1990s.

27. The formulation of industrial strategies for the next two decades requires that certain factors be studied and their implications for industrialization understood. These factors include the use of new technologies, the development of resource management systems, the growing sophistication of policy-making and industrial planning processes, the strengthening of linkages between manufacturing and other sectors, and the coordination of micro- and macro-economic policies.

28. In strategy formulation, the focus would first be on developments conducive to socio-economic goals, secondly on a systematic long-term utilization of prospective industrialization potentials from internal and external dynamics and, thirdly, on a continuous assessment of international challenges and uncertainties. This, in turn, would necessitate a closer surveillance of international development processes and their driving forces.

29. The time dimension of industrialization strategies and policies will also need to be considered: short-term policies designed to overcome immediate constraints need to be closely linked with long-term strategies so as to ensure consistency and sustained development. Similarly, increased flexibility and built-in options for the readjustment of long-term strategies and policies may be called for in the 1980s and 1990s in view of the prevailing uncertainties, rapidly shifting parameters and changing policies in other countries.

30. By its very nature, the formulation of national industrial strategies for the 1980s and 1990s also entails determining the degree of international integration and co-operation. The scope for and constraints upon sub-regional, regional and international industrial co-operation need to be systematically assessed. The potential long-term economic benefits of enhanced co-operation are obvious. The establishment of such co-operation and the overcoming of obstacles, however, is a gradual process that calls for the immediate re-orientation of national strategies.

31. In analyzing emerging prospects and challenges and identifying options for strategies and policies conducive to enhanced industrial development in the 1980s and 1990s, two crucial parameters need to be considered. The first is the degree of manoeuvre open to individual developing countries when choosing strategies within the existing international system: the second is the action-reaction relationship between developed and developing countries.

32. Although no clear-cut policy and strategy prescriptions are available to the developing countries for the 1980s and 1990s, a set of structural adjustment policies designed to respond to external pressures and growing challenges to the current industrial structure is needed, if economic growth is to be stimulated and industrialization promoted in the developing countries. These policies must emphasize increasing productivity and investment as a means of stimulating growth, but they will also have to take into consideration other relevant policy instruments such as exchange rates, import levies, export subsidies, domestic savings, and sectoral developments in agriculture and energy.

INDUSTRIAL STRATEGIES AND POLICIES OF DEVELOPING COUNTRIES IN PERSPECTIVE

33. As emphasized above, developing countries are at present confronted with the problem of re-assessing and formulating strategies to respond to external and internal constraints and to exploit new industrial development potential, both in the short and long term.

34. The basic international framework for continued industrial development in the developing countries and the scope for the global restructuring of industry are undergoing drastic change in terms of the patterns and modalities of international trade, the functioning of the international financing system, the changing international price structure for commodities, and technology.

35. These changes will greatly affect the market orientation and industrialization pattern in all developing countries. It is, however, essential to assess the degree to which these various external forces affect individual developing countries and to determine the scope for alternative policy and strategy options in response to those forces in countries with different production and trade structures.

36. These effects will vary significantly depending on the degree to which the given developing country is already integrated into the international industrial production system, where the developed market economies constitute the main outlets for developing country exports.

37. In examining the key issues for developing country strategies in the 1980s and 1990s in terms of the impact of international trade and developing country policies, it seems appropriate to single out for analytical purposes:

(i) countries with an apparent potential for increased exports of manufactures;
(ii) countries with potential for domestic market-oriented industrialization; and
(iii) countries still at the initial stage of industrialization. This categorization would seem to be useful not only when analyzing issues relating to external forces, but also when focusing on the domestic aspects of industrialization in the developing countries. It is also useful when considering the scope for international co-operation between developing countries acting collectively in support of national strategies.

38. On the other hand, it is important to ensure that the final objective is duly accounted for, when conducting disaggregated analyses of future potentials, constraints and industrial development options for the different types of countries. The overriding concern is to synthesize national perceptions and establish commonalities and joint actions for the developing countries as a whole.

Developing countries with an apparent potential for increased exports of manufactures

39. When considering industrial strategies which entail increased exports of manufactures in the 1980s and 1990s, developing countries face the problem of increasing competition in stagnating and protected developed country markets and fiercely contested developing country markets.

40. On the basis of past experience and prospective analyses of international market developments, current technological trends and corporate strategies, individual developing countries may be able to single out industrial sectors, subsectors, or product groups with significant export potential in developed or developing country markets. They must establish whether they have a dynamic comparative advantage in industries such as textiles and clothing, electronics, food processing, selected mechanical and electrical capital goods or processed minerals. They must also ascertain whether a specialization pattern can be envisaged among developing countries that would be positive and active rather than defensive. Finally, they must ensure that the prevailing institutional structures are adequate to the flexible approaches they are adopting.

41. In the mineral processing sector, the developing countries may have clear potentials, but they will also face significant problems in terms of securing investment financing and ascertaining market access in periods of global over-capacity. In the petroleum processing industry, some major oil exporting countries envisage continuing the expansion of their capacities for export. Although refining capacities in the world are largely underutilized, recent developments indicate potential increases in demand and the increasing obsolescence of refining plants in developed countries which may be gradually phased out.

42. Export potential may also be given for some developing countries in terms of human resources for competitive, labour-intensive manufacturing. Broadly speaking, many developing countries will continue to enjoy a comparative advantage in labour-intensive standardized products for export to developed countries, although increasingly saturated markets and the growing number of low-wage competitors may limit the scope of such strategies.

43. As an illustration of the complex issues involved, two traditional export-oriented industries in the developing countries might be mentioned: textiles and electronics. An examination of current trends in the textile and clothing industry indicates that indiscriminate reliance by developing countries on production for export to developed countries is not feasible, at least in the medium term. For some relative low-cost developing countries just entering the production field, there would seem to be limited scope for exports by shifting quota allotments from currently dominant exporters, while clear long-term prospects exist for exports to the potentially large markets of the developing countries themselves. Since many large developing countries may attempt to establish their own production capacities to serve domestic markets, the scope for technical co-operation and specialization among developing countries will increase.

44. More specifically, current trends seem to indicate that for the cotton-based industries, competition on a saturated international market will be mainly between developing country producers. The export markets for developing countries will grow mainly in respect of synthetic fibre blends. As for clothing, it is questionable whether developing countries will succeed in producing competitive, high-quality products and thus penetrate the increasingly protective developed country markets.

45. In the electronics industry, it would appear that only a few developing countries might succeed as producers and exporters of integrated product groups. Certain growth poles in Latin America, Southeast Asia, the Middle East and the Mediterranean area may continue to maintain their share of the export-oriented production of electronic components.

46. The choice of technology and source of material inputs for the export-oriented industry are of increasingly crucial importance to developing countries. The demand for a high degree of efficiency makes essential the introduction of process and product technologies and inputs to international standards, thus increasing the import-intensity of export industries. Export-promotion policies should thus provide for extensive liberalization of imports to those industries. In the longer term, however, policies will need to be oriented towards upgrading developing country capacities so that they can develop indigenous technological skills. The development of new technologies and the growing systematic use of selected domestic inputs would offset the risk of export strategies creating and sustaining an export enclave with little linkage to other domestic industries and eventually yielding little net foreign exchange revenue: a development that has been observed in the past.

47. When considering export-oriented strategies, particular care must be displayed in the choice of agents for development. Hitherto, transnational corporations (TNCs) have been the dominant partners in this field since they were able to provide the technology, finance, and marketing skills required. It should now be established whether and to what extent third world multinational corporations (MNCs), developing country trading houses or domestic firms could be relied upon in the future to undertake the tasks associated with implementing the new strategies of the coming decades.

48. For countries attempting to pursue these strategies, the problem of assessing which subsectors of manufacturing and which markets have the greatest potential in the 1980s and 1990s is both crucially important and difficult in the light of prevailing uncertainties. Given the trend towards increasing protectionism and official export support schemes in the developed countries, the question arises as to which new types of bilateral, regional and inter-regional trade agreements (including compensation deals) offer the developing countries the best opportunity to improve their exports to developed and other developing countries.

49. Developing countries therefore need to analyze much more systematically than in the past their potentials for dynamic trade with other developing countries.

Adopting this approach will, in turn, require that new modalities be conceived for increased South-North and South-South trade.

Developing countries with potential for domestic market-oriented industrialization

50. Among these developing countries, some have very large, growing populations and thus extensive domestic markets (current or potential) for manufactured products. There are indications that several of these developing countries may devote increasing attention to the systematic utilization of the opportunities that their own markets provide for sustained industrial development. To a certain degree, this increase has been prompted by export setbacks in recent years and by the lack of development stimuli among the export industries for the industrial sector as a whole. A high import content in the current structure of industry in general and the export industry in particular is another reason for re-considering the introduction of a new type of selective import substitution.

51. A domestic market-oriented industrial strategy would obviously still aim at selected exports of manufactures. However, one set of policies might focus on the vehicle of income distribution to generate domestic demand and on using industrial production to enhance supplies of essential products for the broad categories of the population and for employment. Focal issues would thus include integrating industry with agriculture and mining, and mixing modern and traditional industries. Key questions would include the extent to which one can overcome problems associated with inefficiencies and the high cost of production in industry, and the policies best suited to their solution.

52. Attention should also be given to the problem of overcoming increasing adjustment pressures common to industry in many developing countries so as to ensure a dynamism in production processes and product development. In this connection, it is essential to examine those aspects of strategy related to technology policy and, in particular, the relationship between output-oriented and employment-oriented technologies and their rationale in specific situations. Recent technological developments also indicate that scope exists for the application of small-scale production processes to various industrial activities. The development and introduction of such new technologies might help to overcome the problem faced by certain product groups in respect of the relative smallness of domestic markets.

Developing countries at the initial stages of industrialization

53. Most developing countries have only achieved a very limited level of industrialization. In the past, the majority have pursued an industrial strategy of import substitution in various light industries. Within this large group of countries, special attention needs to be given to the smaller countries whose domestic market-oriented industrialization is particularly limited. Attention should also be given to low-income countries which seem to lack the financial (and other indigenous) resources needed to acquire the necessary basic infrastructure as well as the resources essential to establishing internationally competitive industries. These countries include many of the least developed countries and many of the small island nations, with African countries clearly dominating the group.

54. Within this group of countries, the small island developing countries face a singular situation from the standpoint of formulating industrial strategies. For many of them, high transport costs represent significant obstacles to closer linkage with world industrial production and their domestic markets are extremely small. In some of these countries, mineral resources will have to be exploited with great care, both during the period of exploitation and once depleted, so as not to disrupt socio-economic development. In all probability, these countries will only be able to build up a limited industrial structure based on local raw materials and skills and in the form of small-scale plants mainly directed towards local consumption (food, textiles, etc.) One issue that calls for special attention is the manner in which the potential marine resources that have become available as a result of the new international Law of the Sea can be systematically utilized: either directly for purposes of industrial processing or indirectly as tradeable commodities. A second issue hinges on the scope for subregional techno-economic co-operation and the type of schemes that could be evolved so as to ensure at least a minimum degree of industrial complementarity with other developing countries. It should also be explored whether special industrial co-operation schemes could bring about a new form of support for these minor economies.

55. Many of the countries in Africa have established only a very limited industrial base. Whereas for all the developing countries in Africa the share of

MVA in GDP amounted to some 10 per cent in 1980, about half of the (52) countries had a share of less than 7 per cent. This latter group of countries is facing increasing difficulties in their industrialization endeavours owing to internal constraints, dwindling foreign assistance, and small fragmented markets. Previous attempts to establish economic grouping on a subregional basis in order to create a broader market for industrial products do not seem to have yielded major results. Renewed attempts are now being made (such as the Southern African Development Coordination Conference), but it is still uncertain whether they can manage to overcome built-in political and economic constraints.

56. It would seem essential that the poorer African countries take steps to co-ordinate foreign technical assistance and assess the extent to which existing industrial capacities can be utilized to provide inputs into major foreign aid programmes. The African continent is richly endowed with mineral resources, and given a revival of the international economy, mineral-based industrialization may well constitute a promising option for a number of African countries.

57. The major issues governing the formulation of strategies and policies for the 1980s and 1990s in this group of countries relate to their current dilemma: the lack of a sizeable domestic market, the absence of an industrial base and the shortage of resources (investible and human) needed to build up export-oriented industries. In a period of intensive international competition, rapid technological development and international financial tension, these countries need to adopt a dual approach: a policy of endogenous resource-based industrialization using small-scale processes and building up integrated agro-industrial production in tandem with new approaches to international industrial co-operation.

58. Given the similarity of production structures in these countries, the scope for mutual industrial co-operation would appear limited in the short and medium term. This notwithstanding, the issue of possible co-operation schemes remains of crucial importance to enlarging markets, attracting more direct foreign investment, pooling resources and effecting the joint purchase of products and production inputs. The scope for increased industrial complementarity in the long term warrants attention, as does the question of industrial co-operation

between developing countries at an initial stage of development and other developing countries. Finally, the development of co-operation schemes with developed countries also deserves investigation and the extent to which such schemes can support rather than limit co-operation at a subregional, regional or inter-regional level should be studied.

INTERNATIONAL CO-OPERATION AND THE ROLE OF UNIDO

59. In the analysis above a number of key issues were identified related to the directions in which industrial development strategies and policies for the 1980s and 1990s could - or should - move. The objective of such strategies and policies is to re-set the focus on industry as the vehicle for sustained overall development and on the long-term industrialization process.

60. Industrial development is clearly not an end in itself. It is a common denominator of sectoral growth and a central driving force of overall development. Formulating industrial development strategies and policies thus requires an appreciation for and a determination of the prospective role of industry within the complex setting of national development. It calls for an understanding of the fact that the choice of focus is not, for example, on industry as opposed to agriculture, on industry as opposed to trade, nor indeed on industry as opposed to manpower. On the contrary, the focus on industry offers such options as directing industry (agricultural machinery, processing, etc.) towards increased food supply, defining the market orientation of industry, and determining the utilization and upgrading of human resources through industry.

61. Formulating industrial strategies and policies requires that policy makers change their perceptions of industrialization. It implies both an appreciation and determination of the dynamic role and position of a country's industry in the international industrial production system and overall development framework. The key issues in this regard concern the inter-relationship between strategic approaches at the national, subregional and regional level, as well as for the developing countries and world as a whole.

62. These issues need to be approached on two levels. First, national policy makers' perceptions and notions of future strategies in individual developing countries should be ascertained in the light of new parameters, whereafter the degree of convergence or divergence of ideas can be established. At the same time, a normative approach is called for. Consideration should be given to those strategy options, especially at a global level, that would ensure real growth for all countries through a restructuring of world industry and an efficient international division of labour. It is in this context that the international organizations - and particularly UNIDO - have a special role to play. Identifying the potential and requirements for industrial co-operation - intra-regional and inter-regional - should thus be the particular concern of UNIDO. The most decisive factor is the extent to which the co-operation scheme so developed is more than the sum of its component parts. Experience of earlier regional co-operation schemes among developing countries has shown that it has often been very difficult to distinguish between reality and rhetoric. A note of guarded optimism about such schemes' prospects of success would appear justified.

63. In the case of South-South co-operation, arguments in favour of the creation of a new economy for the South seems sound. The size of the "internal market" and possible economies of scale offer great production opportunities, as does potential for learning-by-doing. It would also provide ample scope for sharing risks and reducing uncertainty. Furthermore, genuine commitment to such a strategy by the countries of the South would also permit the creation of compensation mechanisms within the scheme that would guard against polarization in the distribution of the benefits.

64. South-South co-operation, however, is intrinsically a long-term solution. If it is to reach fruition, consistent and supportive short- and medium-term policies and strategies at both the national and international level (and designed in full awareness of interdependence) are required. Appropriate action has to be taken now at both the global and national level, and debate at UNIDO IV could focus on the consistency and convergence of these policies and strategies.

65. Most, if not all, of the issues raised in this paper are of direct relevance to the broad mandate of UNIDO. The question which this meeting - and later UNIDO IV - must address is that of identifying the specific issues of highest

priority and most pertinent to the future work programme of UNIDO. Given the emerging industrial development patterns and the strategy and policy issues faced by various developing countries, these areas of highest priority will have to be selected in terms of the technical co-operation activities, advisory services, action-oriented analyses, information services and promotional activities undertaken by the Organization.

FOURTH GENERAL CONFERENCE OF UNIDO

Draft Provisional Agenda

1. Opening of the Conference
2. Organization of the Conference
 - (a) Election of the President
 - (b) Adoption of the agenda
 - (c) Adoption of the rules of procedure
 - (d) Election of officers other than the President
 - (e) Organization of committees
 - (f) Credentials of representatives to the Conference
3. General debate
4. Lima and New Delhi Declarations and Plans of Action: retrospective and perspective
 - (a) Review of progress and constraints
 - (b) Perspectives for the achievement of the Lima target
5. International co-operation, relevant national actions including industrial policies, and UNIDO's contribution in critical areas of industrial development 1985 - 2000
 - (a) Accelerated development of human resources for industrial development
 - (b) Strengthening of scientific and technological capacities for industrial development in developing countries
 - (c) Mobilizing of financial resources for industrial development
 - (d) Energy and industrialization, with special emphasis on development and application of energy resources and manufacture of equipment
 - (e) World industrial restructuring and redeployment
 - (f) Policies and measures for domestic industrial processing of raw materials in developing countries
 - (g) Industrial policies and measures to achieve rural development and self-sufficiency in food supplies in developing countries
 - (h) The least developed countries: implementation of the Substantial New Programme of Action
 - (i) Strengthening economic co-operation among developing countries
6. The Industrial Development Decade for Africa: review of progress, and proposals on ways and means to attain its objectives
7. UNIDO's co-ordinating role in the United Nations system on industrial development
8. Conclusions and recommendations
9. Adoption of the report of the Conference
10. Closure of the Conference

HIGH-LEVEL EXPERT GROUP MEETING PREPARATORY TO UNIDO IV:
INDUSTRIAL DEVELOPMENT STRATEGIES AND POLICIES
FOR DEVELOPING COUNTRIES

Lima, Peru

18 - 22 April 1983

Draft Provisional Agenda

1. Opening of the Meeting
2. Election of the Chairman, Vice Chairman and Rapporteur
3. Adoption of the Agenda
4. Setting the Scene - Plenary
 - A. Achievements, setbacks and constraints on industrial development in the third world in the 1970s: a critical review of recent strategies, policies and developments
 - B. The current international crisis and its impact on developing countries' industrial development: An overview
 - C. Consideration of strategies and policies in the 1980s and 1990s: an introduction
5. Industrial strategies and policies of developing countries in perspective: a detailed review of current trends and emerging strategy and policy responses - Working Groups
 - A. Strategy and policy issues relating to developing countries with potential for increased exports of manufactures
 - B. Strategy and policy issues relating to developing countries with potential for domestic market-oriented industrialization
 - C. Strategy and policy issues relating to developing countries in the initial stages of industrialization
6. Report of the Working Groups to the Plenary
7. International co-operation, relevant national actions including industrial policies, and the role of UNIDO: conclusions and recommendations
8. Adoption of the report of the Meeting
9. Closure of the Meeting

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**HIGH-LEVEL
EXPERT GROUP MEETINGS
PREPARATORY TO THE
FOURTH
GENERAL CONFERENCE
OF UNIDO**

*Industrial Development Strategies and Policies
for Developing Countries*

Lima, Peru, 18-22 April 1983

**SOME TRENDS
IN WORLD INDUSTRIAL DEVELOPMENT
*Policy Implications for Future Actions***

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EXPLANATORY NOTES

The following classification of economic groupings is used in the text and in most tables, in conformity with the classification adopted by the United Nations Statistical Office: "Developing countries" includes the Caribbean area, Central and South America, Africa (other than South Africa), West Asia (other than Israel) and South and East Asia (other than Japan). "Developed market economies" includes North America (Canada and the United States of America), Europe (other than Eastern Europe), Australia, Israel, Japan, New Zealand and South Africa. "Centrally planned economies" includes Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the Union of Soviet Socialist Republics. Unless otherwise specified, "world" excludes Albania, China, the Democratic People's Republic of Korea, Mongolia and Viet Nam.

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The designation "developed" and "developing" economies is intended for statistical convenience and does not necessarily express a judgement about the stage reached by a particular country or area in the development process.

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Introduction

The performance and growth of world industry in recent years suggests a distinct departure from the experience accumulated over the three previous decades. This departure involves very basic changes that go beyond the mere general slowdown in world economic activity which occurred in the late 1970s. For instance, composition of manufacturing activities is rapidly changing; many of yesterday's major growth industries are stagnating while new ones are taking hold. Simultaneously, new issues involving technology, finance, trade, etc. are emerging.

These are but a few of the issues contributing to the uncertainties which must be faced by policymakers and strategists in both the developing and the developed countries. The complexity of the policymaker's dilemma - whether with regard to industry-specific issues, sector-wide problems or international questions bearing on the manufacturing sector - can not be adequately described in a paper so brief as this one. Instead, the following discussion merely attempts to highlight some of the major changes in world industry having important policy implications.

This paper begins by looking at the changing international distribution of manufacturing activity. The most important dimension of this redistribution concerns relative shifts in the position of individual developed countries - the effects of which are seen in the formulation of international policy that relates to the industrial sphere. Turning to the developing countries, the paper outlines recent changes in the composition of manufacturing activity and draws attention to the declining rate of structural

change in the manufacturing sector. Trends in manufacturing employment, productivity and output are introduced in connection with these discussions. Although decisions with regard to major strategies such as import substitution and export promotion are based on a large number of factors, one consideration involves the relative importance of different sources of growth. The paper presents the results of an investigation of this aspect and summarizes the findings contained in a larger UNIDO study on the related subject of comparative advantage. The discussion concludes with a multi-country analysis of patterns of consumption of industrial products which suggests that many basic needs in developing countries are not adequately met.

The Changing Map of World Industry

A simple overview of the changing world industrial map in terms of the global distribution of manufacturing value added (MVA) is found among the selected statistical indicators.^{1/} The data distinguish between the three economic groupings^{2/} and summarize changes in the pattern of world MVA in various years between 1938 and 1982. The share of the developing countries shows a steady, although gradual rise from 1953 until 1978; in later years, relative gains occurred more erratically. Throughout the period 1963-1982,

^{1/} See ID/WG.391/1, table 3.

^{2/} Owing to conceptual differences in the national accounting practices of the developed market economies and the centrally planned economies, original data for the two economic groupings are not comparable. A statistical investigation was undertaken by the secretariat of UNIDO to derive a set of data that would permit a comparison of the shares of the three economic groupings in world manufacturing value added. The data given for the centrally planned economies should nevertheless be regarded as estimates.

the share of the developing countries increased from 8.1 per cent of world MVA to 11 per cent. These gains are marginal, however, in comparison with the strides made by the centrally planned economies where the corresponding figures were 14.6 per cent in 1963 and 25.0 per cent in 1982. The relative decline of the developed market economies, although gradual, appears to be a long-term phenomenon dating back to the late 1940s. Long-term trends were re-enforced by the general slowdown in world growth which occurred after 1974. The developed market economies were more seriously affected in this regard than the two other country groupings.^{1/} One result was that the downward trend of the developed market economies accelerated after 1974.

While figures such as these provide a rough impression of trends in world industry, they are of limited use for the purpose of the present discussion. Perhaps the most that can be said is that a constant feature of world industrial activity has been the continued dominance of the developed countries. Indeed, during the first quarter of this century only a small number of developed countries accounted for at least 95 per cent of world MVA. Producers in the developing countries were mainly onlookers and not participants in this phase in the growth process.

A more detailed breakdown of the distribution of world MVA is required in order to gauge the basis for international industrial

^{1/} Index numbers of industrial production support this observation, showing that levels of manufacturing activity in developed market economies actually dropped in 1974, 1975, 1980 and 1982. Data on this aspect will appear in the Survey (forthcoming).

policy. Countries obviously embarked on a course of industrialization at different periods in their history, depending on when they achieved independence, when they deemed industrialization appropriate, etc. Thus, for illustrative purposes, one means of examining the consequences of different growth experiences and policy approaches is to distinguish between countries according to how long they have been engaged in industrialization process. Such an arrangement of countries is shown in table 1.^{1/} The developed market economies are divided into three subgroups: countries whose post-war record of growth in the manufacturing sector reflects a long and uninterrupted history, countries where manufacturing has grown at a comparatively fast rate, either because the sector became important only in the last three decades or because the sector recovered from the war destruction, and a residual group of countries. The developing countries are separated into two subgroups: the semi-industrialized and a residual of other developing countries. The centrally planned economies are shown as a separate group.

The consequences of the recent slowdown affected almost all the developed market economies, including the late industrializing

^{1/} The figures shown here provide only approximate indications of trends over the entire period 1938-1980, being derived from both current price data and constant price data and from different sources. Because of these drawbacks, the data for different years are not necessarily comparable although they do provide a sufficient basis for drawing some conclusions as to the directions of change in the world industrial map.

TABLE 1
ESTIMATED SHARES IN WORLD MANUFACTURING VALUE ADDED
BY COUNTRY GROUPINGS AND ILLUSTRATIVE SUB-GROUPS

| | 1938 | 1948 | 1953 | 1963 | 1970 | 1973 | 1975 | 1978 | 1980 |
|---|------|------|------|------|------|------|------|------|------|
| <u>Developed Market Economies</u> | 61.0 | 72.2 | 72.0 | 64.8 | | | | | |
| of which: | | | | | | | | | |
| Mature Market Economies ^{a/} | 41.0 | 58.7 | 55.2 | 44.5 | 77.3 | 73.4 | 72.0 | 67.5 | 66.8 |
| Late Industrializing Market Economies ^{b/} | 13.8 | 6.5 | 10.4 | 14.0 | 46.1 | 39.6 | 38.8 | 35.7 | 35.0 |
| Others | 6.2 | 6.9 | 6.4 | 6.2 | 8.3 | 8.0 | 7.8 | 7.6 | 7.3 |
| <u>Centrally Planned Economies</u> | 34.5 | 22.1 | 23.2 | 28.5 | 14.6 | 17.8 | 18.7 | 22.5 | 22.9 |
| <u>Developing Countries</u> | 4.5 | 5.7 | 4.8 | 6.6 | 8.1 | 8.8 | 9.3 | 10.0 | 10.3 |
| of which: | | | | | | | | | |
| Semi-industrialized Countries ^{c/} | 3.3 | 4.0 | 3.2 | 4.4 | 5.5 | 6.0 | 6.5 | 7.0 | 7.2 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis and the Statistical Office of the United Nations secretariat, with estimates by the UNIDO secretariat.

Note: Data for the years 1938 - 1963 are in current prices. Figures for 1938 - 1963 were derived from data compiled according to industrial census concepts. Figures for the years 1963 - 1980 were compiled from national accounts sources for manufacturing value added expressed in US dollars at 1975 prices.

a/ Mature market economies were defined to include Belgium, France, Luxembourg, Netherlands, Norway, Sweden, United Kingdom of Great Britain and Northern Ireland and the United States of America.

b/ Late industrializing market economies are the Federal Republic of Germany, Greece, Ireland, Israel, Italy, Japan, Portugal and Spain.

c/ Semi-industrialized developing countries and territories include Argentina, Brazil, Colombia, Egypt, Hong Kong, India, Malaysia, Mexico, Philippines, Republic of Korea, Singapore, Thailand and Turkey.

ones. The share of this sub-group had steadily increased from 1948 until the early 1970s implying that much of the redistribution of world MVA was actually a relative shift of manufacturing activities from one sub-group of developed market economies to another. But this compensatory effect slackened as the slowdown in world growth became more severe. By the beginning of the 1980s, the mature market economies accounted for little more than one-third of world MVA while the share of the late industrializing market economies was less than one-fourth.

Some Implications for the Formulation of International Policies

The significant point arising from this description relates to the substantial change of individual country shares in world MVA. It is this fact which has had a considerable impact on the formulation of international policies pertaining to industry. Gradual changes in the global distribution of world MVA eventually altered many of the basic premises which, heretofore, had guided international industrial policy. Since 1950, policy makers in several of the major industrial economies have seen a relative decline in the international role of their countries' manufacturing sectors. These declines were often accompanied by a parallel deterioration in the countries' relative importance as world suppliers, both in terms of total exports and exports of manufactures. Such trends were not unique to one or two countries; they occurred in several developed countries. For instance, table 1 shows that, during 1963-78, the combined share of world MVA in eight

major industrial countries declined from 46 to 33 per cent.^{1/} A different set of experiences apply to other countries which have steadily increased their importance as industrial powers. These gains were matched by a similar expansion in the countries' shares of world exports of merchandise and manufactures.^{2/}

The realignment of world industry has altered the international environment within which governments formulate their industrial policies. The internationalization of economic relations - in today's parlance, a greater degree of economic interdependence - is thought to be inversely related to the degree of equality in the distribution of power between nations.^{3/} However, the post-war rearrangement of the world industrial map has led to the emergence of several relatively equal industrial powers and, in turn, has created a collegial form of policy negotiation. Many policy decisions are now fashioned by consensus between a growing number of different country coalitions depending upon the issue involved.

Briefly stated, the formulation of international policy by the developed countries has become multipolar. The dispersion of capacity among these countries has altered each country's approach to international policy in the industrial sphere. And as their

1/ Figures were compiled from national accounts data, expressed in US dollars and at constant prices. The eight countries include Belgium, France, Luxembourg, Netherlands, Norway, Sweden, the United Kingdom and the United States.

2/ Thus, between 1963 and 1980 the redistribution of world MVA included the following shifts (in percentage): the United States: 30.2 to 21.1; the United Kingdom: 5.6 to 3.0; Japan: 6.4 to 9.4 and the Union of Soviet Socialist Republics: 9.2 to 15.9. Additional figures will appear in the Survey (forthcoming).

3/ OECD, Facing the Future: Mastering the Probable and Managing the Unpredictable (Paris, OECD, 1979), p.77-78.

shares in world production have changed, so have their capacities to influence international industrial policies. In the case of MVA, such trends are clearly evident in the data presented here. Accordingly, the basis for negotiations on international policy issues pertaining to trade, investment, technology and industry has undergone a subtle readjustment reflecting the changes in the world industrial map.

Faced with such a fundamental change, there are several reasons why the governments of developed countries have adopted a more tentative approach to international questions of industrial policy. Their hesitation can be partly attributed to inexperience in the present collegial, or multipolar, system. However, there are other, equally important reasons. First, greater interdependence has accentuated the importance of foreign markets and suppliers at the expense of domestic activities. Under such circumstances, the efficacy of national policies is sometimes reduced while policy makers are faced with a greater margin of uncertainty when making decisions. These dilemmas derive from actual problems: (a) unfamiliarity with the characteristics of foreign markets and suppliers and the inability to influence these firms by domestic means; (b) the fear that external suppliers may impose constraints on domestic development by cutting deliveries, raising prices or enforcing an embargo; (c) the prospect that reliance on imported capital goods may relegate domestic users to an inferior technology or lessen their ability to influence the nature of technological advances.

Second, long-term employment trends reveal a decline in the manufacturing sector's share of total employment in several

developed countries. While earlier types of employment shifts, i.e. from agriculture to manufacturing or within the manufacturing sector, were easily accomplished, displaced workers may not be easily transferred from the manufacturing to the tertiary sector where employment has been growing.^{1/} These and other circumstances may have resulted in a "mismatch" in the demand for and supply of resources, including labour. Thus, when major structural shifts occur, labour and other resources do not flow immediately from unprofitable or contracting activities to new ones with growth potential. During the period of transition, the growth of income may be reduced. The mismatch in resource requirements is reflected in the simultaneous existence of labour shortages in some areas and job shortages in others, together with long delivery delays in some products and surplus capacity in others. Thus, some governments are inclined to respond by holding back the rate of structural change, thereby limiting the restructuring process.^{2/}

Turning to the developing countries, there is a similar need to look beyond the broad trends in order to draw any meaningful conclusions about industrial progress and the attendant policy implications. There are, of course, a variety of ways to examine the industrial experiences of these countries, any of which may have

^{1/} Jobs in the tertiary sector typically pay less than jobs in manufacturing and are often only part time. Thus, they are more attractive to new workers than to those previously employed in industry.

^{2/} Further discussion of the consequences of these mismatches see Michael Beenstock and Patrick Willcocks, "The causes of slower growth in the world economy", Discussion Paper no.76 (London, London Business School, 1980) and Michael Beenstock, World Industry in Transition, George Allen and Unwin, London, 1983.

policy implications; only a few aspects can be considered in a brief paper such as this.

Table 2 provides a picture of the industrial performance of the developing countries according to level of income. The table distinguishes between five income groupings, providing data for the corresponding growth rates of manufacturing output, share of population and number of countries. Two points emerge from the results of these calculations. First, the growth rates in the low-income countries were, on average, significantly less than those recorded for other income groups. In view of the disparities in prevailing levels of per capita income, even relatively small differences in growth rates will have consequences for the standards of living in the poorest countries and, in this sense, the gap between the low-income group and other groups is significant. Moreover, in 1980 over one-half the population of the developing countries was to be found in the low-income countries. Second, it was mainly countries in the intermediate-income range (\$600-1,320), and the upper-middle income range (\$1320-2415) that provided the impetus for the growth of the manufacturing sector throughout the developing countries. These are mainly small countries that accounted for 28 per cent of the population in developing countries in 1980.

A similar picture is obtained when attention is focused on the least developed countries. For instance, growth of industrial production in the least developed countries slowed noticeably in recent years, amounting to only 3.0 per cent per annum in 1973-1980

TABLE 2 GROWTH RATE OF MANUFACTURING VALUE ADDED IN 95 DEVELOPING COUNTRIES, BY INCOME GROUP, 1963 - 1980

| Income | GNP per capita (current US dollars) 1978 | Growth rate of MVA for the group | Group share in population of the developing countries, 1980 | Number of countries in group |
|---------------------|--|-------------------------------------|--|------------------------------------|
| Low | 295 | 4.9 | 50.7 | 28 |
| Lower middle | 295-600 | 7.3 | 18.2 | 21 |
| Intermediate middle | 600-1320 | 8.6 | 15.7 | 24 |
| Upper middle | 1320-2415 | 8.6 | 12.3 | 11 |
| High | 2415 | 5.8 | 3.1 | 11 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis and the Statistical Office of the United Nations secretariat, with estimates by the UNIDO secretariat.

compared to 5.8 per cent in 1963-1973.^{1/} The very limited extent to which these countries are participants in the development of world industry is suggested by the fact that they accounted for no more than 0.2 per cent of world MVA in any year during the period 1963-1980.^{2/} The process of industrialization has yet to really begin in these countries.

The Changing Composition of Manufacturing Output

A more detailed picture of the differences between developed and developing countries may be obtained from a comparison of the changing composition of manufacturing output or MVA. The accompanying statistical documentation provides data on the composition of MVA in selected years and rates of growth for the individual industrial branches.^{3/} Various studies have suggested that patterns of structural change in the three economic groupings may differ markedly and, if so, will lead to substantial differences in the composition of MVA. One means of testing this hypothesis is shown here. Each of the 28 branches of manufacturing was ranked by its share in net output in three separate years for each developed market economy and developing country for which data were available.^{4/} These rankings were then tested to determine the

1/ UNIDO data base; information supplied by the Office for Development Research and Policy Analysis and the United Nations Statistical Office, with estimates by the UNIDO secretariat.

2/ UNIDO, A Statistical Review of the World Industrial Situation, 1982 (IS.368).

3/ See ID/WG.391/1, tables 10 and 11.

4/ Although comparable figures were available for seven centrally planned economies, similar tests were not carried out since the number is too small to allow for an evaluation of statistical significance.

degree of structural similarity within each cell. The results are given in table 3.

Measured in the above manner, the composition of MVA in developed market economies showed a considerable degree of similarity. Equally important, the similarity in rankings increased over time. A comparison of the coefficients between the developed market economies and the developing countries revealed a distinct difference in output mix. Furthermore, there was no observable trend (upward or downward) in the similarity of the developing countries' pattern.

The foregoing analysis and results appear to support the conclusion that the structure of MVA in the developed market economies has gradually become more homogeneous. No similar trend is found with regard to the developing countries; if anything, the composition of MVA in these countries is becoming more dissimilar over time. Such structural changes could have important consequences for several aspects of development, including productivity trends, patterns of industrial investment, trade in manufactures and the choice of industrial policies. Although a clear picture of these consequences would require greater study, a few broad and tentative interpretations may be made. First, greater homogeneity in the pattern of manufacturing production in the developed market economies may contribute to increased competition among these countries. Other things being equal, greater homogeneity would lead to comparable trends in productivity, investment and rates of return, and patterns of industrial demand. Second, among the developing countries the degree of homogeneity is certainly less. Not only do they face a different set of industrial problems from those confronting the developed countries, but the

TABLE 3. KENDALL'S COEFFICIENT OF CONCORDANCE^{a/} BETWEEN THE COUNTRY RANKINGS OF 28 INDUSTRIAL BRANCHES (VALUE ADDED)^{b/}

| Sample group (number of countries) | Year | | |
|---------------------------------------|-------------------|-------------------|-------------------|
| | 1970 | 1975 | 1979 |
| Developed market economies (17) | 0.803 (65.218) | 0.807 (66.902) | 0.794 (61.670) |
| Developing countries (32) | 0.541 (36.538) | 0.567 (40.594) | 0.562 (39.776) |

Note: For a definition of adjusted coefficient of concordance, see A.E. Maxwell, Analysing Qualitative Data (London, Methuen, 1967), pp. 117-121.

a/ F values are given in parentheses.

b/ Calculations were in constant United States dollars.

industrial problems and circumstances differ widely among countries within this economic grouping.

A rough impression of the magnitude and scope of structural change can be gained by comparing the share of expanding and contracting industries in different years. The results, shown in table 4 serve to distinguish between patterns of change occurring in the 1960s and those observed during the 1970s. During the period 1963-1973, the relative magnitude of these structural shifts was greatest in the developing countries being equivalent to 12.2 per cent of MVA. In developed market economies the magnitude of the contractions and expansions between 1963 and 1973 amounted to 6.3 per cent of MVA compared with a figure of 11.2 per cent in centrally planned economies. The extent of structural change during the 1970s was noticeably less than that experienced in the 1960s in all three economic groupings. In the developing countries structural shifts were equivalent to only 5.0 per cent of MVA in 1973-1979. An even smaller proportion, 3.0 per cent, can be noted in the case of the developed market economies while centrally planned economies experienced the largest change, equivalent to 6.7 per cent of MVA.

When employment and productivity trends are taken into consideration, the differences between the developed and the developing countries are more marked. Table 5 shows that employment in both developed market economies and centrally planned economies expanded at a much lower rate than output. Indeed, during 1973-1980, employment was severely affected in developed market economies, so much so that levels declined in most major industrial groups. Output continued to expand, however, reflecting the importance of productivity gains in the growth of most industries.

TABLE 4. THE SHARES^{a/} OF EXPANDING AND CONTRACTING BRANCHES IN MANUFACTURING OUTPUT, BY ECONOMIC GROUPS, 1963, 1973 AND 1979

| | <u>Developed market economies</u> | | <u>Developing countries</u> | | <u>Centrally planned economies</u> | |
|----------------------|-----------------------------------|------------------|-----------------------------|------------------|------------------------------------|------------------|
| | <u>1963-1973</u> | <u>1973-1979</u> | <u>1963-1973</u> | <u>1973-1979</u> | <u>1963-1973</u> | <u>1973-1979</u> |
| Contracting branches | 47.6/41.3 | 42.4/39.4 | 62.5/50.3 | 50.9/45.9 | 54.3/43.1 | 46.1/39.4 |
| Expanding branches | 31.5/37.8 | 41.8/44.8 | 36.9/49.1 | 31.6/36.6 | 43.6/54.8 | 47.3/54.0 |

Source: Based on data in table 10, ID/WG.391/1

^{a/} Percentages exclude those branches whose shares remained unchanged during the period shown. Thus, they do not add up to 100.

TABLE 5. GROWTH RATES OF MANUFACTURING EMPLOYMENT AND PRODUCTIVITY
BY MAJOR GROUPS, 1963-1973 AND 1973-1980

| Branch | ISIC | Developed market economies | | | | | | Developing countries | | | | | | Centrally planned economies | | | | | |
|---|---------|----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----|
| | | Output | | Employment | | Productivity | | Output | | Employment | | Productivity | | Output | | Employment | | Productivity | |
| | | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | 1963-1973/ 1973-1980 | |
| Food, beverages and tobacco | 31 | 3.7 | 2.6 | 0.5 | -0.0 | 3.1 | 2.7 | 5.7 | 4.7 | 3.4 | 5.7 | 2.2 | -0.9 | 5.7 | 3.6 | 2.5 | 1.0 | 3.0 | 2.5 |
| Textiles | 321 | 3.9 | 0.1 | -1.2 | -3.0 | 5.2 | 3.2 | 4.7 | 2.1 | 2.6 | 2.2 | 2.0 | -0.1 | 6.3 | 4.2 | 1.4 | 0.4 | 4.8 | 3.3 |
| Wearing apparel, leather and footwear | 322-324 | 2.1 | 0.3 | 0.9 | -1.4 | 1.2 | 1.7 | 3.9 | 2.9 | 4.1 | 5.7 | -0.2 | -2.6 | 7.6 | 4.9 | 3.3 | 0.7 | 4.2 | 4.2 |
| Wood products and furniture | 33 | 4.5 | 0.9 | 1.2 | -0.9 | 3.4 | 1.7 | 4.7 | 5.1 | 5.0 | 3.7 | -0.3 | 1.4 | 6.5 | 4.5 | 1.2 | 0.0 | 5.3 | 4.5 |
| Paper, printing and publishing | 34 | 4.6 | 2.4 | 1.0 | -0.0 | 3.6 | 2.4 | 8.7 | 2.9 | 4.5 | 3.3 | 4.0 | -0.3 | 7.8 | 4.1 | 3.0 | 0.3 | 5.7 | 3.3 |
| Chemical, petroleum, plastic products | 35 | 8.1 | 3.6 | 1.9 | 0.1 | 6.1 | 3.5 | 10.1 | 4.8 | 5.5 | 5.2 | 4.4 | -0.4 | 10.5 | 6.8 | 3.6 | 1.5 | 6.6 | 5.2 |
| Non-metallic mineral products | 36 | 4.9 | 1.9 | 0.5 | -1.1 | 4.3 | 3.1 | 7.8 | 6.1 | 4.9 | 4.9 | 2.7 | 1.2 | 8.3 | 4.9 | 3.4 | 1.1 | 4.7 | 3.7 |
| Basic metal industries | 37 | 4.8 | -0.1 | 0.2 | -2.0 | 4.6 | 1.9 | 7.7 | 6.9 | 6.3 | 5.2 | 1.3 | 1.7 | 6.7 | 4.3 | 2.0 | 0.9 | 4.7 | 3.4 |
| Metal products, machinery and equipment | 38 | 5.9 | 2.8 | 2.1 | 0.1 | 3.7 | 2.8 | 10.6 | 6.7 | 5.9 | 4.1 | 4.4 | 2.4 | 11.2 | 9.1 | 3.6 | 2.0 | 7.3 | 7.0 |
| TOTAL MANUFACTURING | 300 | 5.2 | 2.3 | 1.2 | -0.5 | 4.0 | 2.8 | 7.1 | 5.0 | 4.2 | 4.2 | 2.8 | 0.7 | 8.9 | 6.7 | 3.0 | 1.4 | 5.7 | 5.2 |

Source: UNIDO data base and data supplied by United Nations Statistical Office.

An opposite situation is found in the developing countries.^{1/} There, the growth of employment exceeded gains in productivity for all major industrial groups. This relationship was particularly evident during the latter time period, 1973-1980. In fact, several major groups - including important industries like textiles and clothing - experienced a decline in productivity in the 1970s. Despite the fact that employment, rather than productivity, was the more important contributor to growth, the developing countries recorded no change in the rate of employment expansion (4.2 per cent per annum) during the two periods shown. In contrast, the growth of total manufacturing output slowed moderately and increases in productivity dropped from 2.8 per cent to 0.7 per cent.

Sources of Industrial Growth in Developing Countries

An important policy consideration concerns the sources of industrial growth and the extent to which each of these sources will vary in importance - both between countries and over time. Conceptually, the sources of industrial growth can be divided into three components: (1) production for export; (2) production in response to growing real demand within the domestic economy; and (3) production to meet existing demand formerly satisfied by imported goods (import-substituting industrialisation). While several alternative methods^{2/} for estimating these components are

^{1/} For further detail with regard to productivity trends in developing countries, see ID/WG.391/1, table 13.

^{2/} The method of estimation employed here follows the procedures developed by Hollis Chenery, "Patterns of industrial growth", American Economic Review, vol.50, no.2, 1960, pp.624-654 and H. Chenery, S. Shishido and T. Watanabe, "The pattern of Japanese growth: 1914-1954," Econometrica, vol.30, no.1, 1962, pp.98-139.

available to economists, the usefulness of the exercise is not so much to arrive at precise estimates of growth sources for a particular country as to ascertain the relative importance (or unimportance) of domestic demand, import substitution and export promotion as sources of growth.

Table 6 summarises the main results of an empirical investigation to measure the sources of growth in a number of developing countries. With very few exceptions, domestic demand is the most significant component of industrial growth. The predominance of this component is particularly evident in the case of intermediate industries. Among the product categories considered in the study, the relative importance of export expansion is greatest in the case of consumer non-durables. The highest (positive) values for import substitution are mainly observed for capital goods and consumer durables. Turning to the observations within each of the product categories, other general tendencies may be observed. Among basic consumer goods a loose relationship with per capita GNP is found. The relative importance of domestic demand appears to decline at lower levels of per capita income. The figures for import substitution show an inverse relation; negative values are generally observed at higher levels of income and positive values are found at lower income levels. Apparently, among the more advanced countries further growth would depend on domestic demand and export promotion while, at lower levels, scope for import substitution still exists. The pattern is roughly similar for intermediate industries although, as indicated above, the figures for domestic demand generally dominate.

TABLE 6: SOURCES OF GROWTH BY END-USE IN SELECTED DEVELOPING COUNTRIES^{a/} IN THE 1970s
(percentage)

| Country | Basic consumer goods | | | Intermediate industries | | | Capital goods and consumer durables | | | Total | | |
|------------------------|----------------------|------------------|---------------------|-------------------------|------------------|---------------------|-------------------------------------|------------------|---------------------|-----------------|------------------|---------------------|
| | Domestic demand | Export expansion | Import substitution | Domestic demand | Export expansion | Import substitution | Domestic demand | Export expansion | Import substitution | Domestic demand | Export expansion | Import substitution |
| Libyan Arab Jamahiriya | 150.9 | 2.0 | -52.5 | 109.0 | - | - 9.0 | ... | ... | ... | 134.1 | 1.3 | -35.4 |
| Iran | 111.5 | 19.1 | -30.6 | 96.4 | 1.3 | 2.3 | 97.8 | 1.5 | 0.7 | 100.2 | 4.3 | -4.5 |
| Iraq | 154.8 | -1.9 | -52.9 | 260.9 | 9.7 | -170.6 | 275.0 | 0.1 | -175.1 | 221.2 | 2.9 | -124.1 |
| Panama | 64.4 | 4.7 | 30.9 | 125.6 | 0.9 | -26.5 | ... | ... | ... | 91.6 | 2.5 | 5.9 |
| Fiji | 213.5 | - | -173.5 | 101.8 | 3.0 | -4.8 | 81.8 | 0.3 | 17.9 | 96.3 | 1.8 | 1.9 |
| Brazil | 92.4 | 8.6 | -1.0 | 100.7 | 2.6 | -3.3 | - | - | - | 99.3 | 3.4 | -2.7 |
| Cyprus | 38.7 | 50.1 | 11.2 | 27.0 | 29.0 | 44.0 | 5.4 | 19.6 | 75.0 | 37.8 | 32.9 | 29.3 |
| Turkey | 91.9 | 8.6 | -0.5 | 106.5 | 2.2 | -8.7 | 109.0 | 1.0 | -10.0 | 102.9 | 3.3 | -6.2 |
| Tunisia | 103.2 | 34.7 | -37.9 | 115.4 | 18.5 | -33.9 | 149.3 | 2.6 | -31.9 | 114.2 | 19.0 | -33.2 |
| Chile | -92.7 | 0.2 | -7.5 | 175.5 | 30.3 | -105.8 | -40.6 | 1.5 | -60.9 | -35.1 | 16.4 | -81.3 |
| Ecuador | 95.1 | 8.1 | -3.2 | 179.9 | 4.3 | -84.2 | 79.7 | 1.2 | 19.1 | 108.8 | 3.8 | -12.6 |
| Guatemala | 77.7 | 28.7 | -6.4 | 58.8 | 13.7 | 27.5 | 41.4 | 5.5 | 53.1 | 59.7 | 13.0 | 27.3 |
| Colombia | 84.4 | 16.5 | -0.9 | 95.7 | 13.9 | -9.6 | 64.5 | 3.1 | 32.4 | 84.6 | 10.3 | 5.1 |
| Republic of Korea | 71.9 | 18.1 | 10.0 | 85.7 | 10.4 | 3.9 | 52.4 | 15.1 | 32.5 | 76.2 | 13.2 | 10.6 |
| Ghana | 17.3 | 2.6 | 80.1 | 47.9 | 3.4 | 48.7 | 2.2 | 0.2 | 97.6 | 30.1 | 2.6 | 67.3 |
| Zambia | 49.8 | - | 50.2 | 41.8 | -0.1 | 58.3 | ... | ... | ... | 45.4 | -0.0 | 54.6 |
| El Salvador | 69.2 | 12.4 | 18.4 | 88.3 | 0.3 | 11.4 | 548.8 | 18.2 | -467.0 | 85.6 | 8.6 | 5.8 |
| Jordan | 181.0 | 15.5 | -96.5 | 112.2 | 17.8 | -30.0 | ... | ... | ... | 131.2 | 16.0 | -47.2 |
| Nigeria | 72.5 | -0.0 | 27.5 | 134.6 | 3.0 | -37.6 | 100.5 | -0.0 | -0.5 | 98.8 | 0.8 | 0.4 |
| Honduras | 50.5 | 3.4 | 46.1 | 72.3 | 10.3 | 17.4 | 60.9 | 2.5 | 36.6 | 64.0 | 7.0 | 29.0 |
| Philippines | 86.3 | 8.8 | 4.9 | 103.9 | 7.4 | -11.3 | 98.2 | 1.3 | 0.5 | 99.0 | 6.6 | -5.6 |
| Thailand | 57.6 | 0.2 | 42.2 | 91.1 | 8.2 | 0.7 | 42.0 | 0.5 | 57.5 | 57.1 | 1.6 | 41.3 |
| Egypt | 83.4 | 17.7 | -1.1 | 81.9 | 8.2 | 9.9 | 58.2 | 0.7 | 41.1 | 77.5 | 10.0 | 12.5 |
| Sri Lanka | 69.7 | 3.5 | 26.8 | 25.9 | 8.7 | 65.4 | 33.1 | 2.1 | 64.8 | 39.8 | 6.5 | 53.7 |
| Madagascar | 40.2 | 4.3 | 55.5 | 52.1 | 7.8 | 40.1 | 26.5 | 0.0 | 73.5 | 40.9 | 4.5 | 54.6 |
| Indonesia | 80.9 | 1.0 | 18.1 | 113.3 | 1.6 | -14.9 | 49.7 | 0.8 | 49.5 | 78.8 | 1.2 | 20.0 |
| India | 88.1 | 11.7 | 0.2 | 94.5 | 2.6 | 2.9 | 76.7 | 4.5 | 18.8 | 88.2 | 5.2 | 6.6 |
| Malawi | 81.3 | 1.2 | 17.5 | 45.3 | 0.3 | 54.4 | 56.0 | 1.0 | 43.0 | 66.1 | 0.8 | 33.1 |

Source: Based on United Nations, Yearbook of Industrial Statistics, vol. I, various issues, Commodity Trade Statistics, various issues; and Yearbook of International Trade Statistics, various issues.

a/ Countries are listed according to GNP per capita in 1975.

The figures for capital goods and consumer durables show a different "growth structure". Import substitution plays a more important role and is often the largest growth source, particularly for countries at the bottom of the income scale. These countries all have small domestic markets and, for this reason, the "easy phase" of substitution is likely to be a brief one. Estimates of export expansion are generally very low which may reflect both the policy bias inherent in the tariff structure of countries that had pursued an import substitution strategy and the growth pattern of "late industries".

As far as exports are concerned, these preliminary estimates show that expansion in foreign demand is rarely important as a source of the output growth of capital goods or consumer durables. In the manufacturing sector as a whole, the ratio of exports to gross output generally does not exceed 6 per cent. For a majority of the 28 countries in the sample, the export-output ratio ranged from zero to 6 per cent. Exports in this range may be important contributors to the acquisition of foreign exchange. They may also be crucial to individual enterprises by contributing to capacity utilization or helping to overcome bottlenecks such as economies of scale. However, on average, the share of exports in domestic production does not suggest many instances of "export-led" growth. Their role is better described as a supplementary one or, at best, that of a catalyst. A more significant feature of the estimates is the lack of a relationship between the level of development and the export of manufactures. Although the value of exports by Brazil,

Republic of Korea and Turkey far exceeds those of other countries, the relative importance of exports to the economies of Egypt, Jordan or Madagascar, etc. is of a similar or greater magnitude. This fact serves to qualify the general impression that exporting (particularly exports of manufactures) becomes significant only after a country has reached some threshold or minimum level of development. However, the significance of exports for the domestic economy does not necessarily increase with development. This implies that supply constraints or problems of market access may be equally important to different countries regardless of their level of advancement or size of their domestic market.

The major conclusion to be derived from these results is that domestic demand stands in the forefront of the growth process. Although its significance is of less importance at lower levels of income, there are a few cases where the growth process is primarily based on trade expansion. This finding is somewhat paradoxical in view of the emphasis often given to trade-related strategies for industrialization. The results would seem to point to the importance of policies aimed at spurring the growth of domestic demand. While import-restricting policies can shift demand from imports to domestic production, they may do little to increase consumer or investment demand. Similarly, export incentives may boost domestic demand by employment generation, increased intermediate demand, etc. although the existence of an export enclave would clearly do little to boost domestic demand. More direct policies for increasing employment, realizing a more equitable distribution of income, encouraging the intra-national diffusion of technology (as well as its international transfer), etc. also deserve a high priority.

Changing Patterns of Comparative Advantage

The question of a country's comparative advantage in specific industries or, more generally, its ability to compete in international markets touches upon a wide range of policy issues, involving specific industries and various development strategies. Early studies generally confirmed the notion that developing countries tend to export goods requiring relatively large amounts of unskilled labour and/or raw materials while an entirely different set of input requirements was associated with the exports of developed countries.

UNIDO has recently undertaken an extensive investigation^{1/} of this aspect. In order to limit this discussion to a manageable scope, four country samples were selected for detailed study. The first includes six industrialized countries (ICs) representing a pattern of comparative advantage which, presumably, is the most advanced. The second sample consists of five recently developed countries (RDCs) that are thought to have comparative advantages in fields representing a less sophisticated export pattern. The third sample is composed of seven countries popularly known as the 'newly industrializing countries' (NICs). Conventional wisdom often singles out these countries as the most zealous exporters of manufactures. They have made strenuous efforts to acquire the technologies and to develop the skilled labour necessary for this approach. The last sample is ten developing countries at an earlier

^{1/} For a detailed analysis of comparative advantage in 134 industries in each of 52 countries, see UNIDO, Changing Patterns of Trade in World Industry (United Nations publication, Sales no.E.82.II.B.1). The study examines changes in comparative advantage in the 1960s and 1970s.

phase of their industrial development and should indicate a more rudimentary export pattern.

Finally, some proxy to represent an industry's comparative advantage was required. Economists reason that "revealed" comparative advantage can be indicated by the trade performance of individual countries. Accordingly, estimates of comparative advantage used in this study have followed traditional methods^{1/} of measuring the concept through the use of export performance indices. Such indices were computed for each of 79 industries^{2/} and twenty eight countries in the sample based on two-year averages for 1965-6 and 1975-6.

The analysis began with a ranking of industries according to their export performance indices. The degree of similarity between the rankings of each of the four country samples can then be appraised statistically. The results, based on each country sample's weighted averages for seventy-nine industries, are shown in table 7. It is immediately obvious that the composition of the industrialized countries' exports differs markedly from that of the other groups. Moreover, this distinction is accentuated over time.

A second noteworthy point concerns the comparisons between the three remaining groups - the NICs, other developing countries and the recently developed countries. Some economists maintain that the

^{1/} For a definition of the measure used here, as well as a discussion of alternative measures, see UNIDO, Changing Patterns, op. cit., pp.22-27.

^{2/} A second conceptual matter was to give some precise meaning to the concept of an 'industry', a relatively specific definition was used which led to the identification of 79 different industries defined according to three- and four-digit SITC product categories.

TABLE 7: SPEARMAN RANK CORRELATION COEFFICIENTS IN EXPORT PERFORMANCE INDICES OF SEVENTY-NINE INDUSTRIES , 1966-7 and 1975-6^{a/}

| Pairings | 1966-7 | 1975-6 |
|--|---------|---------|
| Newly industrializing countries - Industrialized countries | -0.271* | -0.349* |
| Newly industrializing countries - Other developing countries | 0.596 | 0.597 |
| Newly industrializing countries - Recently developed countries | 0.431 | 0.517 |
| Other developing countries - Recently developed countries | 0.512 | 0.717 |
| Industrialized countries - Recently developed countries | -0.247* | -0.275* |
| Industrialized countries - Other developed countries | -0.245* | -0.306* |

Source: Compiled from United Nations, Commodity Trade Statistics, Series D, various issues, and other United Nations publications.

Notes: a/ Calculations were based on two-year averages for exports and imports. For a definition of the export performance index, see UNIDO, Changing Patterns of Trade in World Industry (United Nations publication, Sales no.E.82.II.B.1)

* An asterisk indicates statistical significance at the 5 per cent level. All other values are significant at the 1 per cent level. p. 23 - 25.

composition of a country's exports changes in a sequential fashion as development proceeds. They argue that a country begins by exporting goods requiring simple production techniques and large amounts of cheap, unskilled labour. As the skilled labour force grows and wage rates rise, the country's comparative advantages are thought to shift into new product lines whose production requirements are more in line with these factor combinations. According to this interpretation, countries move along a scale of comparative advantage. Asian countries are often used as an example. A case in point is Japan whose comparative advantage has shifted towards capital-intensive exports and away from goods requiring unskilled or even skilled labour. In turn, countries with adequate supplies of human capital were expected to take the place of Japan in exporting the original products. Countries at lower levels of industrialization would supplant previous suppliers in the export of unskilled labour-intensive products.^{1/}

Significantly, the results in table 7 provide little support for this interpretation. The correlation of export performance in the RDCs, NICs and other developing countries shows a pattern that is similar and became more so over time. The only divergent trend was in the comparison of the industrialized countries with each of the other groups. The fact that the list of leading export industries in RDCs bears a closer relationship to that of Colombia, Egypt, India, the Philippines, Thailand, etc. than to countries like France or the UK suggests that industry in the peripheral European

^{1/} This interpretation is closely associated with the work of Bela Balassa. See, for example, Balassa, "A stages approach to comparative advantage", paper presented to the Fifth World Congress of the International Economic Association, 29 August, 1977, Tokyo and subsequent publications by the same author.

economies poses no serious competitive threat to the 'industrialized centre'. Industries in developed countries that have attained a substantial degree of export success face no serious threat from competitors in other parts of the world. Instead, any competitive threat to these producers comes from potential exporters in other developed countries. The composition of world trade patterns, however, does pit the interests of high performance exporters outside this economic grouping against 'poor performance' industries in these countries.

Consumption Patterns for Industrial Products

Per capita levels of consumption of specific industrial products provide a useful means of gauging the extent to which a population's basic needs are being met. Such information, is, perhaps, most useful when it is compiled on a multi-country basis and therefore, may be used to draw comparisons between consumption levels in different countries. It is hoped that such studies would provide useful guides to policymakers at the country level since they serve to identify instances where levels of consumption are strikingly low in comparison with other countries.

UNIDO has recently completed an extensive compilation of data on apparent consumption^{1/} for a total of 60 commodities and 70 countries. Using this data, the study provided information on consumption patterns throughout the period 1970-1978.^{2/} Although level of income is usually the overriding determinant of the pattern

1/ Apparent consumption is defined to be domestic production plus imports less exports.

2/ See UNIDO, Handbook of Industrial Statistics (United Nations publication, Sales no. E.82.II.B.2).

of consumption, a variety of other factors contribute to this diversity. In the case of certain food items, consumer preferences (in the form of dietary or cultural factors) sometimes exert an important influence on the pattern of consumption. Resource endowment is evidently another significant determinant of apparent consumption of those industrial intermediates that are not far removed from the raw material state. Examples include vegetable oils, raw sugar, cotton yarn and fabrics, wood pulp, petroleum products and non-ferrous metals. Finally, the size of the domestic market appears to be an important contributor to country differences in the case of intermediates such as industrial chemicals, iron and steel and non-ferrous metals.

The influence of these determinants - as well as the more general impact of substantial differences in purchasing power or per capita income - gives rise to the wide divergences in the consumption patterns of different countries. Table 8 summarizes the results for developing countries and developed market economies. For two reasons, the figures for developing countries are likely to be overestimates. First, negligible or non-existent levels of apparent consumption were excluded from the data and these invariably concerned only the developing countries. Second, the lack of consumption data was most pronounced in the case of the lower-income developing countries.^{1/} Both statistical considerations would lead to an underestimation of the actual

^{1/} Negligible or non-existent levels of apparent consumption - implied by the corresponding absence of both domestic supply and imports - were frequently noted for the lower-income developing countries. This result was most common in the case of industrial intermediates and would be partially attributable to the lack of industrial processing facilities necessary to produce these commodities.

TABLE 8. PER CAPITA APPARENT CONSUMPTION^{a/} OF SELECTED COMMODITIES IN DEVELOPING COUNTRIES AND DEVELOPED MARKET ECONOMIES, 1976-1978

| Commodity | Unit of measurement | Developing countries | Developed market economies |
|---|---------------------|----------------------|----------------------------|
| Beef and veal, fresh | kg | 10.2 | 30.4 |
| Milk and cream, dried or condensed | g | 4,747.4 | 11,062.7 |
| Butter and cheese | g | 2,668.7 | 14,584.4 |
| Vegetables, tinned or bottled; and fish, tinned | g | 1,985.2 | 12,075.3 |
| Margarine, imitation lard, etc. | g | 2,371.6* | 8,638.8 |
| Flour, cereal | kg | 40.1 | 71.2 |
| Bread, bakery products, etc. | kg | 9.4* | 40.6 |
| Sugar | kg | 53.5 | 99.4 |
| Prepared animal feeds | kg | 32.5 | 229.0 |
| Vegetable oils except soya-bean and groundnuts oils | kg | 23.0* | 36.2 |
| Wool and cotton yarn | g | 2,242.5 | 6,283.7 |
| Cotton and woollen woven fabrics | g | 1,100.8 | 3,765.7 |
| Knitted fabrics | g | 468.8* | 1,700.6 |
| Wood pulp, mechanical; pulp of fibres other than wood; and wood pulp, sulphate and soda | kg | 9.5 | 176.3 |
| Newsprint and other printing and writing paper | kg | 4.0 | 52.5 |
| Methanol | g | 229.1 | 10,729.3 |
| Chlorine, sulphuric acid, nitric acid, ammonia, caustic soda, and calcium carbide | kg | 32.8 | 234.3 |
| Dyestuffs, synthetic | g | 90.5 | 581.5 |
| Nitrogenous, phosphatic and potassic fertilizers | kg | 15.4 | 68.4 |
| Insecticides, fungicides | kg | 1,035.1 | 2,278.1 |
| Rubber, synthetic | g | 461.4 | 6,221.8 |
| Distillate and residual fuel oils | kg | 260.8 | 1,394.6 |
| Other ferro-alloys | kg | 0.2 | 8.5 |
| Wire rods | kg | 5.2 | 32.3 |
| Angles, shapes and sections | kg | 11.2 | 78.1 |
| Plates, medium and heavy | kg | 11.6 | 58.6 |
| Tubes, seamless and welded | kg | 13.1 | 34.9 |
| Steel castings and forgings | kg | 0.4 | 7.3 |
| Copper, refined unwrought | g | 567.6 | 6,670.7 |
| Aluminium, unwrought | g | 553.0 | 14,617.6 |
| Lead, refined, zinc, tin, unwrought | g | 602.6 | 9,775.2 |

a/ Figures are unweighted averages.

'consumption gap' between the two groups of countries.

With few exceptions the levels of per capita consumption in the developing countries were considerably lower than those recorded for developed market economies. This is particularly true for important industrial intermediates like pulp and paper, industrial chemicals, iron and steel and non-ferrous metals. In fact, the table shows only three instances where the developing countries' apparent consumption were equal to at least one-half the levels recorded in developed market economies: cereal flour, sugar and selected vegetable oils.

A significant feature of the multicountry comparisons is the wide variation in levels of consumption of a given commodity. In most cases the range of per capita consumption levels determined for the developing countries are less than the corresponding estimates for developed market economies. This feature suggests that the latter countries, by virtue of their higher incomes, are better able to satisfy national differences in tastes, preferences and industrial structure. Patterns of consumption in the developing countries are more severely affected by levels of income. Furthermore, during the 1970s, levels of per capita consumption also became more disparate among different developing countries; while consumption levels rose in some countries, they remained very low - and were unchanged - in many others. Resource-based commodities and food products revealed the widest differences in consumption levels, particularly for developing countries. The results of a more extensive investigation^{1/} of the detailed estimates clearly reveal

1/ See UNIDO, Handbook of Industrial Statistics, op. cit., pp. 30-39 and country tables.

a wide number of instances where consumption of essential industrial products is minimal and suggests the need for industry-specific policies and actions to remedy the situation.

In conclusion, this paper has only briefly surveyed recent trends in a few, somewhat disparate fields of particular importance to industry. These have included (a) changes in the world industrial map and the resultant implications for international policy, (b) alterations in the composition of manufacturing output and the attendant implications for structural change, productivity and employment, (c) the relative importance of sources of growth, (d) changing patterns of comparative advantage and (e) consumption patterns in different countries. Each of these aspects carries a variety of policy implications and space does not permit a thorough analysis. However, what does emerge from this brief survey is the impression that the very basis for industrial advancement is undergoing certain profound changes which amount to a departure from previous experience. Thus, the need for a fresh approach to the development of industrial policies and strategies would not only be timely but indeed imperative if the developing countries' aspirations are to be realized.

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

***HIGH-LEVEL
EXPERT GROUP MEETINGS
PREPARATORY TO THE
FOURTH
GENERAL CONFERENCE
OF UNIDO***

***Industrial Development Strategies and Policies
for Developing Countries***

Lima, Peru, 18-22 April 1983

***WORLD INDUSTRIAL DEVELOPMENT:
DYNAMICS OF GROWTH THROUGH CO-OPERATION***

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WORLD INDUSTRIAL DEVELOPMENT: DYNAMICS OF GROWTH THROUGH CO-OPERATION

1. The World Economy Today

The present state of the world economy has been characterized as the worst since the 1930s. It amounts to a definite and catastrophic break with that pattern of steady growth that had been observed since the early 1950s. The year 1973 spelt the first major break. Until that time the economies of both North and South had been growing at steady rates, of between four and six per cent for the developed countries, and even higher rates for the developing countries. After 1973 the pattern changed decisively, with a sharp fall in 1974 and 1975, a subsequent recovery, and then a sharp plunge in 1980 and 1981, to yield negative growth rates for both North and South in 1982. Although the developing countries survived the first recession in the North (in 1973) with remarkable resilience, they did not survive the second.

In recent months (as of March 1983) some signs of recovery have emerged, especially in the United States. But the strength of recovery appears uncertain, particularly because of policy makers' fear of rekindling inflation in the major industrial countries. The Northern countries have succeeded, in general, in bringing inflation down to single digits (now at 4-5% per annum). But for that achievement the North has paid an enormous price, in the form of a collapse in growth rates and 30 million unemployed. And although the present situation in the North is bad, it is even worse in the South. The decline in the growth rates of the North has been mirrored by an even steeper decline for the developing countries. Policy instruments adopted in the North to deal with the present situation affect the developing countries very severely. Policies of high interest rates discourage new investments in the South and make it more difficult for developing countries to service their trade deficits. Increased protectionism in the North makes it more difficult to expand exports of the developing countries, already severely depressed by the stagnant demand in developed countries. It is clear that there are few who gain, either in the North or the South, from the present position.

Manufacturing, in particular, has suffered. In the past the South has managed to achieve extremely high growth rates for this sector, but in 1980 it grew at only 3.1 per cent, in 1981 at -0.7 per cent and in 1982 at -2.3 per cent. Thus the developing countries' share of world manufacturing value added has now begun to decline.

2. Global Interdependence and Structural change

The world economy is a linked system, and to make use of interdependency in a positive way, the need for a global reflation policy is increasingly recognized. Any lasting improvement depends, however, not just on an expansionary monetary policy but a comprehensive restructuring policy, without which inflationary pressure will surely return. Restructuring policy requires the redeployment of high-cost (inefficient) industries from developed countries to developing countries where the output could be produced more cheaply: the developing countries should be allowed to combat inflation through greater efficiency. Only efficiency can lay the foundation for growth without inflation.

The present state of the world economy is due not to temporary shocks such as energy cost increases but to more fundamental processes: structural change and policies pursued to counter it rather than make use of it. If market rigidities and immobilities are removed, the world economy is once more oriented towards growth. Once such policies are implemented, it means that policy measures on the demand side can generate high growth without also bringing inflation. Only comprehensive and internationally co-ordinated action of this kind can effectively overcome the problems not just of the North but of the South also. For the realization of the aspirations of the developing countries for industrialization depends upon a harmonious and dynamic growth path for the world economy.

The Lima target summarizes the aim of a new world industrial structure by which the aspirations of developing countries can be fulfilled. It is expressed in terms of a share of the world's manufacturing value-added. But the target is not only, or even primarily a question of equity. The argument for it is also one of efficiency. It does not mean a redistribution of existing industrial capacity, but a distribution of new capacity. The industrial-

ization of developing countries means, in general, new plant, new employment, and more goods and services. It is a process that benefits both North and South. A new pattern of world investment, directed towards achieving the Lima target, would mean that capital would be employed where it could produce the best results, i.e., in the developing countries, which at present suffer from an under-endowment of capital. The Lima target is based upon such a rational combination of policy measures, and not merely upon a continuous demand for resource transfers. Such policy action can replace the prevailing stagnation and protectionism and provide to the South its logical role in the global industrialization process. The growth path to the Lima target can invoke and sustain those forces of long run growth which have operated since the Industrial Revolution. The South offers a growth frontier to the global economy just as the American West did during the 18th and 19th centuries. It offers enormous scope for absorption of technology and employment of surplus labour. It contains a wealth of natural resource and investment opportunities, extensive potential consumer markets, and an abundance of initiative, incentive, and enterprise.

3. Scenarios of South-South Co-operation

3.1 The choices for the South

The Lima target was conceived in the spirit of the New International Economic Order. But the present climate of North-South relations is such as to make such goals appear difficult if not impossible of achievement. Even the International Development Strategy for the Third Development Decade (DDIII) adopted as recently as January 1981,^{1/} with its targets of, for instance, 7 per cent annual average growth in GDP for developing countries, already appears unrealistic. The protectionism and retrenchment brought about by the present economic climate appears far indeed from the policies of North-South co-operation called for in the Strategy.

What then can the South do? Clearly it is not enough to wait patiently for a revival in the North. Many developing countries are on the brink of severe economic and social crises engendered by the present combination of

^{1/} A/RES/35/56, Annex.

high interest rates, protectionism and a fall in world demand. To many whose dependence is still on a few primary commodities, a revival in the North has little to offer but a return to old patterns of dependency.

For these reasons, South-South co-operation has become an increasingly important policy option for the developing countries. In the absence of co-operation from the North and of a real collective commitment to the ideals of the New International Economic Order, the courses for the South must include consideration of how their collective strength can be utilized in their own interests and towards their own goals. The South, as has been said, can offer an enormous market and abundant resources both natural and human. Growing complementarities between the countries of the South mean that a new collective effort can provide the basis for an alternative development path. South-South co-operation, however, should not be regarded as a substitute for full North-South co-operation; they are not necessarily mutually exclusive propositions. Indeed, South-South co-operation could be regarded as a strategy to induce the North-South co-operation.

3.2 Scenarios of South-South co-operation

Here we discuss briefly some numerical results of scenarios of South-South co-operation. Using a computer model^{2/} of the world economy, different policies of co-operation (North-South, South-South, and combinations of the South and individual regions of the North) were experimented with.

South-South co-operation has different interpretations. One might be a complete de-linking of the South from the North, as suggested by some radical political thinkers of the South. Simulation of this idea has some educational value; the assumption of zero trade and financial flows between the North and the South implies a catastrophe, with the result of both regions losing, a negative-sum-game. In the North, it is estimated that by 1990 GDP would be

^{2/} The UNITAD model was used. See, UNITAD Team "The UNITAD project: a world model to explore institutional changes over the long run", Industry and Development, No. 6, December 1981. United Nations, Sales No. E.81.II.B.4.

about 16 per cent below a "trend"^{3/} value, but in the South the drop would be over 30 per cent. Complete de-linking thus must be ruled out as an untenable strategy for the South.

A more moderate version of South-South co-operation assumed a delinking limited to a maximum of 30 per cent in trade, and a trade creation among developing countries by an equal percentage. A multiplier effect of the net changes in trade is then calculated. The scenario results in sizeable additional gains for the South and small losses for the North. In the South, GDP in 1990 is 8.2 per cent greater than the trend value, whereas in the North the loss in GDP resulting from trade diversion is about 2 per cent for 1990. If such de-linking is extended to become 50 per cent by 2000, the South's GDP would be 19.5 per cent greater than the trend value for the same year. Once again, the loss to the North would amount to only about 2 per cent. In absolute terms these changes nearly cancel out, giving a zero-sum-game for the whole world.

Self-sufficiency is enhanced in the manufacturing sector of the South by the co-operation scheme. Especially for capital goods, dependence on manufactured imports from the North is seen to decrease sharply over time and compared to trend. Correspondingly, intra-South production and trade increases the most in capital goods, above intermediate goods processing, light industry goods, food processing, and oil/coal processing, in that order. Interregional differences in the ranking suggest a broad pattern and magnitude of South-South co-operation, and the specialization suggested by the scenario is a confirmation of resource endowments. In short, the physical and economic potential for gains does exist, and increased co-operation among developing countries would be worth the effort.

At a regional level, it could be expected that Latin America could show an increase of 8.6 per cent in GDP over the trend value for 1990, if the pattern of South-South co-operation described above were to be followed. If this behaviour is extrapolated to the year 2000, then Latin America would see a

^{3/} For comparative purposes, a "trend" scenario was also constructed, to see the effects by 1990 of a resumption of old patterns of growth, but without any changes in international policy.

gain of 15 per cent over its trend GDP value. The relative gains in manufacturing would be even greater, 12.7 per cent in 1990 and 17.4 in 2000. This growth would be associated in particular with light industry and primary processing, followed by capital goods and petrochemicals, with food processing growing slowest.

There seem therefore to be significant benefits to a strategy of South-South co-operation. Nevertheless, it must be remembered that South-South co-operation is not a substitute for, and is at most a second-best to, North-South co-operations along the proposals of DDIII. A scenario simulation of the latter yields a positive-sum-game result. The gain to the South would be 26.1 per cent higher than trend GDP in 1990, and the gain to the North would be 3.9 per cent. Unfortunately the prevailing political climate does not allow this positive-sum to be realized.

3.3 Regionalized North-South co-operation

The refusal of the North as a collective body to co-operate with the South does not necessarily imply that none of the component members will co-operate. Analysis of the politico-economic configurations of the North may lead to a conclusion that the fragmentation of the North and the heterogeneity in their relations with the South provides its own partial solution to the deadlocked North-South co-operation. North America, Western Europe, Eastern Europe, and Japan, may be unable to achieve collective action to restore the world economy. Nevertheless, it is possible to imagine that one developed region may individually explore co-operation with the South as a whole.

Accordingly, we now examine regionalized North-South co-operation scenarios. The assumption is that a Northern co-operator diverts up to 30 per cent of its existing trade away from other regions of the North towards the South. Thus the South and the developed region in the co-operation agreement form a new market. Given four developed regions, North America, Western Europe, Eastern Europe, and Japan, there are four alternative possibilities for regionalized co-operation. The developed region co-operating with the South will gain in every case, and the non-co-operating regions will lose. What is the extent of these potential gains and losses?

Simulation of the four possible scenarios shows that South-Western Europe co-operation yields the best gains for the co-operators followed by the South-North America, South-Japan, and South-Eastern Europe in that order. The first scenario has the following results. Western Europe shows its best performance with a 1990 GDP index of 102.8 (taking the value in the South-South scenario as 100). The excluded regions, North America, Eastern Europe, and Japan have their worst performances with index numbers of GDP at 96.8, 95.8 and 94.9 respectively. These results fully exemplify both the competitive relations between the four developed regions in their trade with the South, and also the magnitude and dispersion of Western Europe's trade relations, actual and potential, with the South. The gains accruing to the South are highest, with an index of 110.2, when co-operating with Western Europe, followed by South-North America at 104.2. Co-operation with Eastern Europe or Japan gives no significant gains for the South, under the special trade assumptions made for these scenarios, because for Eastern Europe the level of trade is small and approximately in balance and, for Japan, because although it is a significant importer of raw materials from the South, its export markets are concentrated in the North.

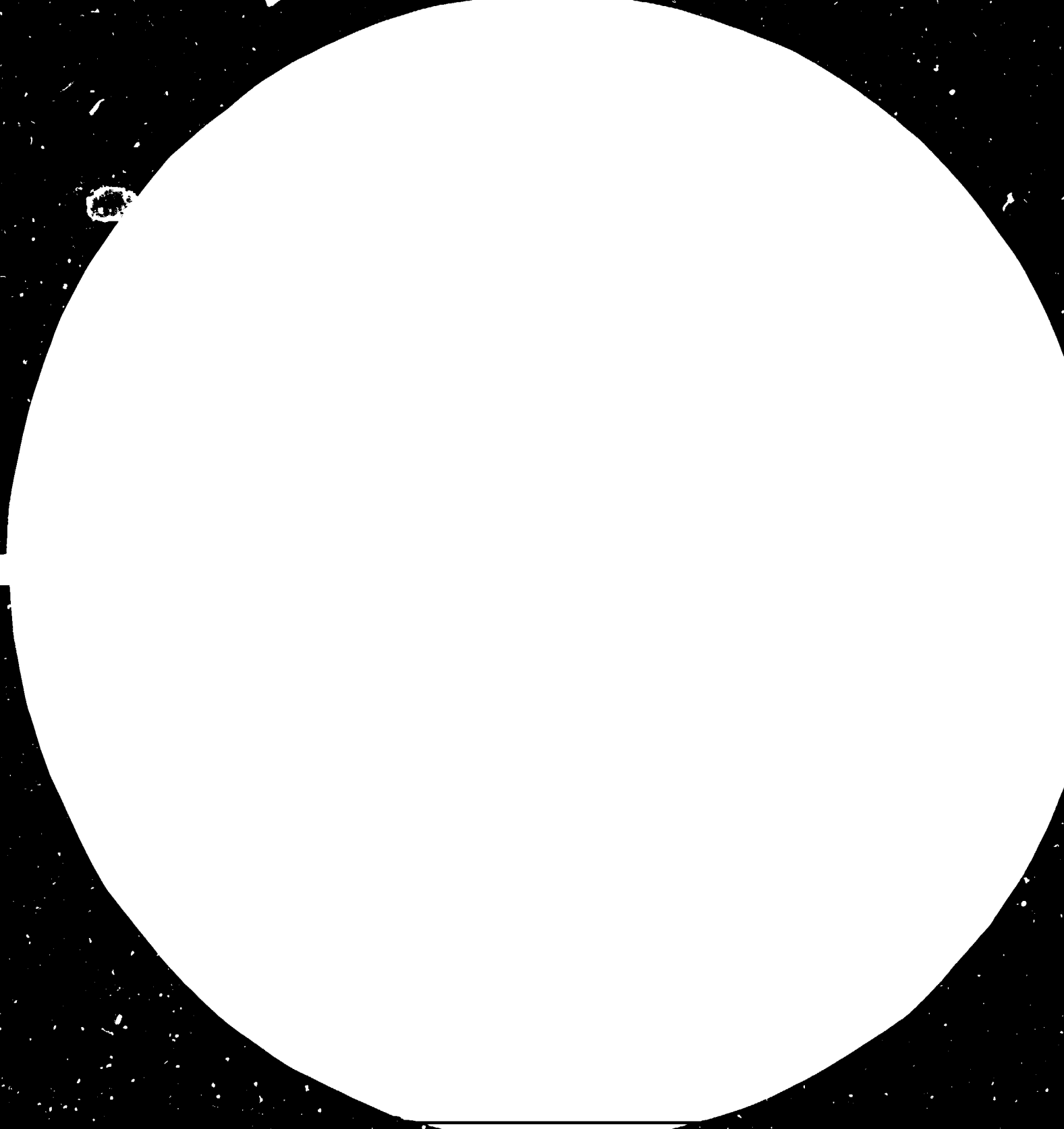
4. Some Dynamic Elements of South-South Co-operation

4.1 Capital goods

As in the South-South co-operation, it is always Capital Goods^{4/} that is the fastest growing sector in the South as a whole under all four scenarios of regionalized South-North co-operation. This is true also for Latin America, except for the scheme of co-operation with Western Europe, where Basic Products is Latin America's fastest growing sector. Capital goods is a sector in which the Northern regions at present have an overwhelming dominance in international trade, and for its imports the South has been highly dependent upon the North. The new co-operation, which amounts to a switching away from traditional sources of supply, thus has the effect of stimulating production in a vital area, in which the South has at present an enormous deficit.

^{4/} Capital Goods are here defined as ISIC (International Standard Industrial Classification) major groups 382, 383, 384, 385 and 390, i.e., including most industrial machinery and transport equipment.

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The conventional economic wisdom has it that developing countries do better in production of labour intensive goods in small scale firms with unskilled or semi-skilled labour at best. Capital goods production requires capital intensity, large scale firms and high level skills. Hence, it is said, capital goods production is not suitable for developing countries in general. The small share of world capital goods production held by developing countries seems to support such reasoning.

But more careful examination of the past record in capital goods production and trade suggest the viability of the South. Many capital goods require a below-average capital intensity. Such capital goods include agricultural machinery, office machinery, metal-working machinery, ships and boats of various sizes. Small firms are as efficient as large firms in producing wood-working machinery, conveyors, dies, tools and jigs, etc. Small firms are often cost efficient due to firm-specific managerial quality, plant layout, and local information availability. Skill-intensive goods (i.e., those using a high level of skilled labour) are being produced by India, Pakistan, Egypt, Singapore, Argentina, the Republic of Korea, and other newly industrializing countries. Developing countries producing different capital goods can complement each other, should they adopt a policy to that effect. Indeed, the evidence is that capital goods production and trade among developing countries has grown faster than other manufacturing sectors. For instance, engines tripled and agricultural machinery doubled in export values (current prices) between 1975 and 1978, in all capital goods producing developing countries (except India and Singapore). Other categories with a particularly impressive export performance were special industrial machinery, other special machinery, electric power machinery, telecommunication, other electric machinery, road motor vehicles, and ships and boats.

The importance of capital goods production in the South is not just because of such static criteria as factor intensity, factory size, cost, etc. The dynamic effects of capital goods production, though difficult to measure, seem persuasive. The first is the efficiency-augmenting effect of "learning-by-doing". The capital goods sector can be said to be richest in such learning-by-doing benefits compared with any other manufacturing subsector. The sector is characterized by dynamic linkages with other sectors of the economy. It also provides the entrepreneurs for small technologically

intensive industries. Furthermore, it can also stimulate skill creation, as well as demand creation through higher wages to skilled labourers.

4.2 Natural resource-based industries

Many natural resources are plentiful in the South, including petroleum, potash, phosphate, iron and other metals, and these form the basis of the important industries of refining and petrochemicals, fertilizers and metallurgy, respectively. The availability of the raw materials poses few problems, at least up to the year 2000, and reserve findings have more than kept up with consumption.

At present, excess capacity characterizes the world market in most of the processing sectors. But a closer examination reveals that the South imports a substantial amount of processed products from the North, despite existing excess capacity in the South. This is particularly true in petroleum refined products, petrochemicals of all sorts, and specific aluminium, copper and iron and steel products. This anomaly seems to be due to a market structure dominated by TNCs, and also to a lack of information among Southern actors (producers, consumers, and traders). Accordingly, to short-circuit the product flow, by direct transfers from Southern sources to Southern consumers, would seem an important area for South-South co-operation. The benefits of steady supplies in processed minerals and of trade and transport margins would then fall directly to the South.

More detailed possibilities for South-South co-operation can be found in the energy-intensive and capital-intensive mineral processing areas. The Middle East, for instance, could be a most significant economic force in such South-South co-operation, since this region has the energy resources, and capital funds needed in a field at present dominated by TNCs. Energy resources at present wasted in the form of gas flares and refinery residues could be used for smelting minerals from other regions, notably aluminum, copper, iron, etc. Such vertical integration, subregionally and inter-regionally, of key resources could provide added bargaining power to the South.

The constraints on South-South co-operation in mineral processing appear to be similar to those for capital goods. They include the availability of technical knowhow, the marketing infrastructure, financing, product qualities and the sharing of benefits among the participants. Therefore we next deal with some institutional changes that might facilitate South-South co-operation in general and these key sectors in particular.

4.3 The institutional framework of South-South co-operation

To make South-South co-operation a reality, the economic ideas have to be translated into specific action: information must be collected and exchanged, decisions made, agreements entered into. But the existing institutions seem inadequate. The capital goods sector shows this very clearly. Capital goods technology, information channels, marketing and trade arrangements, and even the financing such trade are all heavily concentrated in the hand of TNCs. The combination of powers in these crucial areas gives the present capital goods industry considerable bargaining strength with respect to the South. By contrast, the South is unorganized, fragmented, and without institutional support in furthering its own interests. It pays a high price in the form of opportunities foregone.

At present, in spite of excess capacity in virtually all the subsectors of capital goods and primary goods processing, and in spite of complementarities between different regions of the South in supply and demand patterns, no mutually beneficial exchange is taking place. How is this related to institutions? Two illustrations may answer the question. First, the buyers and sellers in the South are not directly linked. They operate through the Northern establishment of information channels and marketing arrangements. But direct and detailed information is crucial, particularly because capital goods are non-homogeneous. The South loses considerably in that a disproportionate sum, of trade and transport margins, goes to Northern actors when South-South trade is intermediated by the North. The control of information and marketing routes is, in general, not in the hands of Southern actors, and this is particularly so for capital goods and basic input goods.

A further important feature of the present institutional framework is finance. Financial institutions do not provide sufficient liquidity to

facilitate trade among developing countries themselves. The existing financial institutions are constrained by United States dollar availability, which is, naturally, determined by United States monetary policy. Current recession and unemployment levels illustrate how expensive it is, particularly for the South, to conduct trade based on dollars. Distress sales (often below cost) in raw material markets are just one symptom. The problem of financing trade in capital goods and processed basic goods is only a part of the larger problem of liquidity shortage afflicting all sectors of the world economy.

These considerations compel us to discuss the institutional reforms in more general terms than the scope delimited by a narrowly-defined industry-oriented issue. The problem of world liquidity is of course primarily the concern of the International Monetary Fund, but it infringes on UNIDO's concerns so long as the shortage of liquidity constrains industrial growth. We consider, therefore, the possibilities of a general solution addressed not only to industry-specific problems in finance but also to associated problems in a broader framework. The two are often operationally unseparable.

Altogether, we examine, in the remainder of this paper, a number of institutional innovations directed towards enhanced South-South co-operation, and these are as follows: (1) South-South negotiations of joint ventures; (2) system of general trading organizations; (3) national currencies as a medium of exchange; (4) South-South co-operation in industrial input management: (a) mineral stabilization plans (b) technology centres.

4.4 South-South joint ventures

As has been said, the concept of South-South co-operation in industrial production is based on the fact that individual developing countries are constrained by smallness of the market on the demand side and a lack of complementary input factors on the supply side. Co-operative schemes would bring together complementary input factors from other co-operating countries so that a production unit could be made complete. South-South joint ventures (SJVs), owned and managed by the South, can provide the best means of realizing such objectives, and, in particular, the production constraints found in the capital goods and mineral processing sectors could best be overcome by SJVs. This form of co-operation seems far superior to customs union approaches and other forms of market integration schemes.

How can reciprocity be ensured in such joint ventures, and, again, how can their benefits reach as many developing countries as possible? One approach would be for countries to prepare a list of joint ventures that they are willing to host. The availability of specific resources such as raw materials, skills, and know-how would provide the basis on which the list could be drawn up. The host country would invite other developing countries to bid on this offer of complementary factors and expected returns. Negotiations would involve many items including an equity ownership, technical assistance, provision of capital funds, marketing underwriting, long-term purchases, barter arrangements, tariff preferences etc. The main objective is to maximize such exchanges and to achieve a fair distribution of benefits, which in the past has proved to be a problem in many co-operation schemes. In these negotiations UNIDO's System of Consultation might be used to provide preliminary services, and thus the scope of the present system would be expanded to intersectoral issues.

Another variant of production co-operation could apply the economic principle of willingness to pay. Thus, either a specific industry or a whole related complex of vertically integrated industries would become part of a scheme of industrial licences for Southern countries as a whole. Among the potentially interested countries, the highest bidder would be given the licence to establish those industries either in his own country or in a country of his choice by mutual agreement. The revenue collected from such a licensing arrangement would go to a common industrial fund for the South, which would become self-financing through the industrialization process. Such a licensing system would thus ensure an automatic contribution by the highest bidder country in exchange for the privilege of a wider market for its product, created by an elimination of tariff and non-tariff barriers in the South. Thus, national self-interest and collective interests could be reconciled.

4.5 General trading organizations

General trading organizations for developing countries offer considerable scope for South-South co-operation, especially in industrialization. UNCTAD has already given extensive consideration to the possibilities for such organizations. Institutional factors tending to inhibit South-South trade

expansion include: uneven and biased information and marketing networks, inadequate communication, transportation, banking and insurance systems, medium of exchange constraints, and tariff and non-tariff barriers. Reduction or elimination of these obstacles is crucial to reduce search costs and transaction costs at present insurmountable for many traders in developing countries. As a means to overcome them, the establishment of General Trading Organizations is recommended. The basic idea finds a reflection in the Japanese General Trading Companies, which have succeeded in linking domestic industrial firms to overseas buyers and sellers. The companies sell a package of information and commercial services to them tailored to their needs. If each developing country could establish such General Trading Organizations (private or state owned) and develop a regional and inter-regional network with a collective system of information gathering, such a system could meet the need for "catalytic actors" and "problem solvers", identified in many studies as missing links.

4.6 Local currencies as a medium of exchange

Developing countries have a chronic need for foreign exchange to facilitate trade transactions. The scarcity of U.S. dollars often blocks potentially beneficial South-South trade owing to balance of payments difficulties. As a means of overcoming such difficulties, the settlement of international transactions in local currencies is one important option. The advantages of this arrangement are many. It means the elimination of transaction costs in finance, i.e., the fees paid to foreign exchange dealers and the interest foregone (or paid on loans) to keep adequate reserves for transactions and creditworthiness. The risks and uncertainties of exchange rate fluctuations caused by "hot money flows" can also be avoided, and the burden of correcting trade imbalance would be equalized between surplus and deficit countries. Such arrangements would be flexible in as much as the proportion of local currency payments can be agreed upon, ranging from a moderate percentage to one hundred per cent. Such an approach would be a temporary measure, its object being to bring about a rapid increase in world aggregate demand from its present depressed level. The best long-term solution is still a global, multilateral, clearing-house arrangement, a world currency. However, the use of local currencies would reverse sacrifices of production, trade, and growth at present forced upon the South by the existing financial institutions. The

General Trading Organization suggested above may be in the best position to initiate the use of local currencies as a medium of exchange.

4.7 South-South co-operation in industrial input management:
oil and minerals

Traditionally, crucial inputs to industrial sectors of the South have been supplied by the North including petroleum products, processed mineral products, technological know-how, or industrial services. Strategies to strengthen the collective self-reliance of the South could take many different forms. For oil, this could perhaps be by charging the same international price, but allowing oil-importing Southern countries to pay a part of their oil bill in local currencies. This scheme would tend to encourage both South-South trade and financial co-operation.

Both in the case of oil and in the case of some other mineral resources (e.g. tin, bauxite) with large deposits in the South, the vast financial surplus of the low-absorber OPEC countries could be used to buy future claims on these minerals' output, keeping them under ground for the present. This would avoid or at least postpone all logistical problems of storage, transport and marketing. OPEC's surplus could thus be more imaginatively used to enhance its international market power, and non-OPEC developing countries would gain in terms of assured future markets and perhaps also in terms of prices higher than their present collapsed levels.

Such long-term "futures contracts" claims on oil and other significant exhaustible minerals in the non-OPEC South, that can be purchased with the OPEC liquid surplus, will produce a far more favourable climate for industrialization of the South. It will allow the South to have better control over international raw material prices and physical location of raw materials. At present, there is immediate pressure on most Southern countries to earn foreign exchange by selling such raw materials, no matter what the international price may be. Such long-term contracts would provide the essential time-horizon for industrial planning in the South, allow developing countries to process and increase "value-added" from their minerals. Collective as well as national self-reliance would be enhanced.

4.8 South-South co-operation in industrial input management: technology

Along with the management of minerals and their products, future oriented management of technology for the South appear crucial for self-reliance of the South, especially the new wave of technological development in, e.g., micro-electronics, biotechnology and information technology. International research and training centres based on co-operation among the countries of the South should be set up in these areas. Such centres would emphasize basic research and training, so that the indigenous technological capability of the South can increase over time. At the same time they would at least partly reverse the "brain-drain" from the South. Without such concerted efforts, the Third World will become helpless observers of new and emerging technologies, as reported in the International Forum on Technology Advances held in Tbilisi, 12-16 April 1983.

The way out of the South's technological dependence must include the development of a technological capability in all production stages in terms of design and actual production capacity. Industrial design centres should also be initiated through South-South co-operation on an imaginative basis. They should not be just "narrow" designing centres for developing blue prints for technology, but instead have a wider perspective of design as an integrated techno-economic process: each product-design would be looked upon as a vertically integrated industrial process involving at least all the major manufacturing production stages (of all developing countries, not just domestic stages). "Process" and not "product" substitution is the key to technological self-reliance for the South.

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*Industrial Development Strategies and Policies
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Lima, Peru, 18-22 April 1983

**STRENGTHENING OF
SCIENTIFIC AND TECHNOLOGICAL CAPACITIES
FOR INDUSTRIAL DEVELOPMENT
IN THE DEVELOPING COUNTRIES**

This paper was prepared by Dr. I.H. Abdel-Rahman, as consultant to the UNIDO Secretariat.

The views expressed in it are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.

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F O R E W O R D

As part of the preparatory activities for the Fourth General Conference of UNIDO (UNIDO IV), a high-level expert group meeting on industrial development strategies and policies for developing countries is being organized in Lima, Peru, from 18 to 22 April 1983.

This particular meeting is considered to be of crucial importance to the preparations of UNIDO IV, since it has as its objective the review of strategies and policies of the past as well as the identification of key elements in industrial strategies and policies for the 1980s as perceived by national policy makers. On this basis, the meeting will identify those issues on which further detailed work in the strategies and policies area should proceed in preparation for UNIDO IV.

This paper focuses on the technological issues connected with the formulation of strategies and policies for industrialization. The paper was prepared by Dr. I.H. Abdel-Rahman, as consultant to the UNIDO Secretariat.

Summary

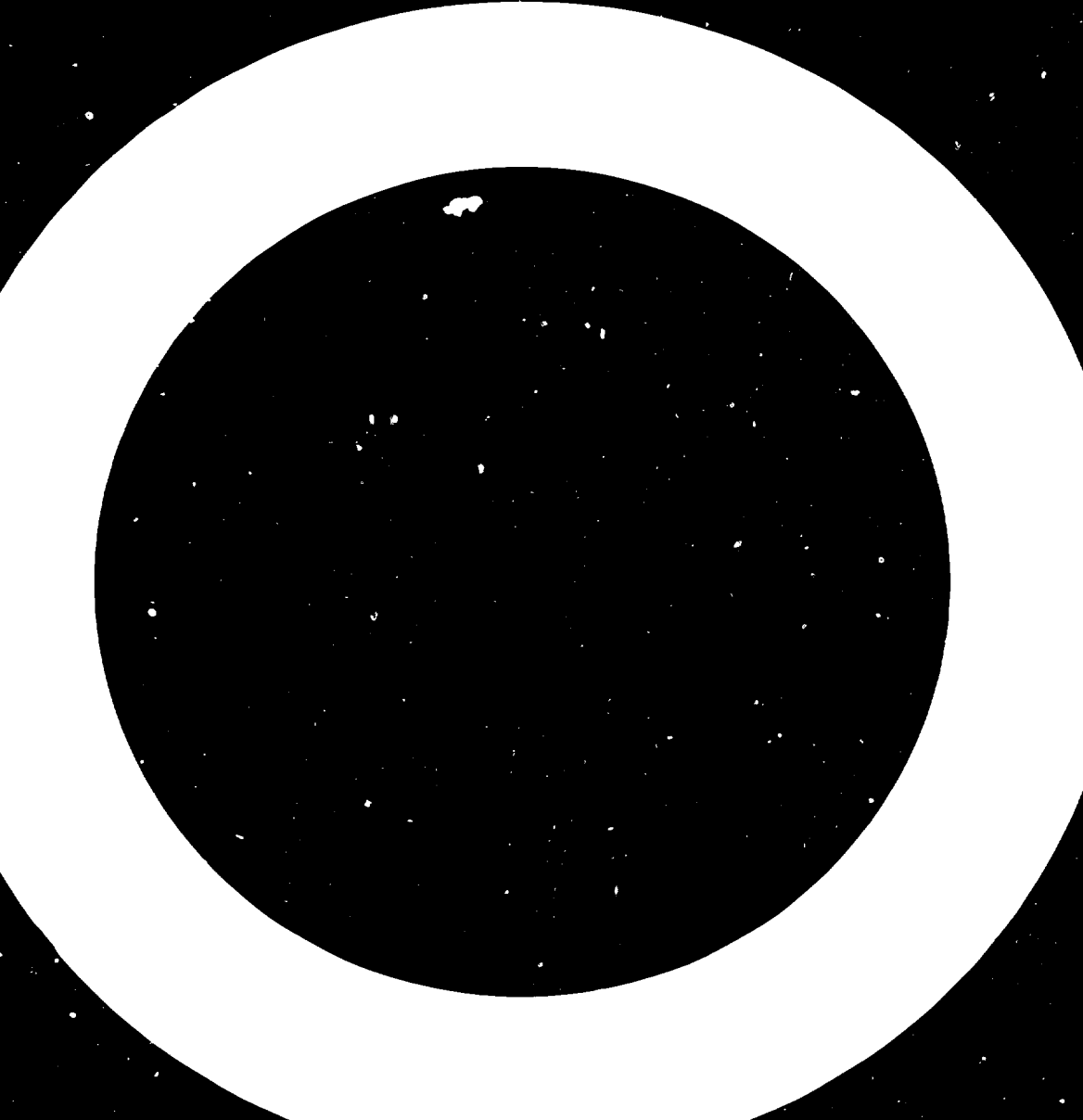
The advanced countries have established their technological capacities for industrialisation in a long period of time as compared with the limited time perspective available to the developing countries, which have to start from an initial fragmented base, and in conditions of severe constraints. In spite of the current economic and social crises of the world economy, positive prospects are almost certain for technological innovation in different industries using new technologies to meet more severe competition in world markets. Major programs of technology innovation are established in almost all of the industrialised countries. Their impact on the industries and technologies of the developing countries will be increasingly felt in the coming years.

The developing countries, would have to examine and strengthen their technological capacity for innovations in industry to face the coming flow and benefit from newly created opportunities. The most urgent requirement is to examine the functioning of technology innovation, and gear the technological capacities to interlock dynamically with industrial development, using both external and domestic technologies. The most serious gap in the chain of functions and

institutions of technology machinery in the developing countries, is the consultancy and advisory services, which assist micro-and macro level projects and policies, making use of all the scientific and technical skills available in the country, and build up relatively quickly a body of experience and guidance for further measures of strengthening selectively the scientific and technological base in the country, in the directions indicated by the development strategies. It is argued that such an approach is both feasible and urgent. Hence it should be given careful attention and high priority. Other measures will be required, including expanding the financial resources allocated to science and technology, and establishing a well thought of policy of transfer of technology. Precedence should however be given to the integration task indicated in the study, otherwise the efficiency of the technological capacity will remain low and its future development doubtful.

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STRENGTHENING OF SCIENTIFIC AND TECHNOLOGICAL
CAPACITIES FOR INDUSTRIAL DEVELOPMENT
IN THE DEVELOPING COUNTRIES

1- The Vienna Programme of Action on Science and Technology for Development:

In August 1979 The United Nations Conference on science and technology for development, adopted a comprehensive set of recommendations, known since then by the name of "The Vienna programme". This document is of permanent value as a guide and compilation of the variety of desirable actions at the national regional and international levels, to strengthen the science and technology capacities of the developing countries and to restructure the existing pattern of international scientific and technological relations for cooperation and transfer of technology. The programme contains also a set of recommendations for the activities of the United Nations system in this field.

In this study, the Vienna Programme, and the subsequent deliberations about it in the United Nations bodies and outside them, are considered as an essential basic and background informations. The study concentrates on the field of manufacturing industry whenever such concentration is meaningful. It also recognises that the developing countries, in their diversity of economic and

social conditions and levels of industrialization, must establish their own policies and actions in this respect. They cannot and need not attempt to adopt all the recommendations of the Vienna Programme in the same time. By the nature of limited social and economic resources, the progress of the developing countries would have to take place gradually in a dynamic manner and within the limits of available resources and existing constraints. Therefore special attention will be given to examine the dynamism of the movements towards benefiting from science and technology for industrialization. The several steps already taken in a particular country may leave behind them situation of disequilibrium and ineffectiveness. The remedies will not always need additional resources. Harmonisation of different components of a general plan for application of science and technology to development may lead to quick improvements and establish a solid base for further progress.

In the following pages an attempt will be made, to help identifying the key deficiencies in the structure and working of the technological capacity of the developing countries. While all parts of the machinery require strengthening, it is essential to give priority to strengthening the weak (or in fact the missing)

links, and to ensure the working of the machinery as a whole, before sinking resources to strengthening some components, which remain isolated unproductive entities on the national scene.

2. The Topology of technological capacity:

Technological innovations are continuously necessary to establish new industrial production facilities or to improve the productivity of existing units. The ultimate objective of the innovation resides at the production point, but the capacity to examine alternative technologies has to be built at many points, and institutions and cannot be established in a short time, or designed only for a specific problem or branch. Many components enter in the building of technological capacities, starting from the educational system, the industrial and technological research institutes, the advisory and consultancy services, the design experimentation, testing and analysis centres and project preparations, evaluation and feasibility studies. The technological capacity depends also upon the establishment of appropriate programmes of research and development, and availability of information about alternative technologies. Institutions and mechanisms are required to identify problems and difficulties in production so as to seek technological solutions for them, and in addition develop technological knowledge and ideas into full practical applications.

This extensive field of coverage, can only be activated by decisions at different points and by different operators. Other than technological content, these decisions involve financial as well as management and organisational aspects. The financial burden, in the final analysis is borne by the consumer of the industrial products. Actual financial payments take place at all of the above mentioned components, according to a variety of rules and regulations. For example, the cost of education in most of the countries is shared between the individuals and the public budget. Industry may offer fellowships and study funds for specific purposes. This is however a minor contribution. On the other hand, the technological research and development institutions gain income from services given to customers through contracts, in addition to a share received from public funds and central research and promotion institutions. Advisory services and consultancy activities have a variety of public and private forms. They are financed usually by project promoters, including banks and capital shareholders. Financial institutions in their turn establish their own advisory services, or secure the services of specialists for specific tasks along the successive stages of project examination and evaluation. Once an industrial project is approved by the relevant promoters and its financing is

arranged, detailed engineering designs are made, bids are requested for construction and for delivery of equipment. In all of these stages, industrial advisory services of varying types have to be provided.

Information will be always wanted about wages, prices, taxes, public policies of credit, licensing, trade, employment, distribution and development in general. Future estimates of these data will normally enter into the feasibility studies, and in the subsequent adjustments during the life time of project.

In all of the above aspects, technological elements, are raised and decisions are made, by the variety of operators in the long chain of steps of macro-and micro industrial development activities. The national technological acapacity is therefore the sum total of all that is required to proceed along the successive steps of building of industrial capacity and its management.

In the majority of developing countries, not all of the above requirements are available domestically. Hence the need to get the missing services from outside. The degree

of dependence on external sources varies from country to country, and from one branch of industry to another. Technological sources are frequently closely associated with the relevant sources of finance, or with the suppliers of equipment and holders of know how.

Even in the frequent cases of (importing) technology, a domestic technological capacity must be built to select and negotiate, and possibly later adapt and implement, the technological innovations. The domestic technology machinery will be required to advise the decision makers. It should call upon and make use of the domestic experts and technologists who exist in the country. In large projects, the decision makers seek additionally the advise of foreign consultants of wide experience and high reputation. As will be explained later in detail, the link between decision makers of industrial development on the one hand, and the domestic experts in universities and technological institution on the other hand is perhaps the weakest link in the long chain of technological activities in the developing countries.

5- Who Decides about Technological Innovation and Who Pays:

The technology machinery in its wide diversity of components, institutions and functions is closely related and interwoven with those who decide about industrial development, and with those who pay to finance that development. The two can become one party, when the owner of the industry is the one to finance it. In most cases, these are two parties, each of whom has priorities and policies different from the other. In many developing countries, the public sector by choice or by necessity assumes an important role (even exclusive or dominant) in developing certain branches of modern and basic industry. Yet in many of these cases, external finances from private, bilateral or multilateral sources is invited to participate as a donor, a lender, or as equity capital. Technologists (together with planners and economists) have to answer the questions raised by the sources of finance and by the promoters and owners of the projects. Many of the required answers depend directly or indirectly on public policies. A government need to harmonize carefully different public policies, including industrial policies and programs of industrialization. This harmonization is not as easy to attain, as it may seem in the first instance. Public policies serve a number of objectives, some of them may be

contradictory. In the case of private industries, financing is usually sought partially from the banks, the financial institutions and the open capital market, where it exists. Foreign interests may participate both as investors, promoters or suppliers of equipment. Each one of these operators studies the project proposals by itself, using its own technology consultants and finally negotiate to reach an agreement. Some of the most active industrial development organizations have been established by large banks. Specialized industrial development banks are formed to finance mostly medium and smaller industries.

Some industrial branches, such as textiles, food industries and building material industries are relatively more developed in the developing countries than capital goods industries, electronics and science based industries. Technology institutions are likely to get formed first in the former industries.

As a part of general development policies in developing countries education facilities are financed to a large extent by public funds. Technological services related

to specific industrial projects, are financed from the project funds made available by the promoters of the project. In the middle ground between these two end points, a number of technological institutions must be available to link technology information and knowhow to the actual production facilities. These intermediate institutions draw their manpower and expertise both from the academia and from industry. They specialise in techniques rather than in projects and their services are essential for completing the chain of technological capacity in the country. Some of those intermediate institutions, such as those of standards, specifications, information, patents and industrial property, essaying and testing are financed partially from public funds. Professional associations and guilds (generally not so strong in developing countries) are interested in developing and monitoring codes of conduct of some of these intermediaries. But by and large, these important institutions fall between the two chairs of public finances and project finances. This explains why they lag behind in the developing countries, so that the required services need to be imported from external sources at high costs. More damaging however is the breaking of the chain of components of the technology capacity of the developing country and the loss of its dynamism of industrialization and innovation.

4. National Development Plans and Export Industries:

Two notable and welcome exceptions to this general situation exist. When a country establishes medium term national plans of comprehensive social and economic development, an inventory is obtained of large scale projects intended for financing of infrastructure, irrigation, housing, power, agriculture and industry. The size of the requirements for these projects, justifies the building up of design and engineering offices for common materials such as cement, fertilizers, power stations, heavy chemicals, steel and other basic commodities. The engineering offices established gain experience in actual implementation of large industrial projects in the different branches. They can then call on the services and expertise of university and technological institutes and with the help of external partners, develop their own engineering and advisory services. They can then extend their activities to regional and international projects. They find it to their interest to support research studies, and training related to their field of industry, and thus help to create an integrated and effective domestic technology capacity in the branch concerned. These initial offices assume frequently the structure of a limited company and support a number of auxiliary services of great importance. Some of them are becoming well recognised internationally.

When a developing country expands its exports of manufactured goods, the producing domestic factories raise their efficiency to meet international standards and competition. They develop strict quality control measures, product designs for specific markets, and dynamic innovations to keep their place in the world markets. Export industries thus stimulate a number of technological activities, especially as the manufactured exports shift from textiles and consumer goods towards machinery, chemicals and electrical equipment, and thus establish a strong base of capital goods production.

Military industries, may have similar prospects. They seek technology capacity first to manufacture munition and light spare parts. They build relatively large repair and maintenance workshops, and proceed towards the assembly, design and manufacture of complete units. Military factories have been the training ground for industrial management in many developing countries. They have usually a certain spill over to civilian industry and technology. The funds are easily made available to them, hence their better prospects for training and innovation.

These are a few examples, where integrated technological systems with good capacity for innovation, have been established. They are drawn from the experience of large and relatively advanced developing countries. We may however look now at the general situation of technology in the developing countries as a whole.

Levels of Technology capacity and innovation

The endogenous technology capacity in the developing countries, is most likely to be lagging behind the technological innovation, which takes place actually in the economy. Both of course lag still more behind the (desirable) technology innovation level which is feasible and ought to be reached. The technology shortcoming meant here is both quantitative and qualitative. Though it is difficult to produce numerical and tangible evidence to quantify and specify the above two statements, there is general agreement about their validity as a whole.

We may reflect briefly about the above mentioned three levels namely, the indogenous technology capacity, the actual technology innovation and application, and lastly the desirable technological level. The difference between the first two is filled presumably by technology acquired from external sources. The cost of such acquisition may be considerable, especially since in many instances the (returns) from such acquisition are reduced by economic constraints, such as the size of the domestic market or restrictions on exports of products in

which the technology is used to third parties. The returns may be also limited by the lack of appropriate adaptation and application. These limiting factors, can however be considered components of the shortcomings of local technology; capacity in negotiating for transfer of technology.

The gap between actual technological innovation (using mostly foreign technology) and the feasible and desirable levels, is more difficult to define. Two aspects in this regard can be identified. The first is the judgement that the innovation that takes place is not fully in harmony with the proper priorities of the developing country concerned. This type of divergence is sometimes exaggerated to the extent as to claim that most imported technology is value loaded against the interests of the recipient countries, and takes place to realise benefits to its sources in the advanced countries, in collusion with a limited minority of collaborators in the recipient countries. Suitable mechanisms of technology screening and licensing will be always required to guard against unfair technological agreements. The transfer of technology in its variety of forms will continue to be important to all countries, including the industrially advanced countries. The developing countries should build self reliance in technology but not isolation.

The second aspect, is the likely existence of technology externally which should and could be acquired and implemented domestically but does not come available either for lack of knowledge about it, or lack of interest and capacity of the mechanisms, policies and institutions of transfer of technology. This shortcoming may apply both to new (break through) technologies, as well as to well established technologies already applied in the advanced countries. The solution in this case may be found in building a stronger domestic capacity of selecting and application of external technologies, including the streamlining of the functions of transfer mechanisms, especially as regards the institutional policy and economic obstacles to innovation.

These remarks are of particular importance, in examining the policies and programs of developing the domestic technological capacities of the developing countries. These capacities should be designed to handle adequately the above mentioned cases, as well as to devise (new) original technological innovations. The structure and programmes of technology development should be designed with due regard to the relative importance of and need for these different aspects of technology tasks.

Integrating Technological Capacity Components:

From the practical point of view, the developing countries need to establish a focus to think about such problems and reach recommendations, which may be submitted to the interested parties (both public and private) for consideration and possible adoption and implementation. What comes out of such a (focus) may be the bases of what may be called a coherent and harmonious technology policy for the country.

In the market economy industrially advanced countries, the functions required by an explicit technology policy, are usually performed by a variety of foci, in the government, in the research and advanced study institutions, in business and industry, in the military research, and in the open international market of technology. The actions of these varied mechanisms balances the one against the other. Decisions are made against risks taken by seemingly independent operators, who are subjected finally to market signals, and to central public policies in major questions. In the centrally planned economies, the planning machinery, either directly or through branch and regional decentralized units assume these functions, within the frame of a set of central policy directions. The price and market mechanisms have in this case an important though considerably limited role as compared

with the case of the market economies. These are only schematic features of the situation of technology policy identification and application in the advanced countries. In reality, in practice, considerable degrees of variations exist in both groups of countries, especially as regards the explicit and implicit consultations between public policy and industry and business in general.

In the developing countries, economic systems, and levels of industrialization differ considerably. Hence the considerable variations in the institutions and procedures used in identifying and applying technological innovations. Yet a number of common features exist amongst the developing countries in this respect. The first is the relatively recent history and limited size of industrialization. The long history of well established industry and the large size of such industries in the advanced countries, afford a strong and useful base for development. Channels of interaction between science and technology on the one hand, and business and industry on other hand, would have been established and can be further strengthened. Industrial activities are supported by skilled labour force through an adjusted education system, training and skill development procedures and institutions.

long periods of political independence and international cooperation preclude sensitivities and unfair bargaining with external operators. Public policies have built experience and capacity for adjustment in widely different situations of technology selection and application. The developing countries, especially in recent years, face a number of complicated pressures of security, political, social, financial and economic nature. These difficulties should however spur them to be more attentive to the requirements of benefiting fully from domestic and external technology for industrialization. With these variety of pressures, and the relatively quick pace of technological innovation internationally, the need is more urgent for building up the experience to identify and review the different measures required, both on the short run and long run to benefit to the greatest degree from the technology potential.

As indicated above, the hoped for improvements may have the following three objectives:-

- a) Strengthening the domestic technological capacity for original technology creation, and also handling problems related to technology transfer.

- b) examining the technological innovation, that have taken place recently, and develop recommendation to ensure their harmonisation with national interests and coordination with development policies and strategies.
- c) Identifying the technology potential both from domestic and external sources, and recommending measures and policies to realise this potential.

7- Industrial dynamism and technology innovation:

Since manufacturing industry is one of the most dynamic sectors, innovation and technology development is continuously required for industrialization under all diverse circumstances and in a variety of forms. These include innovations in processes, product design and specifications, new production technologies, better selection of equipment, and raw materials, savings in energy, environmental protection, labour skill development, management techniques, market and consumer studies, project planning for new investments and introduction of new technologies to maintain and develop comparative advantage and competitiveness. These are some of the important functions and objectives of the dynamism required for industrialisation in

general and specifically for the developing countries. The procedure of buying equipment and introducing imported technology in the industry of the developing countries, without the establishment of the capacity for dynamism and innovation as outlined above, would render newly established factories and products obsolete in a few years time, with the consequent loss of capital, employment and income.

Unfortunately those responsible for establishing individual industrial facilities, do not accept the responsibilities for establishing the capacity for technological dynamism and innovation. Industrial financing, at the project level, expects that the economy as a whole somehow will provide the physical infrastructure such as power, water, transport and other facilities. They expect that the economy and society will build up the skilled labour force, including the technological higher skills. They, not unreasonably refuse to assume the costs for these human and physical capacities, though they are generally in a position to attract the best elements of the available stock of trained personnel. Hence the costs of technology, specially imported technology are paid at the level of projects without however building up and developing the integrated domestic technology

capacity. Hence the opinion mentioned above that the importation of technology without maintaining industrial dynamism perpetuates the dependence on external sources and does not allow domestic technological capacities to be built up. Public policy has to recognise the need to remedy the situation by stimulating and promoting the establishment of an integrated technological domestic capacity, which may be organised and financed by industry and public funds according to the specific circumstances of each country. It is only in this way that industrial dynamism is created and maintained.

8- The Missing links between the separate technology capacity

Components:

The main two historical approaches to the development of science and technology in the developing countries are those through the education system and through the government central services. Scientific research developed in conjunction with higher education and post graduate studies. University staff are generally required to conduct research in addition to the teaching duties. The qualified university staff form the elite of scientific personnel in the country, who are related closer to the outside scientific community than to the domestic business and development circles. Considering the large number

of specialisations in University departments, the qualified scientists there are distributed thinly, and hence are not capable easily to form integrated schools of creative research of relevance to development requirements.

The building of modern state functions, require a number of analysis and control activities, in connection with security economic and general development. Chemical laboratories, testing and assay functions, land survey and legal transactions, procurement and tenders, are early nuclei of scientific and technological activities which may be supplemented by irrigation and water control, forestry and agriculture research and extension, or geological and minerological surveys, as the case may be in the early stages of economic development in different countries. Again in this approach, the type of scientific knowledge and routine activities is not directly related to business and industrialisation.

At a later stage, additional approaches are initiated for developing technology centers in the developing countries. Foreign technology is introduced through development projects in the public and private sectors. These usually create a

demand for higher skills, but do not readily form an integrated base for local technological capacities. At a certain stage research and testing laboratories are established mostly by public funds to study problems closely related to domestic conditions. The model used in many countries is that of (national) research centers, which were developed mostly after the First World War in many advanced countries. In Commonwealth developing countries the model of "the department of scientific and industrial research" is generally followed. National laboratories, under different names and for specific fields such as physical, chemical and medical research became important features in the map of science and technology in recent decades in many developing countries. In these establishments science in the academic and university sense existed next to engineering studies, material testing and to a much lesser extent, industrial design and innovation.

Universities, government scientific units, and national technology institutions, however were not able easily to link with industry and business. Industrial development projects had therefore to keep resorting to external sources of technology.

9- Consultancy and advisory services:

Consulting services needed for major development projects, as well as those required by modern industrial enterprises in the developing countries were almost totally secured from external sources, and in many cases, provided by the suppliers of equipment or finance, with practically no participation from local counterparts. The limited domestic qualified staff dispersed in university departments, government laboratories, and national research centers, at best found a minor role with the foreign consultants mostly as individuals and not as institutions. In civil engineering and construction, local consultancy and design capacities were able to reach adequate levels earlier, than in mechanical, electrical, chemical and electronic branches of industry. Many efforts were exerted to establish competent consultant offices within public departments, but with limited success in general, especially as regards industrial technology, which continued to be heavily dependent on outside sources. Technology choices are usually determined for industrial projects in the early stage of project preparation and design and can be modified only to a limited extent in the later stages of project evaluation, financing and implementation. In the absence of competent domestic

consultants, which is the weakest link in many developing countries, industrial technology became determined almost totally by external sources, with very limited participation of the domestic engineering and industrial skills dispersed between different institutes concerned originally with education, control and formal research. This dependence in itself became a retarding factor and an obstacle to the efforts to build up the domestic competent industrial consultancy capacity.

In the absence of strong domestic industrial consultant capacities, the choice of technology in industrial projects took place in many instances without due attention to the interest at the national level or without adequate technical and economic feasibility examination.

The creation of domestic consultant capacity in itself is not a sufficient guarantee for avoiding common pitfalls of industrialisation in developing countries. In certain cases, rules are established to force international consultants to work in the developing countries with local partners, without ensuring that those partners are really qualified and active.

The result would be the creation of (front) or sham partnerships, which constitute only a financial burden on the real operators, and the cost of which is simply added to the final payments. Foreign consultants in their own interest need however to search for local support in order to reduce their costs, use efficiently local manpower and materials, and become familiar with the working conditions and regulations. In cases of genuine partnerships, domestic counterparts can be of real technical and managerial help. If consultancy contracts are drawn carefully and open bidding is used according to clearly formulated terms of reference, irregular practices can be much reduced.

10. Backward linking of advisory services:

The emerging domestic advisory capacity in a developing country should link backward with national scientific and technological institutes, and further with public scientific and technical departments, and with the universities and the science establishment in general. This linkage is necessary to supply the technological design and consultancy machinery with qualified staff and also with specialized services of testing, chemical and material testing standardisation and specification, data, and the highly sophisticated research and scientific examination of specific problems and process. In certain cases, some of research and scientific institutes themselves assume consultancy functions, in addition to their normal (research) functions. Some university departments organize and encourage their qualified staff in science engineering architecture, agriculture, economics and management to undertake consultancy work whether individually or institutionally. The many activities known as university-industry linkages are only one form of such relations. It has been a long accepted tradition to allow medical staff in universities schools of medicine and public hospitals to open private clinics outside their normal official working duties. This practice which has many positive and negative aspects, is spreading to other fields of specialization such as accountancy, law practice management, construction and also science and engineering. The balancing between public and private consi-

derations in these types of multiple activities is a very important and delicate matter. Professional associations and syndicates, together with governments do examine continuously many aspects of these relations including the need to ensure professional competence and integrity on the one hand, and the need to avoid monopolistic tendencies and closed shop practices on the other hand. In most cases institutional links between consultancy organizations and scientific and technological centers are preferable to individualistic links. The problems connected with this subject vary from country to country and according to the varying branches and specializations. Codes of practice and conduct, in addition to laws and regulations will be always necessary to protect public interest and also the private interests of the technologists and their clients. In the industrialised countries long years of experience, trials and errors, have helped to create "traditions" and not only rules in such matters. In the developing countries, the pace of change, or at least the appreciation for the need of change, is much greater. Public policy may proceed along the line of over-regulation, or along the opposite line of under-regulation of advisory functions. Continuous attention and experience would help eventually to create the required balance, avoid misconduct and malpractices and strengthen the capacity for technological advisory services in different fields.

While linkages and balances are necessary, they should not impair the basic functions of the different establishments. Universities, for example have their important role in higher education and research, which should be maintained. National research centers, and public technical control laboratories have their important duties in their fields of interest and responsibilities. These specific functions also should be maintained and strengthened. No amount of expansion of universities and research institutes, however desirable, will fill the gap in the national technology capacity due to the limited consultancy and advisory services.

11. Forward Linking of Advisory Services

The consulting and technological centers need also to link themselves forward with business, finance and other development institutions. After all these are their clients. The financing system of industry and development varies from country to country and also according to branches, size of industrial establishment and levels of technology. Public sector financing is different in many respects from private sector financing. Equity financing is different from borrowing. Financing through banking system, insurance companies, corporate investors, is different than auto-financing and open capital market promotion. Financing of small industry is different than that of large industry.

Industrial project (generation) is an important and essential function in society. The starting signals for the project idea may come from the market place, in which shortage of certain products is conceived or from forward looking entrepreneurs who judge that demand will expand for certain products. The signals may come from a public authority as a result a concept and programme of industrialisation to increase supply of goods, to satisfy domestic or export demands, to develop basic industries or to replace imports and (save) foreign exchange. Banks and sources of finance can initiate ideas and seek entrepreneurs to invest their accumulated deposits, for which they pay interest to their clients. Scientists technologists, patent and know how holders may conceive application of their knowledge and seek interested promoters.

In all of these cases the project idea, wherever it starts, is handled successively and simultaneously by the entrepreneur on the one hand (whether public or private, national or foreigner) and the possible financing partners on the other hand. Technological consultancy services are required to be available independently to each one of the two sides. A bank or a minister of finance needs an advisor to give him preliminary assessment about the project, and to give advice and future details as study of project proceeds towards an economic and financing decision. The entrepreneur (including ministers of industry and of planning in the case of the

public sector) needs also similar advice along the different stages. The advisory service required will contain an element of technology choice. It would include also and by necessity other elements such as markets, costs, labour, regulations, public policies, future prospects of profitability (in commercial and national sense) and organisational and management questions. In private business industrialisation, it is believed that the financing source decides very early on the technology choice. In public finances, technology choices may come much later, in certain instances as late as the last stages. Because of financing difficulties, bids for projects, request the bidder to offer both the technology choice and the foreign exchange component of financing. Equipment suppliers backed by export guarantees, offer the technology available in their equipment and no other. Transnational corporations have also their own preferences for technology. Competent technological advisory services (whether domestic or foreign) should help the decision maker in identifying the most appropriate technology. The development authorities, may need to balance between efficiency and financial feasibility, but they need to know the expert and honest opinions to reach a reasonable compromise. Competitive bidding for large projects, reveals many alternatives and possible combinations of technology and other factors. The analysis of bids is in itself no small task, that require special expertise, and so is the following negotiations. Specialised advisory services, from within the development authority or from outside is required in all of

these stages. This is the area of forward linking, which is essential for the proper choice of technology and preparation of industrial development projects.

12. The Starting of Advisory Services

The consultancy and technological centers, if they have the adequate backward and forward linkages as outlined above, could in a relatively short time accumulate knowledge and experience, which would increase their competence quickly. They handle in all cases similar, if not identical, problems, and face repeated situations. What they acquire in one project could be helpful in the next especially if they narrow their area of competence to specific branches of industry, or specific stages of project development.

Continuity in this case pays well. Centers based on individuals and not on institutional forms risk having short life and usefulness. A central permanent core, with access to a large number of individuals and institutions for specific tasks, seems to be the most appropriate structure for consultancy and technology advisory centers. Some of these centers take the form of (non-profit) organisations in certain advanced countries. Normal (company) form is more prevalent otherwise. Individual consultants,

or individually based centers prevail in the developing countries. These individuals are usually university scientists, section chiefs in national research institutions, former managers of industrial enterprises, or former senior government officials in development departments. There is no set channels for the (formation) of a technology advisor. Established training institutions produce (scientists) rather than (technologists). Government activities produce bureaucrats rather than entrepreneurs. In the absence of an established technology advisory capacity, some form of a start will have to be made, by the development authorities, the financing authorities, or the scientific and professional community. Efforts to develop training and information facilities to prospective consultants would be highly recommendable. UNIDO, the World Bank, and major bilateral and multilateral agencies could contribute most effectively to the examination of these problems at relatively low cost and high returns to the developing countries.

13. Promotion of small industries

Because of their size technological services and requirements for small industries are handled differently. Small industrialists cannot engage the services of specialised consultants, and therefore institutions are established to promote and support small industrialists. The required support includes training facilities, advice on designs and

equipment, repair and maintenance facilities, arrangements for financing and priorities for marketing products. Special legislations are enacted to assist small business(including small industries). Industrial estates are built and space is rented to small industrialists to save them the trouble of capital expenditures on buildings and infrastructures of power, water, transport and drainage. The system of industrial estates has been particularly successful in India and other Asian countries. The planning of industrialisations in developing countries, especially when the public sector has a predominant role, neglect small industries in favour of relatively large industries. Small and large, industries are in fact interdependent. Large industries depend on small feeder industries. Small industries require intermediate products to process them into finished products. The technology for small industries requires in many cases special attention, hence the small industry promotion and training organisation, need to examine carefully traditional technologies and give the appropriate advice to the small industrialists to use modern technologies with the proper selection and adaptation as to size of operation, availability of materials, suitability to local marketing and relatively scarce high skills.

14. The International Systems of Transfer of Technology:

A lot of attention is assigned in international forums to systems and procedures of transfer of technology to the developing countries. The

discussions include aspects related to the generation, selection and adaptation of modern technologies for use in developing countries, as to the conditions, costs and constraints of such transfers. These discussions relate naturally to (restricted) technology, though the developing countries, because of their limited information may not be making full use of (open) technology, nor of the immense technological and Unido scientific literature which is accessible internationally. The benefit to the developing country from technological negotiation and agreements does not depend only upon the conditions and costs of the transaction, but equally upon the degree of utilisation of the technology capacity acquired. The capacity of developing countries to benefit from external technologies require the training of a staff of economists, accountants engineers, lawyers and technologists in the varied aspects of technology assessment, selection, negotiations, bargaining, adaptation and application. The building of such a capacity, will stimulate technological studies and follow up and would lead to considerable improvements in the linking mechanisms between industrialisation and technology, within the frame of economic and social policies. The discussions in these matters involve confidential information between the interested parties. Rules must be established to protect the interests of the negotiators, even if some of them are public sector enterprises.

15. Multiple Technologies Side by Side:

At any one time, a number of different technologies may be used simultaneously in the same country for the same type of production, and most of them may be equally efficient from the economic point of view, in spite of the wide variations which may exist between them technologically. The reason for this multiplicity of technologies is the differences due to other factors of production, including the capital costs of renewal and replacement of equipment and processes. An industrial production, introduced with a certain technology at one time, must maintain its economic viability at least for the life time of the equipment. Since new technologies are likely to be generated and offered year after year technological and other modifications must be examined and introduced, otherwise the competitiveness of the industrial process is impaired. As an extreme case, centuries old traditional technologies are maintained, because they continue to be appropriate when taken together with other factors such as labor, skills, productivity, availability of capital, and the purchasing power of the local clients.

The introduction of modern equipment, or the sudden increase of the purchasing power of the clients (as in the case of ungained incomes), changes this equilibrium. A new combination of factors of production must be attained. Technologists, who recommend changes in the technology

in use (whether traditional or modern) need to assure themselves of the likely realisation of new factor combination, otherwise the mere introduction of more modern technologies may not be successful. In other words, the penetration of new technologies in a certain society, can cause a series of disequilibrium (whether good or bad) and will only be economically feasible if new combinations of factors of production (in an appropriate time perspective) are realised. It is also possible that technological innovation may become necessary to regain equilibrium, caused by the changes that may have happened in other factors of production.

16. Technology for Development the Micro and Macro levels:

In the long run, technology is likely to be the leading factor of economic development. Stages of civilisation are recognised since historical times by the prevalent production technology. The same is equally true for recent decades in which technologies of energy, transport, communication and others characterize whole social patterns. However, at the microlevel, and in the short run, technology application is constrained, as explained above by other factors, which in their turn may be influenced by public policies and other social factors. The economic and social development, that takes place both by the public and private authorities, would be related to possible technological innovation in the short run and the micro-level, by considerations different from those in case of the macro and long term.

At the micro-level the mechanisms of research, experimentation, problem solving, domestic technology application, project preparation, external technology selection, project negotiation and financing should function in harmony to improve the existing technology, introduce new technologies and explore the prospects of further application of technology for industrialisation.

At the macro level, policies of economic and social development, education, manpower and employment, are harmonised with technology potential to increase technological effectiveness.

There is no clear cut separation, between macro and micro levels, or between short term and long term aspects. Development of science and academic research is essential for education, but the trained staff contribute also to many technological activities. Technology research and development institutions develop expert knowledge in their fields of specialisation, and train experts in applied science and techniques of research and investigation. Their output is the basis, as a whole, of the technical knowledge used in design and advisory activities, though the institution as such may not be working directly in specific development projects. Innovation takes place ultimately in the production sector, but it can start at any one of several points and its idea passes through

a variety of stages until it becomes ready for application. Development projects and problems have a technology component, but they can be resolved only if other factors of production are considered. Even the technology content of a development problem needs to be decomposed into separate components, each of which draws on a special technique or branch of knowledge. The final-solution may therefore be composed of a number of different recommendations.

The relations between social and economic development and technological potential are therefore quite complex, and have multiple aspects at the macro and micro-levels. A developing country, is not likely to be able to build its technological capacity in all branches, nor does it really need to do so. It is therefore important to be selective in using the limited human and financial resources available for science and technology. Imitative technology may be useful as a temporary stage until capacity for original technology is developed. Technology transfer is useful and necessary, where domestic experience does not exist, but it has to be selected, negotiated and implemented in a dynamic sense for each industry.

Staff, institutions and policies should be established to make this possible, in the particular areas corresponding to the industrial and development branches of the economy. Scientific and academic research is an integral part of University and higher education. By its association with education it is usually fragmented and not directed to specific development projects, yet it must be capable within limits to train staff and to afford the basis for more applied activities. National specialised centers are very useful to handle problems at the national level, and also to do contract research for industry. As one moves from the pure science, towards application in development projects, the areas of work of institutions and experts must become more specific and carefully chosen according to the specific problems of the industry. Freedom of research which has to be maintained in Universities, gradually changes until one reaches confidential technology and industrial secrets at the production point.

With all this diversity, the different components of the technology capacity of a country must be integrated and linked with each other. Two requirements therefore are essential. The first is adequate resources, and the second is the proper (functioning) of the components of the technology capacity. These two requirements are not independent. Resources are likely to be more available from project funds, if the machinery renders the required services. The capacity to deliver and to

function technologically will be more likely if resources are made available for it in a carefully designed and selective-manner.

In this manner the technological requirements of the social and economic development projects and plans are met, either from domestic research, or from transfer of technology. The integrated dynamic technology capacity would adjust its activities selectively to the specific situation of each project and in harmony with national policies. The contribution of domestic research would increase gradually in selected and specific directions, and not simply across the board. The general proposals of streamlining and raising the technology capacity, would be further supported by regional and international programmes of information, science, technology, training, research and cooperation. The cooperation between developing countries in technology development and application will be stronger as a result of specialisation and accumulation of experiences. With the dynamically functioning technology-industrialisation machinery, both technology policy and industrialisation policies and strategies could be mutually harmonised and periodically adjusted.

17. The priority and feasibility of integrating the technological capacity in the developing countries:

Finally, the priority at the national level of allocating resources, though relatively small, to the efforts of integrating the technological capacity, may be examined. The current development, economic and social problems facing the industrialised and developing countries are well known. They create difficult financial demands and constraints practically in all countries. Technological innovation, at the international level, however has not been reduced. On the contrary, severe competition is felt in world markets and attention is increasing to maintain and develop exports of manufactured goods, and the introduction of the new basic technologies such as bio-technology and micro processors. Energy saving measures and environment protection programs also have stimulated technological innovations. Science and technology development is being supported generously in the advanced countries, may be much more than ever before. The final result is obviously, that the developing countries, will have to face the incoming flow of innovation from the advanced countries, some of its impacts may be unfavourable to the current industrial production, including exports. The industrialised countries, in their drive to

innovate and maintain exports, and under conditions of unemployment and economic stagnation, may be more ready than before to support the export of capital goods and technology to the developing countries, especially where greater economic efficiency and better financial management are likely. The developing countries are becoming an expanding market for the exports of the advanced countries.

A strong and rationally planned movement to streamline and strengthen the technological capacity of the developing countries for industrialisation, seems to be necessary timely and feasible. It should therefore be accorded a high priority in the development of strategies and policies of industrialisation. Once dynamism is created in the technology-industry relations, details of the required programmes, policies, training and institutions, become more specific and amenable to harmonised decisions at different levels and components of the complex structure of development in the country. No doubt there will be many other aspects to be studied and strengthened, but it is felt that the most essential step is the integration and linking of the basic technology components.



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**HIGH-LEVEL
EXPERT GROUP MEETINGS
PREPARATORY TO THE
FOURTH
GENERAL CONFERENCE
OF UNIDO**

*Industrial Development Strategies and Policies
for Developing Countries*

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**DEVELOPMENT IN THE DEVELOPING COUNTRIES
IN THE 1980s**

This document was prepared by E.A. Bragina, M.A. Kyznetsova, E.V. Morozenskaja and O.B. Novikova of the Institute of World Economy and International Relations, USSR Academy of Sciences.

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FOREWORD

As part of the preparatory activities for the Fourth General Conference of UNIDO (UNIDO IV), a high-level expert group meeting on industrial development strategies and policies for developing countries is being organized in Lima, Peru, 18-22 April 1983.

This particular meeting is considered to be of crucial importance to the preparations of UNIDO IV, since it has as its objective the review of strategies and policies of the past as well as the identification of key elements in industrial strategies and policies for the 1980s and 1990s as perceived by national policy makers. On this basis, the meeting will identify those issues on which further detailed work in the strategies and policies area should proceed in preparation for UNIDO IV.

Development in the Developing Countries in the 1980s begins with an assessment of the results of the development of the industrial base in the developing countries at the beginning of the 1980s and then turns to a closer examination of development prospects for the African countries, looking first at the prospects for co-operation among the member countries of the United Nations Economic Commission for Africa during the 1980s, and then at the possibilities and prospects for the use by African countries of socialist industrialization theory and practice.

The paper was prepared by E.A. Bragina, M.A. Kyznetsova, E.V. Morozenskaja and O.B. Novikova.

ASSESSMENT OF THE RESULTS OF THE DEVELOPMENT
OF THE INDUSTRIAL BASE IN THE DEVELOPING
COUNTRIES AT THE BEGINNING OF THE 1980s

The development and modernization by the developing countries of their own industrial potential and the elimination of their backwardness in a whole number of major economic areas is a task which is essentially global in nature and the solution of which will contribute to the recovery of the international economic situation and the progress of all mankind. In terms of many indicators, the decade of the 1980s marks an important stage in the effort to solve the pressing problems of the developing countries.

There are several groups of factors at work in the industrial development strategy. Some of these factors have a mainly national impact, while the effect of others is global, but the most promising approach is the comprehensive one which combines these conditions. One might refer, in this connection, to the need for joint solutions to the problems in such areas as energy, the economy, raw materials, and many others, solutions which in turn will exert a stimulating effect on the development of the world economy as a whole.

Industrialization as a generalizing concept and trend in the socio-economic policy of the developing countries is an important factor in their continued forward movement towards progress. The character of this process, along with its forms and methods, do not remain immutable or static, but are rather enriched by the experience of the developing countries themselves and those international organizations whose mission it is to assist them in every possible way through their work. The content of industrial strategy is materially affected by the state of international relations, the position of the developing nations in the world economic system, and the thrust and essential features of scientific and technical progress.

Industrialization gives rise to complex, multi-variable processes in the developing countries. The internationalization of production, coupled

with ever-increasing specialization, is responsible for the developing countries' accounting for an expanding share of the international distribution of labour, among other reasons because of the strengthening of their national industrial infrastructures. This decision by the majority of newly independent States to develop and expand an industrial sector of their own reflects their desire to move towards greater economic self-sufficiency and to achieve a more equitable status in world economic relations.

The developing countries see the growth of their national industries as being closely linked to the solution of a number of external economic problems, thus accentuating the global nature of industrialization. The formulation, under United Nations auspices, beginning in the 1960s, of ten-year development strategies which lay down in a general way the basic guidelines for growth in the young States, including the industrial sector, is a confirmation of the international character of the industrialization process. An important role in this new approach to the industrial development of the recently independent countries was played by the 1975 Lima Declaration, which established as a target the expansion of these nations' share of world industrial production to 25 per cent by the year 2000. This goal reflected both the new alignment of forces in the world arena and the increasing co-operation between the socialist and developing countries in the economic and political sphere, as well as the shifts occurring in the expansion of industry in the developing countries themselves.

The active role of the State in stimulating industrial construction and its direct involvement in the establishment of new production enterprises, mainly in heavy industry, was a contributing factor to industry's becoming the most dynamic branch of the economy. The high growth rates in this sector, especially in the 1960s and early 1970s (nearly double the growth rate in agriculture and in certain years climbing to 8-10% per annum) provided a basis for a substantial increase in the volume of national industrial production. From 1950 through 1980 this indicator rose by a factor of 6 or 7, among other reasons thanks to the creation of a number of new branches. The industrial

sector's share of the gross domestic product increased from 25 per cent in 1960 to 33 per cent in 1980. Equally important factors were the diversification of production and the emerging structural shifts, particularly the change in the ratio between light and heavy industry brought about by the strengthening position of the latter. The highest growth rates in the 1970s were recorded in the basic sectors - iron and steel, petrochemistry, and, of particular importance, the engineering industries, this latter factor contributing to the establishment of a foundation for the development of national engineering industries. For a number of developing countries, these branches represent a new type of production. In addition, there were significant changes in the extraction industry, the importance of which increased as a result of the nationalization of the property of foreign private capital in a trend that was particularly widespread in the petroleum-exporting countries.

However, within the structure of industrial production the manufacture of the means of production on the basis of modern equipment and technology - the key to substantially higher labour productivity - accounted at the outset of the 1980s for only 25 per cent in the developing countries as opposed to 50 per cent in the capitalist countries of the West. This reflects the objective difficulties of mastering modern advances in science and technology that are being faced by the developing countries, the internal structure of whose industries is only just beginning to change under the effect of the introduction of capital-intensive production lines in place of the former labour-intensive operations. At the same time, worldwide industrial production standards are coming to be increasingly characterized by the use of production methods with a high "science content."

The encouraging results achieved by the basic group of developing countries in their efforts to industrialize have also revealed the enormous difficulties which lie on this path. Development based on the market model has led to an exacerbation of a number of negative factors. As the principal among

these factors we might cite the increase in unemployment and semi-unemployment in developing nations with populations of hundreds of millions of people; deepening distributional inequality with only 10-12 per cent of the gross national product going to 40 per cent of the population; and the spread of mass poverty. In turn, this worsening social situation has impeded the further strengthening of these countries' economic independence. As the level of development rises, there is an increasing interrelatedness of economic and social processes, and this trend must be taken into account when formulating industrial policy.

The crisis affecting the world capitalist economy is exerting a profoundly negative effect on the economic situation of the developing countries. The alignment of these nations on external factors failed to produce tangible stimuli for sustained and steady industrial growth. The developing countries' share of world industrial production in 1981 amounted to a little more than 10 per cent. The external indebtedness of these countries, put at over 625 billion dollars, is a cause of serious concern. The increasing role of commercial bank loans, inflation, and the changing currency and financial policies of the industrially developed capitalist countries have led to a rise in interest rates that threatens the developing countries with even greater indebtedness in the future. The result is a limitation of the resources available to these countries for new industrial construction.

Toward the end of the 1970s the developing countries encountered increasing difficulties in selling their industrial products on the world capitalist market. The United States, Western Europe, and Japan strengthened their protectionist barriers against exports from the developing countries and introduced a host of non-tariff limitations. The slow-down in the growth of industrial exports is having a negative effect on the evolution of the entire economy. The exploitation of the natural resources of the developing nations by foreign capital is continuing.

Of major importance to the success of the industrialization policy is the fruitful co-operation of the developing States with the USSR and the other CMEA countries.^{1/} In the 1970s the growth rates in the CMEA countries were twice higher than in the developed capitalist States, their national income increasing on an average over the decade by 66 per cent and their gross production volume by 84 per cent.

In the area of trade in finished goods, the steady growth in imports from the newly independent countries to the CMEA countries stands in marked contrast to the protectionist policies of the West. As long ago as 1965 the Soviet Union abolished all duties on these imports. In 1982 the CMEA countries provided economic and technical assistance to 92 developing countries for the purpose of strengthening the public sector of their economies, developing their natural resources, and expanding the training of indigenous personnel.^{2/}

Despite the difficulties confronting the developing countries, it is timely and important to emphasize that industrialization remains a priority goal through which the problems of these countries can be solved, provided that it is pursued in a consistent and comprehensive manner. It is logical that particular aspects of this process and the specific forms of industrial policy can be examined in accordance with changing internal and external conditions. At the same time, however, there are inherent in industrial strategy certain factors which are of crucial importance.

Primary among these factors is the role of the State as the agent of development. It is under the aegis of the State that industrial policy is both formulated and implemented, and that the public sector in the most vital, "structure-forming" branches of the economy is strengthened. Unlike the private sector, the public sector can be guided in its activities not by the desire for maximum profit, but by broadly conceived socio-economic goals and the

^{1/} See UNIDO/WG.357/7 and UNIDO/IS.335.

^{2/} See "MEIMO", 1983, No. 1, p. 105.

quest for more uniform and balanced development. An essential element providing a genuine prerequisite for the lessening of socio-economic disproportions is the decisive role of the State in the construction of vital infrastructural facilities and works and in the establishment and/or expansion of dynamic branches of industry in developing countries. In this way it is possible to plan appropriate ratios between industry and infrastructure at various stages in their evolution and strengthen the linkages between them, and also to introduce a definite element of planned regularity into the area of economic development.

No less important is the role of the State in curbing the growth of social inequality. Among the measures that may be taken to this end, particular mention should be made of the effort to secure a uniform and equitable redistribution of national income, which includes an appropriate fiscal policy, effective and radical agrarian reform and the support of co-operatives, State control of prices and distribution, and a number of additional measures. The acute economic inequality that currently exists in many developing countries, and the associated effective demand, has the effect of distorting the branch structure of industry, and leads to an underutilization of production capacity because of the emphasis on the production of goods and articles designed for the more affluent strata of the population.^{1/} Capital, skilled labour, and modern equipment are all concentrated in this narrow sector of industry, at the same time that the broad masses of the population, particularly the rural population, are able to enjoy the fruits of industrialization to only a negligible degree.

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In the industrial policies of the 1980s an increasing importance will attach to measures designed to mitigate the most blatant disproportions in the national economies of the developing countries. This refers mainly to the ratio

^{1/} According to UNIDO estimates, underutilization in developing countries is as high as 30 per cent of production capacity.

in the growth rates for agriculture and industry. The chronic backwardness of the agricultural sector, the increasing imports of cereal and other food products have accentuated the imbalances between the various branches of industry and have noticeably inhibited the development of industry.

It would appear that under these conditions the role of industry in establishing and expanding direct and reverse linkages with agriculture and in furthering the process of integration in the economy is especially vital. Today, the principal flow of goods between these sectors consists of agricultural raw materials and a number of consumer items. By increasing the share of goods for use in production, the technical endowment of the agricultural sector will be enhanced and a contribution made to increased agricultural production. No less important an aspect of industrial policy is the expansion of infrastructure construction for the agricultural sector, which has the simultaneous effect of generating new jobs, particularly outside of urban areas.

The acute unevenness of economic development and the presence of structural disproportions in the economy have led to greater social polarization and to mass unemployment and poverty in the developing countries. Increased employment as a means of ensuring at least a minimum livelihood for the broad masses of the population has rightly been awarded pride of place in the development strategy. Along with rural unemployment in its various manifestations, there is a rapid rise in urban, "overt," unemployment. In large measure this phenomenon is connected with the wide-spread retention in the industrial structure of small-scale production, including the informal sector. This raises the question of the possibility and need of applying various levels of technology, the multi-stage nature of the equipment introduced, and the coexistence within the industrial sector of modern means of production side by side with traditional tools of labour. The weaknesses of small-scale industrial production - limited technical sophistication, rudimentary technology, low worker skill levels and correspondingly poor product quality - lead to a lowering of production efficiency.

However, considering the pervasiveness of small-scale traditional production in developing countries and its role in providing employment and income for large segments of the population, measures to gradually modernize this category of production activity and to widen its links with the modern factory manufacturing sector represent an important aspect of industrial policy.

The experience of industrialization indicates that the heightened role of research and development in industrial policy is an objective factor the importance of which is destined to increase perceptibly in the decade of the 1980s.

The technological backwardness of the developing countries vis-à-vis the technically advanced countries (which, according to UNCTAD estimates, are ten times more advanced in this area, and in certain high-science areas far more) has resulted in the infusion of foreign capital in industrial construction, mainly in the form of deliveries of the latest technology, patent and licensing arrangements, and the introduction of modern production management methods. ^{1/}

This is one of the major reasons for the massive infiltration of the transnational corporations into the industry of the developing countries. This penetration by the transnationals is accelerating the ruin of small-scale enterprises in such areas as textiles, tobacco, soft drinks, and ready-to-wear clothing.

The business practices of the transnationals are leading to the predominance of incomplete production cycles in the industry of the developing countries and are increasing the dependence of these industries on imported means of production. There is every reason to believe that an industrial strategy for the 1980s must envisage measures to genuinely strengthen the control of the Governments of the developing countries over the activities of the transnational corporations and to regulate their participation in the area of industrial construction.

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^{1/} The developing countries currently account for not more than 1 per cent of all the technical patents issued throughout the world. Their annual payments for the use of various forms of technical services, patents, trademarks, etc. are in excess of 10 billion dollars; however, if all payments connected with their technical dependence are taken into account, the total sum is between 30 and 50 billion dollars (UNCTAD estimate for 1980).

The developing countries have achieved unquestionable successes in creating their own industrial potential. Nevertheless, the complexity of the industrialization process and the exacerbation of internal and, especially, external negative influences are impeding the establishment of a stable internal basis for sustained growth. This fact was clearly evident in the decline in annual industrial growth rates to 1-1.5 per cent in the late 1970s and early 1980s. To some degree, the downturn in industrial production was caused by the depletion of the extensive factors behind the expansion of national industry and the need for restructuring, the broad application of intensive forms of production, and the organization of the labour force.

However, because of objective factors a transition of this kind is prolonged in character. Meanwhile, the active effect of external factors - prime among them scientific and technical advances - aggravates the disparity between the level of world industrial production and that of the developing countries. In industry this disparity shows up more strikingly than in the other areas of the economy of the developing nations, since industry is more subject to the influence of scientific and technical innovations. The lack of funds, the shortage of skilled workers, and the inadequate levels of research and development are all factors that make it difficult for the developing countries to improve the quality of their industrial products and, accordingly, enhance their competitiveness.

The growing energy-intensiveness of industrial production (in the developing countries it accounts for 50 per cent of total energy consumption) has confronted the oil-importing countries not only with the problem of finding the money with which to pay for the increasingly costly import of fuels; it has also faced them with the no less urgent task of restructuring their industries to use other sources of energy in place of oil. Given their limited technical competence, their room for maneuver in this area is limited and their reliance on imported energy imposes real limits on the expansion of the national industrial base.

The difficulties connected with ensuring energy supplies may substantially inhibit the growth of industry in the basic group of developing countries, particularly in the heavy branches. Currently, these branches are responsible for 50 per cent of manufacturing output in the developing countries as opposed to 33 per cent in 1955. There is reason to believe that, in the course of their restructuring and modernization in the 1980s, this share will rise even further. A slow-down in the rate of production of the means of production may have a negative effect on industry as a whole inasmuch as it would limit the possibilities for technical redesign and new construction.

In these circumstances, increased importance attaches to a policy of industrial development that looks to the retention of high growth rates and the further restructuring of industry. We might note that the creation of an economically and socially viable industrial structure is no easy task. It is essential to take into consideration the experience of the developing countries in formulating and implementing industrial policy, along with the strengths and weaknesses of these policies. It is quite clear that, however much they may be needed, the use of technical-economic methods alone as a means of solving the problems of development is not enough. There is evidence that the failure to devote sufficient attention to social factors, the persistence of certain traditional forms of production, the specific effects of scientific and technical progress, and a number of other factors has limited the effectiveness of the industrialization strategy.

In connection with the discussion of the design and specifics of an industrial policy for the 1980s and beyond, we might note as a general comment that a sharp delimitation of the thrust of industrial policy is not always a constructive approach. Obviously, there is always a particular stress in the implementation of an industrial policy, but in this case the need for a more co-ordinated approach seems clear.

Industrialization in developing countries passes through fairly well defined stages which differ in terms of their specific tasks and the methods by which industrial production is to be encouraged. But these stages are closely linked, and - the main thing - there is a certain elasticity between them. For example, import substitution has made it possible to reduce imports of consumer goods and certain kinds of machinery by opening up local markets. This stage of industrialization has created objective preconditions for the export orientation of a number of branches, mainly by mastering the production of - for developing countries - new industrial goods. The limited extent of internal demand has also dictated the need for access to external markets.

The transition to an export-oriented policy has meant a significant change in the priorities of industrial development, with the result that it has been possible to accelerate the rates of economic growth and improve the effectiveness of public production. But export-oriented production has still remained an isolated form of development with weak direct and feedback links to the local economy. The promotion of the export of industrial goods, as noted in a UNIDO study (Doc. YD/269, page 87), contributes to the growth of production, provided that increased use is made of local resources, including products developed as a result of import substitution.

The establishment of proportions between import substitution and an export promotion policy as part of the task of strengthening and diversifying the local industrial potential depends to a decisive extent on the expansion of the State's organizational role and direct involvement in the creation of a number of industrial branches. The establishment of a complex of modern industrial production facilities and the expansion of State ownership in heavy industry provide a real basis for a certain regulation of structural shifts in industry and a way of affecting the speed and direction of the reproduction processes.

Equally essential in this connection would seem to be the role of the State in enhancing the effectiveness of national science and engineering and in assimilating and developing technology, with a view, inter alia, to local

requirements. Although the developing countries have substantially increased their scientific and technical potential, their share in worldwide R and D is still negligible. Further efforts are needed both to expand research and development activities and especially to ensure that their results find application in the industry of the developing countries.

The expansion of the national R and D base and the introduction of scientific and technical innovations will make it possible to make better use of national science workers, who today are by no means always successful in finding an area in which to apply the education they have received, with the result that the economic potential of the country suffers accordingly.

The need for the State's regulatory involvement is no less felt in connection with the particular status of traditional small-scale industrial production and the acute problem of unemployment. Although the modern, structure-forming branches of industry play a leading role in ensuring growth rates, still the specific features in developing economies and the social factors at work in the developing countries require the retention of small-scale industrial production both as a means of supplying the internal market with consumer goods and of providing employment for millions of people.

The modernization and restructuring of the industry of the developing countries are further accentuating the irregular patterns of development: a single industrialization process may be characterized by the coexistence within it of extensive and intensive operations, small-scale and large-scale forms of production, and by the interaction of a great many economic sectors differing both in terms of the character and level of their development and in the forms of ownership specific to them. Under conditions of this kind, greater importance attaches to the co-ordinating role of the State and its direct intervention to control the mechanisms of industrial development and regulate the reproduction process. It appears that the industrial development strategy must accord greater attention to the problem of ensuring an effective national industry. The industrial potential created by the developing countries require the more extensive application of modern methods of industrial production management and organization.

PROSPECTS FOR CO-OPERATION AMONG THE MEMBER COUNTRIES
OF THE UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA
DURING THE 1980s

Co-operation, and above all economic co-operation, among the newly independent African States is an important condition for success in their struggle to throw off the vestiges of their colonial past and to establish their economic independence. Particularly great importance attaches to this co-operation in the context of the efforts of the developing nations to restructure international economic relations.

An important role in the development of inter-African economic relations belongs to the United Nations Economic Commission for Africa (ECA). Established in 1958 under an ECOSOC resolution and currently grouping together all the 50 independent countries of Africa, from the outset of its work ECA has given priority attention to the problem of the economic co-operation of the countries of the continent in all its aspects. The Commission's active and consistent advocacy of the idea of inter-African co-operation and integration must be regarded as one of its major achievements, which has substantially contributed to the wide-spread incorporation of this concept in the national strategies of the African countries. Today, the development and strengthening of inter-African co-operation is a basic strategic premise for the Africa of the 1980s.

ECA is currently playing a leading role in organizing the process of the "economic convergence" of the member countries. It is conducting its work in this area along the following basic lines:

1. The identification of opportunities for inter-African co-operation and the formulation of recommendations aimed at developing it in various areas of the economy on both a bilateral and multilateral basis;
2. The establishment of an institutional mechanism to promote the development of mutual economic ties among the African countries;
3. Assistance in the preparation of programmes and in the implementation of specific multilateral co-operation projects, and also in the creation of new economic groups through technical and other kinds of assistance;
4. The creation of the organizational prerequisites for subregional co-operation among the African countries;
5. The co-ordination of the activities in Africa of the international economic organizations of the United Nations system in matters of technical assistance for co-operation and integration;

6. The promotion of mutually advantageous economic co-operation between the African and other developing countries.

Much fruitful work has been accomplished in all these areas.

The Commission's achievements have been particularly significant in the establishment of an institutional framework for co-operation. At this time, an extensive system has been established in Africa of intergovernmental organizations engaged in promoting economic co-operation among the African nations on the basis of bilateral and multilateral agreements. The continent has in current operation 18 economic groupings of an integrationist character (consisting of three or more countries) involving the majority of the independent African nations, some of which hold simultaneous membership of more than one grouping. Particularly great interest in the expansion of these integrationist ties is being shown by the so-called "least developed countries" (of which there are 21 in Africa). The ECA member countries co-operate within numerous pan-African economic institutions, such as the African Development Bank, the Association of African Banks, the African Railways Union, the Association for the Promotion of African Trade, and others (totalling more than 20), in specialized sub-regional organizations (e.g., the West African and East African rice-growing organizations and others), and in scores of bilateral commissions and committees on economic co-operation and associations of countries exporting and producing specific commodities (e.g., the inter-African organizations grouping together the producers of coffee, peanuts, wood, etc.). Specialized multilateral organizations exist to combat diseases of cattle and agricultural crops and to control the effects of agricultural pests, in addition to which there is a large variety of joint training and research centres (e.g., the African Training and Research Centre for Management and Development, the Association for the Promotion of the Development of Agricultural Science, the Institute for Economic Development and Planning, the Centre for Industrial Design and Research, and others).

In recent years, an increasingly conspicuous role in the implementation of these programmes of co-operation has begun to be played by the special sub-regional centres, MULPOCs (Multinational Programming and Operational Centres), which the Economic Commission for Africa has established. Centres of this kind have been set up at the following cities: Yaoundé, Cameroon (servicing the countries of Central Africa: the Central African Republic, the Congo, Equatorial Guinea, Gabon, San Tome and Principe, Cameroon, and Chad); Gisenye, Rwanda (servicing the countries of the Great Lakes region: Burundi, Rwanda, and Zair); Niamey, Niger (servicing the West African countries: Benin, Cape Verde Islands, the Ivory Coast, Gambia, Ghana, Guinea, Guinea-Bissau, the Upper Volta, Liberia, Mali, Mauritania, Nigeria, Togo, Senegal, and Sierra Leone); Lusaka, Zambia

servicing the Southeast African countries: Angola, Botswana, the Comoros, Djibuti, Ethiopia, Kenya, Lesotho, Malawi, Madagascar, Mauritius, the Seychelles, Somali, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe); Tangiers, Morocco (servicing the North African countries: Egypt, Libya, Tunisia, Algeria, and the Sudan).

ECA is paying increased attention to the work of the sub-regional centres, because it believes that in the 1980s they are to become the basic mechanism for intensifying co-operation among the member countries. In this connection, the principal tasks of the centres were formulated at ECA's 16th session (in 1981) as follows: (a) the co-ordination at the sub-regional level of national development plans and programmes and of programmes of assistance received both from international organizations and, bilaterally, from developed countries; (b) assistance in the formulation and implementation of multilateral projects in the area of economic and scientific-technical co-operation. It is also planned to hold periodically seminars on sub-regional co-operation under the aegis of the centres.

Since the beginning of the 1980s, ECA has been placing substantially greater emphasis on its work to develop co-operation between the African and the other developing countries. Studies have been prepared regarding the expansion of trade between Africa and Latin America and between Africa and Asia. The Commission has dispatched missions of experts to economic associations in Latin America for the purpose of studying the opportunities for trade co-operation, and has prepared for the Arab Bank for Economic Development in Africa (BADEA) a draft document on commercial co-operation between the African and Arab countries.

An additional factor contributing to the strengthening of regional co-operation among the member countries is the expansion of commercial contacts with the socialist countries (the preparation of a co-operation draft was begun in 1980) and with the capitalist States (within the framework of the European Economic Community and the countries of Africa, the Caribbean, and the Pacific).

The Commission has a major role to play in the formulation of a long-term programme for the development of inter-African co-operation. The first efforts in this direction date back to the early 1970s and resulted in the inclusion in the "African Declaration on Co-operation, Development, and Economic Independence", adopted by the Organization of African Unity at its tenth assembly, of a special section setting forth the basic principles and main directions of the economic convergence of the African countries. During the next decade, the Commission's member countries held repeated discussions, at many meetings and in many forums, of the problems of their mutual co-operation. The agreed recommendations and

proposals worked out at these meetings contain a concrete programme of action to develop intra-regional co-operation and integration; this programme was adopted as an integral part of the Monrovia Strategy for the Development of Africa (1979) and the Lagos Plan of Action (1980). In its most complete form it is reflected in the Final Act of the 1982 session of the Conference of African Planners, Statisticians, and Demographers, "The Application of the Lagos Plan of Action".

As its strategic premise, the African programme for the development of intra-regional co-operation sets the task of creating, by the year 2000, an African Economic Community. This task is to be carried out in two stages. During the first ten years (1980-1990), the intention is to strengthen the existing commercial and economic groupings, followed by the creation of sub-regional communities; to intensify co-operation among African countries in the areas of agriculture, the achievement of food self-sufficiency, and the development of industry and of energy, transport, and communication systems; and finally to assist in the co-ordination of activities between the economic groupings for the purpose of creating an African Common Market. During the second stage, covering the next ten years (1990-2000), the measures taken to deepen pan-African co-operation and integration in individual sectors of the economy are to be continued, there is to be even greater co-ordination of national economic development plans, and assistance is to be given to the implementation of multinational projects in the industrial area.

In general terms, then, this is the programme for the development of mutual co-operation among the countries of the continent, a programme which is regarded as an essential instrument for the attainment of the objectives of the Lagos Plan of Action. It is a programme that distinctly reflects the African context and in which a regional focus has been brought to bear on the recommendations common to all the developing countries.

Co-operative programmes and projects are being designed for specific areas of the economy in conformity with the principles of the Lagos Plan of Action.

The ECA member countries attach major importance to the strengthening and expansion of economic co-operation in agriculture. The related problems were considered at the Fifth Conference of the Ministers of Economic Affairs, Finance, Planning and Development of the Commission's member countries, held in Rabat in 1979. That conference recommended to the African countries that they should pursue an integrated policy involving such objectives as the institution of socio-economic reforms in the countryside, the quest for self-sufficiency in agricultural commodities, the generation of additional employment and income for the rural population, the improvement of the trade network and infrastructure

in rural areas, and others. The conferees emphasized the need for stepped-up joint actions by the African nations with a view to achieving the objectives of the "Regional Food Plan for Africa" which had been adopted in 1978 as a joint ECA-FAO initiative,

A long-range plan for the development of mutual trade and co-operation for the countries of West Africa for the 1980s has been prepared, which, if it is successfully carried out, might serve as a model for similar planning to embrace the entire region.

The most important area of economic co-operation among the African countries is in the production sector. In the light of the experience of previous years when the implementation of "industrialization programmes on a regional basis" was slowed by the inadequate level of national planning (specifically by the lack of adequately mature plans for the growth of industrial and agricultural production), insufficient co-ordination of these plans at the regional level, and the failure to solve the problem of the distribution of the advantages of co-operation, the member countries of the Commission have directed their efforts towards the formulation of inter-African entrepreneurial programmes and the design of comprehensive programmes for the development of particular regions of the continent. The regional industrialization strategy which the Commission has laid down for the period through the year 2000 envisages inter-governmental industrial co-operation, multinational projects, and also the establishment of pan-African institutes of an industrial nature.

All-embracing industrial collaboration schemes have been replaced by projects calling for limited co-operation in specific sectors through the setting up of African multinational enterprises. A number of conferences of ministers of industry of the countries of Africa, beginning in 1973, have dealt with the matter of identifying these sectors and the principal modalities and directions by and in which they are to be developed. For example, at their fifth conference, held in Addis Abeba in 1979, the African ministers of industry decided to promote on a preferential basis five basic sectors, namely: 1. the food and agriculture industry, 2. construction and the production of construction materials, 3. the engineering industry, 4. the metallurgical industry, and 5. the chemical industry.

Together with the increased exchange of raw materials between the African countries, the plans for the decade of the 1980s look to an activation of co-operation among the ECA member countries in the area of the industrial development of mineral resources. This question was the subject, in particular, of the first regional conference on the development and use of mineral resources, held in February 1981. That meeting adopted recommendations to the member coun-

tries to the effect that they should organize multinational raw material enterprises and speed the establishment of co-operative ties in the area of raw material processing. Preliminary searches have already been started for sources of financing, capital investment, and insurance for the companies operating in this sector, and the results of these inquiries will be presented at the next conference, which has been planned for 1983. It is planned that during the 1980s extensive studies will be conducted into the region's available reserves of mineral resources and the possibilities for their collective processing and use.

In recent years ECA has directed particular attention to the development of African energy resources. The member countries have been given assistance in the development, planning, and effective utilization of their energy resources, and there has been research into the development and use of new energy sources, such as solar power, geothermal energy, and natural gas. The Commission has taken the initiative in the creation of a Regional Centre for the Study and Development of Solar Energy.

As a general proposition, it is fair to say that the prospects for multinational industrialization during the 1980s and through the year 2000 are linked to the establishment by the African Governments of multinational corporations to develop and exploit the continent's enormous potential natural and industrial resources to the end of achieving national and collective self-reliance. This explains why the Commission is intensifying its efforts to create a mechanism for co-operation in the area of industrial development. Such previously established pan-African institutions as the Regional Centre for Industrial Design and Production, the Centre for the Adaptation and Introduction of Industrial Technology, and others are stepping up their activities, while preparations are going forward for the establishment of an African Iron and Steel Centre, a Regional Centre for Industrial Construction, an African Multinational Projects Centre, and a West African Centre for the Development of the Petroleum Industry. Of particular importance is the creation of the African Industrial Development Fund, in which a number of international organizations will participate side by side with the African countries.

The further growth of inter-African co-operation and the expansion of its scope depend in large measure on the setting up of integrated infrastructural systems of various kinds and on all levels - bilateral, sub-regional, and pan-African. In recent years, the Commission's work to develop transport and communications has been co-ordinated through the decisions of the conferences of ministers of transport, communications, and planning of the African countries. At the second such conference, held in March 1981 and attended by the representatives of 43 African countries, the participants examined issues connected

with the implementation of the first stage (1978-1983) of the ten-year programme for the development of transport and communications in Africa, together with the preparatory work on projects for the second stage (1984-1988). In a conference resolution the delegates placed particular stress on the need to design special transport and communications programmes for the land-locked and island countries and reaffirmed their preference for regional and sub-regional projects over the purely national approach.

The plan of action for the first stage of this ten-year programme calls for the construction of 771 facilities (or, according to other data, 389 transport and 156 communications projects), estimated at a total cost of 9 billion dollars. At the present time, an agreement providing for 6 billion dollars has been reached with the creditor countries. Currently, the principal pan-African transport projects involve the construction of five trans-African highways: the Trans-Saharan Highway (Algeria-Nigeria), the Trans-African Highway (Mombasa-Lagos), the Trans-Sahelian Highway (Dakar-N'jamena), the Trans-West-African Highway (Lagos-N'jamena), and the Trans-East-African Highway (Cairo-Gaborone).

The ECA member countries are co-operating also within the framework of the African Civil Aviation Commission. This is an advisory body with responsibility for the co-ordinated development of African air transport.

Permanent and close links exist between the Commission and a number of sub-regional organizations engaged in the development of sea ports, such as the Port Authority Association of East Africa, the Port Authority Association of North Africa, and the Port Authority Association of West and Central Africa. Through their work, these associations all pursue identical goals, namely, the improvement, co-ordination, and standardization of port operations and the boosting of the effective volume of harbour work through improvements in equipment and the performance of port services.

As a result of the increased cost of liquid fuel, particular importance during the upcoming decade attaches to the co-operation of the ECA member countries in the area of rail transport. The Commission's recommendations underscore the urgency of accelerating the construction of new railroads, especially the connecting lines necessary for the completion of a unified continental rail network. The total length of the lines the construction of which has been recommended by 1988 is 15,600 km.

It is expected that the 1980s will see a rapid expansion of electric power systems on a regional scale. The first steps towards co-operation in this area among the ECA member countries have already been taken, the task now

being to establish a unified electric power grid. Regional power projects, especially those carried out by the organizations responsible for the development of the continent's river and lake basins, must play a major role in this effort.

The member countries of the Economic Commission for Africa are also engaged in bringing into being a pan-African communications system. The largest project of this kind, currently nearing completion, is the Pan-African Telecommunications System (PANAFTEL), in the implementation of which the International Telecommunications Union (ITU) and the Organization of African Unity are playing a major role. This system consists of 24,000 km of communications channels and 18 relay centres.

Also planned for the decade of the 1980s is a substantial expansion of intra-regional trade. For the first session of the committee of African ministers of international trade and finance, which met in March 1981 in Addis Abeba, ECA prepared a draft programme of action on the expansion of intra-regional trade. The development of intra-African commerce as a condition for the continent's economic development and the establishment of an African Common Market was discussed at the second symposium of ECA member countries on the development of intra-continental trade.

In recent years, together with questions pertaining to the co-ordination of the production and trading of goods, increasing attention has been given to the establishment of an intra-African marketing system that would be free of the dominance of foreign monopolies. The existing associations of countries producing specific commodities, along with the State trading organizations of the countries in the region, can provide the basis for joint export sales institutes. In ECA's view, African marketing should develop primarily through the establishment of the appropriate multinational enterprises. There are also plans to set up specialized corporations designed to act as clearing houses or chambers of commerce and furnish the countries of the region with information on prices, profits, the distribution of markets, and freight carrying conditions. The basic objective of these corporations, which will be under the control of the member countries, will be to develop intra-African trade.

From the very outset of its activities, the Commission has been greatly concerned with the development of African co-operation in the currency area and in the area of credit and monetary transactions. This is in line with ECA's view that these areas are of critical importance to the effort to speed the processes of economic growth and ensure the successful outcome of the struggle for economic independence. The decade of the 1970s witnessed a considerable activation of co-operation in the currency and financial area,

at a time when this co-operation was recognized as an essential tool in implementing the policy of self-sufficiency. An increasingly conspicuous role in the economic development of the countries of the region is being played by one of ECA's first "brainchildren" - the African Development Bank. Founded in 1966, the Bank has annually increased the number and average size of the loans it grants to the participating countries. The priority in the Bank's financing activities is accorded to those projects and programmes which meet the interests of more than one member State, and also those which contribute to the development of complementary economic structures in the member countries. The Bank maintains close contacts with the regional organizations of Africa and also with international organizations. Specifically, there is a joint OAU/ECA/ADB committee, whose tasks include the co-ordination of the work programmes of these three pan-African organizations. The Bank is taking steps to become even more active. For example, at the conference held in April 1981 on the expansion of the Bank's information activities, a decision was taken to establish regional branches in order to facilitate contacts on the part of African Governments with the Bank.

Considerable experience has been gained by another pan-African financial organization - the Association of African Central Banks, which groups together 27 national and two regional banking institutions. The Association's programme of work includes the development of sub-regional payment systems; the consolidation and expansion of the role of financial institutions in the mobilization of internal resources and the funding of expert studies and private capital investment; and participation in the solution of international currency problems. The emphasis in the 1980s will be on the study of problems connected with currency control, the unconvertibility of currencies, and the extension of foreign trade credit. The purpose of all these measures is to lessen the difficulties in the development of sub-regional trade caused by currency and financing problems. The Association has lent its assistance to the establishment of the African Centre for the Study of Currency Problems (1975), whose responsibilities include the preparation of recommendations on specific international currency problems and the formulation of a unified policy for the African countries in this area.

The outlook appears to be for an activation, during the next years of the decade, of the interventions of the regional central banks, the regional development banks, and the commercial banks as they increase the levels of their funding for intergovernmental co-operation among the African countries. This subject was at the centre of a meeting of the directors of West African regional and sub-regional development financing institutions which took place in Benin in 1981. Among those projects which have already been carried out

with the help of the sub-regional financing system is the project for the integrated development of the telecommunications system in West Africa. Currently on the agenda is the question of joint funding for the establishment of a multinational maritime transport company and a highway construction project under the auspices of the Economic Community of West African States (ECCWAS), including the Nouakchott-N'jamena Trans-Sahelian motor road and the Nouakchott-Lagos coastal road, along with sub-regional projects in the agricultural area (a seed production and distribution centre, grain storage facilities rural water supply systems, etc.).

A decision has been adopted to establish an Association of West African Banks for the purpose of intensifying co-operation among the countries of the sub-region, with particular emphasis on exchanges of information regarding the participants' practical activities. This association would also act as the intermediary between the West African banks and the Sub-Regional Committee of the Association of African Central Banks.

In addition to the growth in co-operation for the financing of regional and sub-regional projects, co-operation is also expanding in terms of the actual currency transactions of the ECA member countries. For example, under a decision adopted at a session of the Board of Directors of the Central Bank of the Central African Countries, a sub-regional currency market will begin to operate in the 1980s. Currency and financial co-operation is also being developed within the framework of other regional groupings (the East and West African development banks, the Mutual Assistance and Guarantee Fund under the Entente Council, the Fund for Co-operation, Compensation and Development of the Economic Community of West African States).

Since 1976 there has been in operation the Pan-African Insurance Company, which was founded by 42 African States and one of the principal objectives of which is to attract capital from national companies for investment in the African economy. The member countries have undertaken to pay 5 per cent of the revenue from their **insurance** activities into the fund of this pan-African organization. The company is to expand its activities in the years ahead. For example, in accordance with a decision adopted at the organization's eighth conference, held in Lusaka, Zambia, in May 1981, a special committee has been set up to prepare action programmes in the area of agricultural insurance. Attention was also drawn to the need to do more in terms of training qualified insurance agents from among national personnel. This pan-African company later served as the model for the establishment, in 1978, of the Organization of East African Insurance Companies (participants: Zambia, Kenya, Madagascar, Mauritius, Malawi, Mozambique, Swaziland, and Tanzania). This organization concentrates its attention on the training of qualified personnel for the participating insurance

companies, one of its initiatives having been the establishment of the Insurance Institute of East Africa in Nairobi, Kenya.

The ECA member countries are also directing increased attention to the broadening of scientific and technical co-operation among the countries of the region. The Commission's work programme for 1982-1983 places particular stress on the co-ordination of the scientific research conducted in the African countries and on the augmentation of assistance by the Commission to the scientific research organizations operating under its aegis. For the purpose of co-ordinating research in industrial technology on a regional scale, the African Centre for Industrial Design and Production was established in 1980.

Scientific and technical co-operation among the member countries of the Economic Commission for Africa is one of the most promising trends in their intra-regional co-operation efforts. Of great importance in this connection is the question of the joint training of personnel in various specialized disciplines and at various levels. Two large regional research and training centres are already operating successfully under the Commission's aegis - The African Training and Research Centre for Management and Development (Tangiers, Morocco) and the Institute of Economic Development and Planning (Dakar, Senegal).

The accelerating process of the economic convergence of the African States is an important reality in today's Africa. The reason for this progressive phenomenon lies in the need to speed the development of the productive forces of the countries of the continent so that they may achieve a position of parity in international economic relations.

POSSIBILITIES AND PROSPECTS FOR THE USE BY
AFRICAN COUNTRIES OF SOCIALIST INDUSTRIAL-
IZATION THEORY AND PRACTICE

The elimination of economic backwardness and success by the African States in their struggle for economic independence are impossible goals unless there is a sharp increase in labour productivity based on the development of industry and on the replacement of manual labour by machines. Industrialization is the key factor to the economic growth of the nations of the African continent. "It is only on the basis of industrial development that a restructuring of international economic relations can take place and the developing countries can be integrated into the new system of the international division of labour." ^{1/}

The importance of industrialization to the socio-economic development of the African countries is recognized today by practically all the economic and political leaders of Africa and also by such international organizations as the Organization of African Unity (OAU) and the United Nations' Economic Commission for Africa (ECA). This is further evidenced by the fact that the ECA has proclaimed the 1980s as the African industrial development decade. To what degree is the Soviet experience applicable to the conditions of the developing States?

To begin with, let us consider how the very concept of industrialization is to be defined. There are various treatments of this process in the economic literature. For some writers it may be ultimately reduced to the development of manufacturing industry, others understand by it the emergence basically of heavy industry, while still others regard industrialization as the development of industry in opposition to agriculture. The Soviet economist N. S. Babintseva, taking her lead from Lenin's definition of industry in the broad sense of the word as production based on the social division of labour and the

1/ 'Ekonomika nezavisimykh stran Afriki', Moscow, 1972, page 9.

use of machines and being of a commodity nature, ^{1/} notes that industrialization should be understood as a particular period in the socio-economic development of a society during which a specific system of production based on the use of machines comes into being. "...industrialization is a system of all the technical and socio-economic changes (transformations) in social production as a result and on the basis of which one of the modes of production based on machine technology and the industrial organization of social production is developed." ^{2/}

At the present time, this understanding of industrialization as a complex socio-economic phenomenon is also coming to be shared by a number of Western authors; for example, the French economist M. Humbert has emphasized that the industrial restructuring process must be viewed as an integral part of the transformation of society as a whole. ^{3/}

Thus, industrialization is a socio-economic process that may be directed at two fundamentally different goals - the establishment of a capitalist or a socialist form of production. Depending on this essential factor, there may also be distinguished the two basic kinds of industrialization - capitalist or socialist.

Socialist industrialization, which relies on the advantages of the public ownership of the means of production, is able, as the experience of the Soviet Union demonstrates, to solve the problems of the restructuring of social production within, historically speaking, a brief period of time. The plan-based development of the economy and the concentration of capital investment in certain key areas of development makes it possible to use limited resources to maximum effect. During its industrialization period, the rate of accumulation in

^{1/} See V. I. Lenin. Polnoje Sobranije Sočinenij, Vol. 3, p. 309.

^{2/} N. S. Babintseva. Industrializatsija v razvivajushchiksja stranakh. Moscow, 1982, p. 8.

^{3/} See M. Humbert. "L'industrialisation sous contraintes", Revue Tiers-Monde, Paris, No. 87, Vol. XXII, 1981, p. 520.

the USSR amounted to 26 - 29 per cent of national income. ^{1/} The effect of all these factors made it possible to achieve unprecedented growth rates. During the period 1928-1937, the mean-annual growth rate for national income in the Soviet Union was 16.5 per cent; during the period of the prewar five-year plans gross industrial production rose by a factor of 5, its mean-annual growth rate for the period 1928-1940 being 16.5 per cent, and for heavy industry - 20 per cent. ^{2/}

At the same time, in capitalist countries like the United States and Japan, where in comparison with other countries of the capitalist world economic growth proceeded at a fairly rapid pace, the maximum industrial growth rates during the restructuring period were 6-7 per cent and 8.5 per cent, respectively. ^{3/}

The situation in the African countries is completely different. In these countries, the economic base of the society is characterized by a state of transition and by the economic mix typical of this state. In the majority of these countries, a capitalist system of production is in the process of emerging, to the accompaniment of the integration of public production on the effective basis of State capitalism and foreign monopoly capital. Conversely, a certain number of nations have chosen the socialist approach, but here too it is still too early to speak of the emergence of socialist production relationships; at most, there is evidence of a gradual build-up of the necessary preconditions for the formation of such relationships and the establishment of progressive economic forms. In most African countries, the authority of the State is also in a period of transition, arising out of a coalition of the representatives of various classes, mainly the petite bourgeoisie and indigenous capitalists. An increasingly important role in the development of society is being played by

^{1/} V. I. Kuz'min. Istoricheskij opyt sovetskoj industrializatsii. Moscow, 1969, p. 132.

^{2/} N. P. Shmelev. Problemy ekonomicheskogo rosta razvija pushchikhsja stran. Moscow, 1970, p. 37.

^{3/} Ibidem, pp. 36-37.

what might be called the "bureaucratic bourgeoisie." Private ownership of the means of production is not only being preserved, but is actually expanding.

Although in the Soviet Union also, during the first years of the Soviet administration, a mixed economic system persisted (it has been described in detail in the works of V. I. Lenin), this mixed system differed radically from that which currently exists in the African States, primarily because in the USSR the socialist system predominated among the rest.

Therefore, in view of the absence of the necessary socio-economic pre-conditions, at the current stage there can hardly be any discussion of the total application by the African countries of Soviet industrialization experience.

The importance of our country's example for the nations of the African continent resides in the fact that it provides living proof of the possibility in principle of achieving a rapid industrial restructuring of the economy and points the way towards such a restructuring, namely, through a socialist revolution aimed at the building of a socialist society. "Obviously, it would be incorrect," writes Doctor of Economic Sciences N. P. Shmelev, "to attempt any simple comparison of the contemporary problems of the developing countries with the specific methods which were used to solve similar problems in the Soviet Union during its period of industrialization. There can be no question of concrete prescriptions - the times today are in many ways different, as also different are the conditions and the opportunities. What is of genuinely great importance to the newly independent developing countries is the logic of development and the principles of that social system which has produced the most effective solution in world history to the problem of industrialization." ^{1/}

There are in the economies of the African countries a number of characteristic features that distinguish them not only from the socialist countries,

^{1/} N. P. Shmelev. Op. cit., pp. 46-47.

but also from the capitalist States, and which make it impossible to bring about their industrialization along classic capitalist lines. The Marxist-Leninist analysis of the phenomena of social life requires that attention be given to the whole range of factors affecting these phenomena, including such considerations as the historical age and the international situation. As long ago as when Germany and Japan began the industrial restructuring of their economies at the end of the 19th and beginning of the 20th centuries, industrialization involved certain particular characteristics linked to changes in the world capitalist system, to the transformation in the advanced capitalist States of free competition into monopolistic capitalism, and to the intensifying influence of external factors on the process of economic development. The further expansion of foreign trade, the export of capital, and the struggle among the imperialist powers to divide up the world between them - all these factors forced the Japanese and the Germans to industrialize at a rapid rate and with the powerful support of their governments.

From the very outset, the economic development of the African countries has been marked by the far more more considerable role of the external factor in all areas of socio-economic life than was at one time the case in today's industrially advanced countries. This is the result both of particular features of the present age and of the specific historical evolution of these countries.

At the present time, no one country can develop in isolation from the rest. National economies are becoming more interdependent, the socialization of production has crossed the frontiers of national economic entities, transnational corporations have appeared, integrationist processes are gaining momentum. The African countries are also affected by all these developments. In addition, however, these countries occupy a special, subordinate and unequal position in the system of world economic relations. In many instances they have inherited from their colonial past a one-sided monoculture orientation in their foreign trade along with an extraordinarily high degree of dependence on

foreign capital. Another important consideration is the fact that the industrialization of the countries of Africa is taking place at a time when there has been a revolution in science and technology, when the science and engineering gap separating them from the advanced capitalist countries is widening rapidly, and when there is emerging a new form of dependence, namely, technological dependence.

All of these factors as they pertain to the African countries shape the specific way in which they are experiencing the industrialization process. On the one hand, these States must take into account the already established division of labour as the basis for their economic development, whereby nearly all of them have no choice but to resort to foreign capital for the industrial restructuring of their economies.

Under the conditions that prevail in the African countries, the State alone has the power to oppose the inroads of foreign capital and to mobilize the fairly sizable financial resources needed to meet the requirements of scientific and technical progress. Therefore, the role of the State in the industrialization of these countries is not simply a matter of creating favourable conditions for the operations of local private capital; rather, it is itself a major entrepreneur with an involvement in mixed enterprises operating with indigenous and foreign capital. In addition, efforts are being made to guide the process of reproduction from a single center, a fact reflected in the formulation of economic development plans.

The specific characteristics of the economic development of the African countries and the particular combination of internal and external factors are forcing African leaders to seek their own development strategy. It is important, in this connection, that this search should not lead to the creation of pseudo-scientific theories emphasizing some kind of "African exclusivity" or to the emergence of concepts of so-called "national socialisms." It is well known that individual socio-economic systems develop on the basis of general objective laws, although these laws manifest themselves in a specific way in different

countries at different times. The conscious use of mankind's accumulated valuable historical experience could greatly speed the process of the economic development of the African countries.

The thrust of their industrial policies and their desire to lessen their dependence of foreign capital is prompting the African States to turn their attention to the experience of the Soviet Union. Despite the fact that at this stage these countries cannot make full use of this experience in such areas as the socio-economic development machinery, the sources of accumulation, and the pace of economic change, certain Soviet methods for the solution of economic problems in the light of specific national characteristics are in fact applicable in these nations. Without question, greater opportunities for the use of Soviet experience exist in those countries which have opted for the socialist model and whose number on the African continent is increasing with every year.

The theoretical premises of the Soviet industrialization model were developed by V. I. Lenin and later elaborated in detail in the works of Soviet economists written during the period when history's first long-term development plan - the plan of the State Commission for the Electrification of Russia - was under preparation. In the formulation of this plan, solutions were found to such basic questions as the ratio between the growth rates in the manufacture of the means of production and those in the production of consumer goods (social production subdivisions I and II), the selection of technology, the ratio between labour-intensive and capital-intensive growth alternatives, the problem of balanced versus unbalanced economic development, and the selection of the sectoral strategy of industrialization.

On the basis of the long-term interests of the country's economic growth and the preservation of economic independence, Soviet economists successfully argued that the production of capital goods (subdivision I) should proceed at a faster pace than the production of consumer goods (subdivision II). However,

it was repeatedly emphasized in this connection that this accelerated production of the means of production (i.e., capital goods) was a temporary phenomenon required during the period of the country's industrial restructuring, and that the ultimate goal was the expansion of popular consumption. The forced development of heavy industry in subsequent years was explained, in addition to the purely economic reasons, by the complex international situation, the encirclement of the young Soviet republic by the imperialist powers, and by the need to strengthen the country's defense capability.

In opting for the capital-intensive approach to development, Soviet economists called for the combination of the massive use of only partially mechanized labour - workers operating out of their homes and small workshops - with a high level of funding in the key branches of the economy.

It will be remembered that the electric power sector was identified as one of these key branches in the plan of the State Commission for the Electrification of Russia (the so-called GOELRO Plan), although this branch was not the leader in terms of the volume of capital investment. As a so-called "integrating branch," it represented the basis on which the entire complex of branches, first in the heavy and then in the light industry, was to be built.

During the initial years of Soviet governance, the economy of the USSR, it will be recalled, was characterized by a disruption of basic proportions and linkages. This critical situation was further aggravated by the consequences of the Civil War and acts of sabotage by reactionary elements. The imbalances were both horizontal (between the demand for and supply of finished products) and vertical (i.e., along the raw material - semifinished - finished product chain). Under these conditions, the GOELRO Plan adopted as its basis the vertical imbalance alternative involving the establishment of vertical linkages with a temporary disparity between the demand for finished products and their supply. This disparity was envisaged as applying primarily to consumer goods and, in particular, to luxury items.

In formulating their socio-economic development strategies, the African countries are faced with the task of solving what are in principle the same problems, and it is here that Soviet experience could obviously be of value to them.

It is symptomatic that these States are exhibiting increasing interest in non-market methods of economic management and are devising their own economic development plans. It is true, of course, that their planning does not have, nor can it, the force of official directives, nor does it cover all the country's various economic systems and modes of production, but its basis in the form of the State sector is expanding and gaining strength.

There can be no doubt but that the question as to the selection of the key, or "industrializing," branches must be solved in the light of the specific conditions of each of this group of countries - its economic basis of departure, its historical heritage, and its geographical realities. Indeed, the very notion of "leading branches" needs to be precisely defined at the present time, since as a concept it is subject to the changes brought about by advances in science and technology. In today's world, among the sectors entering the first rank of economic importance are the electric power, electronics, and chemical industries, while the iron and steel industry is losing ground.

The development of these sectors is by no means within the reach of all African countries. While Algeria and Nigeria, for example, are capable of creating through their own efforts nearly all the leading branches engaged in the manufacture of the means of production - the petroleum and petrochemistry industries, ferrous metallurgy, the cement industry, and others - for the majority of the African States this task, at least for the time being, lies outside their capabilities. For them, the rational approach is to focus their efforts on one or two sectors.

On African soil the concept of the priority branch has experienced a certain evolution and is even now continuing to be refined. A typical colonial and neocolonial strategem was to develop agriculture and a mining and extraction

industry based on access to foreign markets. Later, import substitution by indigenous production gained wide acceptance. At the present time, the import-substituting branches in the African countries account for about 75 per cent of all value added by industry; these are mainly consumer goods. A recently popular trend has been a shift of emphasis to the export-oriented branches, requiring, however, a higher degree of processing of the raw material to be exported.

The experience of industrialization in the developing countries has shown that the development of these export-oriented sectors has no meaningful effects of the vestiges of colonialism. In addition, as real experience has shown, the development of these export-oriented sectors has no meaningful effect on the economies of the African countries, since it fails to contribute to the solution of such problems as the establishment of intersectoral linkages, the expansion of the internal market, the elimination of unemployment, and others. Against this background, there is emerging a new industrialization trend, namely, the development of so-called "structure-forming" branches or, as they are sometimes called, the "integration industries." This approach to industrial development has been given great attention in the African development strategy for the 1980s. "In Africa," writes L. I. Aleksandrovskaia, "there has arisen a new trend in industrial development - the promotion of integration industry. This approach includes the identification of certain basic (key) branches of industry capable of broadening and strengthening economic ties both within the industrial sector and between industry and agriculture. It looks to the expansion of the market within the national economies and to co-operation among the African countries. At the present stage, the basic task of integration industry is to absorb the largest possible volume of indigenous raw materials into the processing procedure." ^{1/}

The fact that the question of an integrating industry has been raised is of itself of great importance in that it can be seen as evidence of an

^{1/} Afrika v 70-e - 80-e gg. Stanovlenije natsional'noj ekonomiki i strategija razvitiija. Moscow, 1980, p. 111.

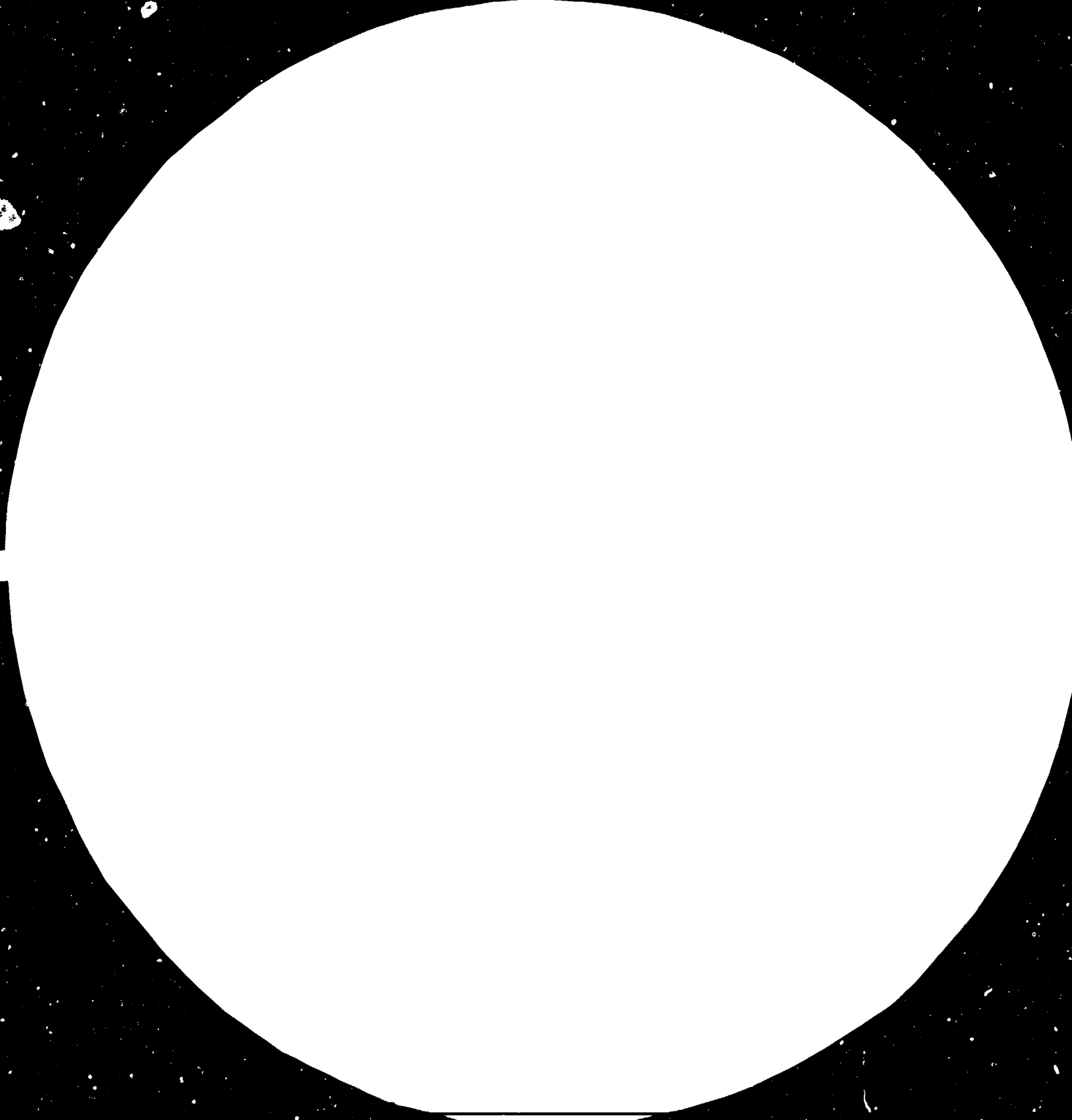
effort to approach the national economy as a single economic complex. In determining which specific branches of the economy should be selected for their integrating effect, the Governments of the African countries might well refer to Soviet experience in solving the problem of ensuring balance in economic growth, with allowance for the fact that in these countries the establishment of vertical linkages in the economy is made more difficult because of the presence of a variety of socio-economic forms of production which are largely uninterrelated, and also because of the major role that precapitalist conditions continue to play in these nations.

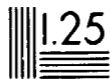
There is much in common between the economic conditions from which the African countries are beginning their development and those which existed in the Soviet republics of the Trans-Caucasus and Central Asia at the beginning of the Soviet era. In the Central Asian republics, for example, the economy was primarily agricultural, with industrial goods imported from European Russia. In Azerbaidzhan, the only relatively developed sector was the petroleum extraction industry, which was controlled by foreign capital. Feudal and patriarchal relations predominated in agriculture.

In formulating its sectoral strategy of industrialization in these republics, Soviet planners adopted as the basis of their policies the division of labour that already existed there. Industrialization in Central Asia began with the creation of industry to produce the tools of production for the irrigation and land-improvement systems and for light industry and the food industry; it was only after this stage that new branches began to be added to the industrial complex. In Azerbaidzhan, the task of industrial restructuring proceeded basically through the development of the oil, oil refining, and chemical industries.

In studying the industrialization experience of the Soviet East, it is essential, however, not to lose sight of the fact that industrial development in these regions was an organic part of the industrialization process of the entire Soviet Union. A substantial portion of the capital invested in this

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development was financed out of the central budget, while equipment and skilled workers were sent out from the more developed regions of the country. In addition, the Soviet republics of the Trans-Caucasus and Central Asia were not confronted with the task of creating a full range of industrial branches and sectors, since their national economies were being built as part of an overall scheme based on co-operation with the other Union republics.

Despite these differences, the African States can learn valuable lessons from the practical experience gained in the industrialization of the Soviet East, if they decide to design their industrialization strategies on a regional basis, with each country's traditional areas of specialization supplemented within a framework of regional co-operation. This approach is all the more relevant since the idea of regional integration - "collective self-reliant support" - is becoming increasingly popular in Africa. A major emphasis on intra-African co-operation for the development of the basic sectors can be found in the ECA and OAU programmatic documents dealing with the formulation of an economic development strategy for the Africa of the 1980s. What is envisaged in these documents is the development of mainly small industries within the individual African countries in combination with the establishment of large "multinational" African enterprises through the efforts and resources of a few States.

This is an area in which Soviet experience in combining small-scale and large-scale production, and also simple and the most advanced technology, can be instructive.

Thus, the theory and practical experience of accelerated industrialization in the USSR contains many valuable lessons for the African States. "Despite all the differences in the original conditions in the past and present, the experience of the industrial powers is of great importance to the developing countries inasmuch as it is the record of the results of the practical effects of different economic and social systems, and of how, in specific countries, these systems made it possible to achieve a decisive turning point in economic

development. What is involved here is the very mechanics of growth in both its social and its technological aspects." ^{1/} One must merely remember that particular socio-economic prerequisites are essential for the application of specific methods of economic development. Any mechanistic transfer of these methods to unprepared soil can only harm the struggle for economic self-sufficiency. Just as any aspect of society's socio-economic life, the selection of an industrialization strategy reflects contending class interests. Therefore, the possibilities of applying advanced Soviet experience depend to a large extent on the strength, in the country in question, of the democratic forces advocating genuinely independent development, and on the consistency with which they pursue their aims.

^{1/} N. P. Shmelev. Ibidem, p. 22.

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FOURTH
GENERAL CONFERENCE
OF UNIDO**

*Industrial Development Strategies and Policies
for Developing Countries*

Lima, Peru, 18-22 April 1983

**INTERNATIONAL TRENDS
AFFECTING INDUSTRIAL STRATEGIES
IN THE DEVELOPING COUNTRIES**

This document is based on material prepared by Dr. András Inotai,
Head of Department, Institute of World Economics, Hungarian Academy of Sciences.

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FOREWORD

As part of the preparatory activities for the Fourth General Conference of UNIDO (UNIDO IV), a high-level expert group meeting on industrial development strategies and policies for developing countries is being organized in Lima, Peru, 18-22 April 1983.

This particular meeting is considered to be of crucial importance to the preparations of UNIDO IV, since it has as its objective the review of strategies and policies of the past as well as the identification of key elements in industrial strategies and policies for the 1980s and 1990s as perceived by national policy makers. On this basis, the meeting will identify those issues on which further detailed work in the strategies and policies area should proceed in preparation for UNIDO IV.

International Trends Affecting Industrial Strategies in the Developing Countries considers two quite different sets of factors that will be major influences on the industrialization process in the developing countries in the 1980s - international trade and its interaction with global restructuring, and specialization and the structure of markets, national, regional, and global - and concludes with a summary of policy suggestions in related areas for the developing countries in the 1980s.

The paper is based on material prepared by Dr. András Inotai.

Introduction

The international economic environment has always been, and is currently, considerably influencing the industrial strategy and policy of every national economy. No exception can be made from this fact - even for economies in which industrialization took a definite inward-looking character in order to avoid world economic impacts.

The growing international division of labour in manufacturing which could be observed in the 'seventies, was based on the concept that the reduction of trade barriers, growing international co-operation, and new market possibilities could contribute to increasing growth rates and help solve some of the most acute unemployment problems. The concept had its origin at a time when international conditions were favourable. The real process itself started in the last years of "normal" world economic conditions, but most of its duration fell in a period of worsening external conditions.

At the beginning of the 'eighties the question arises whether the former industrial strategy is still valid or whether - in the light of the recent international economic developments - it must be fundamentally changed. A new problem therefore has to be brought into focus: even if one finds that the earlier paths of industrialization would only lead to an impasse, it is absolutely not sure that an alternative strategy is necessarily viable.

The first part of the study points out some salient features of the international economic environment which affect industrial strategies, while the second illustrates alternative ways of coping with the problems facing the developing countries. In the last part of the present paper some general remarks will be made and some conclusions and suggestions formulated.

International trade and restructuring

It can hardly be denied that the world economy is passing through one of its most difficult periods in the last fifty years. Generally, there are three aspects of controversy regarding the new conditions of industrialization in developing countries. Two of them are external, world-dependent factors, one is more connected with the character of economic development in the developing countries.

Diminishing resource flows represent one of the external bottlenecks. In fact, there are several fields where supply conditions have been changed in the last years. The most discussed among them is the oil price explosion, the most recent and probably the most dangerous the indebtedness and the financing of the developing countries. But experts point out that some other fields must be considered too: raw materials in general, technology transfer, and to an increasing extent machines and spare parts, which have become integral parts of the structure of export of some two dozen developing countries.

The new international conditions for growth made their appearance at a time when many developing countries had built up at least some export sectors in manufacturing and started to export to the world market. The appearance of new suppliers would have intensified the international competition in itself, but the fact that sharper competition has been developing on shrinking markets has essentially aggravated the problem. The decreasing or stagnating import capacity of the world market is due to several factors. Growth rates in developed countries have been very modest in the last years. Demand has been reduced also by the lack of financial means in a number of developed, socialist, and developing countries. Some markets seem to be saturated - sometimes in quantitative terms, sometimes in a qualitative form.

The latter has to do with continuous change in the structure of demand (i.e., "structural" saturation and not "physical"). Slower growth rates and decreasing demand - not only on the national, but on

the international level, too, at least in some important export sectors of developing countries - led to production overcapacities which tended to aggravate the structural problems of the developed economies. Partly the protection of established but non-competitive industries, partly the protection of the national (or regional) market resulted in protectionism and discrimination against one or another group of countries all over the world.

In the 'seventies, those developing countries which seemed to be successful on the international market for manufactured products possessed several advantages: a low-cost and disciplined labour force, a diligent and intelligent entrepreneurial strata, and a stable political and economic system attracting foreign investment and credit.

How can the prospects of the above-mentioned three main development issues be judged? In the international economic literature on the subject, there are different views. In fact, arguments may be found on both sides, competing with each other. In the following, the author tries to illustrate the main points incorporating his own feelings about the development framework of the coming years.

Are resource flows really diminishing? Is it an unchangeable, necessary path of development? Certainly, all raw materials - first of all oil and other energy carriers - are physically finite. For several national economies this limit does not exist simply on the physical side, but - much more severely on the financial. The future of the availability of raw materials and oil must therefore be considered under this distinction. As regards the physical availability, no real constraints may be encountered in the following decade.

The main question is whether real prices will rise or fall in the 'eighties. It would be erroneous to start from the present oil situation and forecast constantly falling oil prices in the coming years. There are important factors supporting price cuts on the oil market - and they are not only coming from the exporting economies, but from countries where huge energy-saving and energy-converting

programms have been launched in the recent years. On the other hand, a conjunctriual upswing in the developed economies - which cannot be excluded in 1983 and 1984 - may increase the demand for oil, with prices rising again. The author finds that no abrupt price rises are to be expected in the 'eighties, from the economic point of view. Raw material prices can be expected to stabilize in the coming years - the historical moment of abruptly changing price relations in favour of raw materials seems to be over.

In the technological field a new "revolutional phase" is emerging. The extensive introduction of the electronics and computer industry in several branches in the 'eighties and the impact of the results of biogenetics in the coming decade may substantially alter comparative advantage and the interrational division of labour in industrial products. It will be ever more difficult to keep pace with the general technological development. The main reason is probably not that technology cannot be obtained, but the fact that fewer and fewer national economies will be able to finance technological development and to create an industrial background capable of adapt the new technology.

International financing seems to be the main challenge for the 'eighties - and not only in the light of recent developments in some Latin American countries. Bankers have drawn the conclusion from the financial development of the second half of the 'seventies, that credit conditions must be tightened. Actually, interest rates are falling which can increase the chance of a new upswing. Nevertheless, this upswing will first of all require the largest part of the disposable international liquidity - without solving the liquidity problem of the indepbted developing countries. An upswing-based redistribution of international liquidity is, on the one hand, probably necessary to increase demand for industrial products of developing countries in the developed economies. On the other hand, it is hardly adequate to meet the real problems of indebtedness, in the short-run. Therefore, in this field new initiatives are overdue - and not only in order to take the necessary emergency steps but to improve the structure of international financing.

Positive trends in the growth rate of developed economies will enhance the import capacity of this group of countries, especially if import prices will, at most, experience slow increases. However, the new demand will emerge in a changed structure, and there will be other dynamic products than in the 'seventies. For the developing countries it means that there will be real possibilities of exporting, but not the same commodity structure as before.

Protectionism is not a means to solve structural problems in the developed economies. In spite of this, there is little hope that protectionist tendencies will fade away in the 'eighties. The opposite is more likely: without entering a phase of general protectionism and closing-down, protectionist measures will be maintained. We expect that areas and means of protectionism may change during the coming years. In areas where the developing countries are increasing their exports rapidly and the developed economies fail to undertake the necessary steps for restructuring, new protectionist measures may emerge. It is not excluded that in some other fields, which for a certain time belonged to the most protected ones, trade barriers will be lowered.

In this respect, special attention is to be paid to the differentiated development in Western Europe, the United States and Japan. Western Europe is handicapped in several ways: the growth centre of the world economy has been shifted to the Pacific for the first time since modern capitalism emerged in the world, whereas the economic ties of this region have been developed first of all with Mediterranean and African countries which are less dynamic and in several respects less industrialized than the main partners of the United States or Japan (Latin American and Far Eastern countries, respectively).

A third bottleneck can be detected in the Western European integration process itself. A large regional market has for a long time permitted that uncompetitive (or below-average competitive) sectors survive. Intraregional trade makes up the major part of total imports in labour-intensive and raw material-intensive products, in which developing countries have a clear advantage on the US and the Japanese markets. The import structure of Japan and the United States is more developed than that of Western Europe, considering the imports from developing countries. While in 1980 40.4 per cent of the developing

countries' industrial exports to the OECD countries went to the United States and 37.9 per cent in the European Communities, the respective shares in machinery products (SITC 7) were 55.7 and 28.9 per cent, respectively. The highest relative EC shares were in the labour-intensive sectors (textiles 49.3 per cent and clothing 43.3 per cent) and in raw-material intensive chemical products (48 per cent).

The concept of generally shrinking markets is thus not convincing. First of all, in the United States and in Japan the market tends to be growing, and within Western Europe there are different national attitudes, too. Less impetus can be expected in the demand of socialist countries: financing constraints, structural problems of manufacturing and urgent export needs do not promise large possibilities here.

One has, however, to reckon with the fact that the development in the socialist world will probably be less balanced than before, and some countries may offer interesting import markets. Practically the same problem emerges with respect to the developing countries: financing bottlenecks and export requirements make everybody interested in exporting and not in importing. This is one of the practical obstacles to convert this group of countries into a large importer of manufactured goods produced in developing countries.

In order to assess the possibilities for the manufacturing exports of developing countries it is necessary - and it has to be stressed in actual conditions in which most experts are dealing mostly or exclusively with the unfavourable external conditions - to refer to the earlier advantages of developing countries as exporters of manufactured goods. Has their attractiveness changed? Are the clearcut advantages of the 'seventies lost?

Manpower is still available in abundance and with a changing structure. In the 'seventies, low-cost and disciplined manpower was required. Today, without having lost this type of manpower but certainly with a clear geographical shift in it, comparative advantage appears in semi-skilled and skilled labour sectors, too. The supply side is larger and more differentiated. This implies on the one hand, sharper competition, on the other, new fields of international industrial co-operation.

The entrepreneurial sector has gained a lot of experience in the 'seventies, especially in Far Eastern and Latin American countries; without losing dynamism - as the latest data on international competitiveness demonstrate. (Some countries could considerably enhance their exports even in the recession-hit years). The developing countries' situation became more critical in the financial aspect, and indebtedness may lead to more cautious behaviour of foreign capital. Moreover, the strained financial situation may produce changes in the general economic policy which in the seventies has increasingly concentrated on export orientation.

A more inward-looking policy - either as a general, comprehensive concept or as a tactical step to reduce indebtedness - may reveal very soon the high degree of vulnerability of the economy - strengthening the psychological aspect of closing-down. In some rapidly industrializing countries territory is limited and the infrastructural projects of the 'seventies may be insufficient to ensure the attractiveness of the given economy on the international scale. New financial needs for infrastructure could emerge - without real financial resources to meet the needs. Industrialization also influences not only the economic growth, the export performance, productivity, etc. but has many non-economic "side-effects" which may enter into the economic sphere if social problems cannot be solved adequately.

How far do changes in the international economic framework and in the attractiveness of industrializing or semi-industrialized developing countries give ground for "export pessimism"? It is convenient to refer to the historical parallel: in the early- and mid-sixties, there was a general feeling that developing countries cannot enter the international market for manufactured goods, or if they can, only in very unsophisticated products and by the transmission of multinationals. Although for other and more fundamental reasons, export pessimism has been rather popular in recent years.

Unfortunately, data are not available for the most recent recession-hit years. But in the second half of the 'seventies, when protectionist tendencies were rapidly growing, export competition

severely sharpened, and growth problems in some principal markets accentuated, the newly industrializing countries could maintain or even strengthen their market share. But - and this is especially noticeable - a new group of exporters of manufactured goods has appeared: the so-called new exporting countries (NECs) developed at a quicker pace than world import demand and even then the NICs themselves did.

This illustrates that in spite of sharpening competition, export possibilities existed. These countries exported first of all labour-intensive products to highly protected markets. They could do so because they were marginal exporters and the general tariff preferences and the quota system helped their exports increase.

However, there are clear differences between this newly emerging group of countries and the NICs: a growing share of manufacturing exports did not lead to higher growth rates; offshore activities prevail; the level of development is relatively low; special incentives for foreign capital have been given; and the industrial development is less "organic" than in the Far Eastern or most Latin American countries.

Export pessimism is certainly not a convincing argument, but prospects for export-led growth have changed and will be changed in the 'eighties. Some of the main conflicting points are:

- the structure of world demand is changing which offers possibilities for countries which can change rapidly their industrial structure. At the same time a deeper differentiation is developing;
- protectionism has not expanded to all fields: market possibilities for developing countries are given in not-protected areas. Certainly, with higher export performance, the new area may be protected again, but the flexible economies - forced to respond to the challenges in short periods - will be able to find new outlets for their products;
- competition between more industrialized and in-the-last-years-industrializing developing countries will be sharper,

the latter have comparative advantages where the former had them some ten years ago. If the NICs fail to adjust themselves, they may be forced out of the international market. The export performance of the newly industrializing and exporting countries may be felt in the earlier industrializing developing countries - protectionist measures are here again not to be excluded;

- a major problem of economic - and first of all industrial - policy consists in the fact that the world economic environment and general overcapacities require rapidly adjusting industrial systems and not new capacities which could theoretically contribute more to economic growth and employment generation;
- export growth is to a lesser extent connected with economic growth and employment in the newly exporting countries, if it is so, and exports are highly necessary to pay back credits and pay for essential imports, the growth and employment generating role must be overtaken by other sectors. But are they able and ready to do so?
- the Far Eastern and Latin American countries - or a large part of them - have more or less established industrial structure and a higher export performance characterized by relative stability. But what about the new group of exporters, which are exposed to primary world market changes;
- the role of transnational companies seems to be growing in the 'eighties, both as a direct investor and as the supplier of the technology. Contacts with these agents will remain highly necessary in the coming decade. How to pursue this objective simultaneously with other general policy aims as appropriate technology, collective self-reliance or basic needs strategy is a major question facing the developing countries; and

- and last but not least: it may be that the maintenance of the export-led growth model will bring to the surface serious economic and socio-political tensions. But is there any other strategy which offers better prospects and less disequilibrium? More concretely: exporting remains a high priority because debts have to be repaid, external equilibrium consolidated. Is there any possibility to separate the national economy into two different fields and achieve at the same time better servicing of debt and ~~s~~iezing the enormous internal problems? Possibilities, limits and tensions of a more inward-looking economic strategy are described in the next section.

Specialization, Co-operation, and Integration

In this section alternative options of the developing countries of avoiding the negative influences of the world market and the recession, as well as structural problems, financing difficulties of the developed economies will be examined. Only the vital questions will be formulated here. The possible areas for strategy options are: intra-regional integrations, broader South-South co-operation, collective self-reliance and East-South industrial division of labour.

The experiences of a common industrial policy based on a regional market are in most cases not successful. Industrial policy on the regional level has practically replaced national import-substituting policies; i.e., the same concept prevailed on a somewhat larger regional market. Beyond well-known infrastructural, technical and administrative problems there are some general issues which hindered regional integrations as a vehicle for promoting in a more successful way common industrialization strategies. First, even the wider markets are very limited for most industrial products. Secondly, at the beginning there were two possible ways of implementing regional

industrialization policy: by enhancing the competitiveness of earlier established national industries and by setting up new common projects widening the structure of industry in a region.

The second option was preferred, and it has had two main consequences. On the one hand, the production in established national industries could not become more effective in a regional competition. On the contrary, the wider regional market remained practically closed for these products. On the other hand, financial, distribution and allocation issues were forming severe obstacles in the integration process from the very beginning: the centre of controversy could not be abolished, only shifted from trade policy and adjustment issues towards allocation policy and structural issues.

Thirdly, regional market became more and more a "protection ground" and not a "training ground" as put forward in theory. International competitiveness and better export performance was largely due to world market effects and close contacts with extra-regional markets, and not to regional training grounds. Of course, some countries started exporting to several member countries of an integration grouping, but in most cases this move happened after successful world market performance. Thus, the widest international division of labour made possible higher regional market shares and not vice versa.

It is worth noting that all economies which could substantially increase their industrial exports in the 'seventies, did first of all rely on the global market. It is true in the opposite sense, too: economies basing their industrial exports on the regional market cannot be found in the group of the NICs nor in the "second-tier" exporting countries. And what is more: industrial exports of countries which relied on the regional market and which considerably increased their industrial exports until the early 'seventies (Central American countries, Colombia, Egypt) suffered decreasing growth rates, indicating the limited spect for expanding industrial exports within a given region.

The changing pattern of the world economy is certainly not favouring the process of regional integration. Challenges have to be faced not only by national economies but by regional groupings. These regional groupings have to survive at a time when not only external influences are increasingly disadvantageous, but earlier integrational impulses seem to be exhausted.

The question then arises: what a role can intraregional industrial co-operation play in the future? Theoretically, there are a number of possibilities:

- world-market-oriented industrial development in some well-defined sectors;
- common direction, management and control of global redeployment processes;
- orientation on the regional market in order to satisfy growing regional needs;
- common protection against disruptive tendencies of the external world (i.e., maintaining structural challenges in "tolerable" limits); and
- common infrastructural development as a necessary step to increase overall co-operation and improve the market access of regional industrial goods.

At the same time, there are a number of areas where the pursuit of a strategy of regional integration will present difficulties and challenges for the developing countries:

- large-scale projects which offer world-wide competitiveness need substantial financial means and technology transfer. Thus, international financing channels must be found and contacts with main sources of technology have to be established and maintained;
- the effectiveness of regional industrial production must be increased by rationalizing parallel national industrial priorities. The difficulties are well known in national framework and in many countries, and it is at least doubtful

- that tensions would be less strong in the regional framework;
- international competitiveness can only be achieved if the location of the given project is economically well grounded. How to maintain, in these circumstances, the principle of equal distribution of regional gains and losses and how to follow the path of harmonious development on the regional level is a crucial question; and
 - since industrial development is a highly-ranked political issue in all developing countries, regional co-operation has clear political impacts. Different interests, the difficulties of harmonizing various concepts represent a heavy burden on political decision-making, and tend to reduce the political basis of co-operation among developing countries.

The prospects for global South-South co-operation are, however, better. There are some positive signs in recent years, especially in the OPEC countries where some developing economies have become strong competitors with developed country and socialist country exporters. For a dozen developing countries, the promising industrial markets in rapidly growing developing economies and in oil-rich countries will represent an incentive for expanding industrial exports.

Industrial strategy may be based on a better all-round co-operation among developing countries. Among international experts the following points have been stressed: co-operation in the raw material sector and in the infrastructural projects or in common service sectors should be increased; trade preferences should be given only step by step and perhaps connected with higher security of supply; preferential treatment of goods produced in inter-firm co-operation should be given; and joint ventures of enterprises of developing countries should be strengthened.

No doubt that all these steps may improve South-South-industrial co-operation. Nevertheless some general concerns remain:

- experience up to now shows even in recession-hit years, the import market for industrial goods from developing countries

is less unstable in industrially developed economies than in developing countries;

- if the oil price does not increase in real terms in the coming years, the main OPEC import markets will tend to decline, while in other more industrialized developing countries the external financing may break the expansion of the import capacity of the economy;
- the commodity pattern of developing countries' industrial exports is similar to the production pattern in most of the developing economies. Thus, the competitive edge is likely to increase, even if signs of redeployment within the developing world are present;
- technology, modern machinery, some spare parts and basic materials forming an integral part of the technology process remain to be obtained from outside the developing countries; and
- external financing and the need to finance the external debt may divert exports towards developed countries, with their wider markets and higher liquidity.

Collective self-reliance can be accepted as a political principle but can hardly be implemented in economic practice. Several simulation models constructed in the last years indicate that an attempt to economically disengage from the developed countries would generate only a very marginal decline in the relative trade volume between developing and developed countries. At the same time, the structural development would be undesirable in two senses: first, it would re-establish the traditional trade pattern of changing primary goods for industrial products. Secondly, it would generate traditional trade pattern within the developing world, too, between exporters of industrial products and exporters of primary goods.

The other major conclusion emerging from the simulations is that the benefits realized by the developing countries were not distributed equally among the members. In this point, the collective self-reliance strategy seems to be especially vulnerable.

The third conclusion is that policies which generate benefits for the developing countries may imply costs for other participants in the world economy. It is at least problematic whether other countries would accept them or give responses which may hurt international economic and political relations and reduce the possible benefits for developing countries.

Socialist countries as alternative import markets for industrial products of developing countries may play a certain role in the coming decade if:

- the financing problems can be eased;
- a higher growth rate could be achieved;
- the structure of industrial production is rapidly changed; and
- energy- and raw material-saving can be enforced.

However, even if the mentioned conditions can be met, the import market remains relatively narrow, playing a complementary but not a substituting role for industrial exports of developing countries.

It is foreseeable that - without denying the real possibility of industrial co-operation and some very positive results - the main tendency will remain the sharp competition on world markets between socialist and developing country exporters of manufactured goods. The competition will first of all centre on the OECD market, but it will be felt in OPEC countries and - not to be excluded - even in some socialist countries (e.g., the Soviet Union).

Conclusions and suggestions

The international economic environment for industrial development has become more difficult and complicated in the early 'eighties than it was in the 'seventies. Conditions of export-led industrialization have changes - but without creating better conditions for other comprehensive development strategies.

Export of manufactured goods from developing countries will increase in the 'eighties at a slower pace than before, but a growing share for the developing countries will also characterize the present decade. Within this general picture, the circle of manufactured goods exporting countries will increase and the structure of exports will become more diversified. Beside labour-intensive and low-skill products, capital-intensive goods and skill-intensive articles will appear in the exports of the more industrialized developing countries. Special attention has to be given to the selection of partners: the import market of the United States and of Japan seems to be structurally more advanced than that of Western Europe. With the protectionist tendencies in Western Europe which are likely to remain in the 'eighties, the already observable "structural lag" will be even greater.

One of the main contradictions of industrial strategy in the present decade consists in the fact that, on the one hand, exporting remains necessary, on the other, export-led industrial strategy is likely to enter into conflicts with other economic policy issues. The separation of exporting from the generation of growth process and of employment will be characteristic of the "second-tier" exporters. Industrial policy cannot meet all the challenges: some previous fields of industrial strategy have to be overtaken by other sectors.

Differentiation processes within the developing world cannot be slowed down or halted. On the contrary, differences can be expected to increase in the course of the 'eighties. The industrialization of the relatively more developed Far Eastern and Latin American countries will probably continue and respond successfully to the international economic challenges. Here the main issues seem to be of domestic adjustment (internal restructuring), discovering new advantages and the creation of more effective bargaining power in international economic issues.

The second group of industrial exporters will probably face the most delicate problems. Here industrial exports are indispensable for foreign financing but not involved in the national reproduction processes.

In the group of developing countries which up to now did not export manufactured goods except a negligible amount, industrial policies directed to increase the export capacity of the given economy may emerge. Some of them may enter the group of the "second-tier" exporters, but the majority will continue to face serious bottlenecks in their attempts at comprehensive industrialization.

Differences in the starting position and in the economic strength and prospects involve evident differences in the means to be applied. The role of education and professional training will become manifest in the relatively more developed developing countries, offering them new production lines and export possibilities. Industrial exports will be accompanied by servicing and in some cases by technology transfer. The problem of small-scale industry remains very actual, not only concerning employment-creation and regional policy, but - and to a growing extent - as a flexible unit which can rapidly adjust to external challenges and structural requirements.

No universal path and no universal remedy can be suggested. However, regional autarchy and disintegration from the world economy seem to involve serious damages and backwardness even if the external conditions remain unfavourable. Retaining global economic relations is a primary necessity which has to form the framework for regional industrial co-operation. In this respect, the following activities can be forecast:

- common efforts to prevent or reduce negative effects of protectionism;
- increasing regional bargaining power in international economic issues in all the fields possible;
- restructure regional integrations from import-substituting aims to common export policy goals; and
- better use of the resources of developing countries for industrial development.

Industrial strategy in the coming years has to reckon with the fact that, beside elements of co-operation, the prevailing feature seems to remain competition on the world market. Competition will be extended to the special national offers to be made in order to attract foreign capital, get larger international credits, and guarantee access to technology sources.

Global industrial strategy with longer-term validity can be elaborated only if the following conditions are met:

- the international monetary and financial system has to be consolidated, and first of all issues of crucial indebtedness must be settled;
- a complex policy of international restructuring of the manufacturing sector is overdue;
- actions must be taken in accord with the relation that protection is no solution to the real problems; and
- in order to avoid current problems of market disruptions, labour redundancies and depressed manufacturing profitability and to increase the probability of smoother and longer-term redeployment processes, exchange of information between industrial policy makers in developed and developing countries has to be institutionalized on various levels.

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**HIGH-LEVEL
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PREPARATORY TO THE
FOURTH
GENERAL CONFERENCE
OF UNIDO**

*Industrial Development Strategies and Policies
for Developing Countries*

Lima, Peru, 18-22 April 1983

**A BRIEF INTRODUCTION TO RE-ORIENTATION
OF STRATEGIES FOR INDUSTRIAL DEVELOPMENT
IN CHINA**

This document was prepared by an expert of the Government of China.

The views expressed are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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F O R E W O R D

As part of the preparatory activities for the Fourth General Conference of UNIDO (UNIDO IV), a high-level expert group meeting on industrial development strategies and policies for developing countries is being organized in Lima, Peru, from 18 to 22 April 1983.

This particular meeting is considered to be of crucial importance to the preparations of UNIDO IV, since it has as its objective the review of strategies and policies of the past as well as the identification of key elements in industrial strategies and policies for the 1980s as perceived by national policy makers. On this basis, the meeting will identify those issues on which further detailed work in the strategies and policies area should proceed in preparation for UNIDO IV.

Each of the government experts nominated to the meeting was invited to present a brief paper outlining the perceptions in terms of the future industrial developments in the 1980s and 1990s. This particular paper was prepared by an expert of the Government of China.

Over the past 33 years since its founding, the People's Republic of China has, by overcoming numerous difficulties, scored tremendous achievements in economic construction and industrial development, which would have been inconceivable in the old society. The Chinese people have, nevertheless, also suffered setbacks on their road of advance. Based on the historical experience it has summed up, China has now entered a new stage of its socialist modernization programme and set forth new strategic objectives for its industrial development.

I. Remarkable achievements despite
a weak foundation

Faced with the legacy of semi-feudal and semi-colonial China, the People's Republic of China had to overcome a plethora of problems. The pre-liberation annual output of the major industrial products even in a peak year was pitifully low: only 923,000 tons of steel, 62 million tons of coal, 6,000 million kwh of electricity and 450,000 tons of cotton yarn. The output of 1949 was even lower: 158,000 tons of steel, 32.43 million tons of coal, 4,300 million kwh of power and 330,000 tons of cotton yarn.

With liberation, the Chinese people have become the masters of the country. Through thrift and hard work, they have gradually established an independent and comparatively complete industrial system and national economic system. Compared with the highest records of the old China, in 1980, production of steel increased 40 times to 37 million tons; that of coal rose by 10 times to 620 million tons; that of power went up by 50 times to something over 300 billion kwh; and that of cotton yarn increased by 6.5 times to 2.93 million tons. In 1980, the output of crude oil reached

105 million tons and the output value of the machine building industry exceeded 127,000 million yuan. Starting from scratch, China has built a group of new industrial bases on the vast expanses of hinterland and minority nationality regions. Industrial construction has promoted the expansion of agricultural production and resulted in improved people's livelihood. Despite the fact that population has grown too fast and the figure now stands at something over 1,000 million, the country has basically guaranteed people's needs for food and clothes and it has done so by relying on its own efforts.

II. Meeting people's needs, the fundamental aim of economic development

Measured against the needs of the people, China's achievement in the economic construction and industrial development is initial. Production level per capita is very low. The main problems that existed were: a long-time disproportion among agriculture, light industry and heavy industry; sharp changes in the development speed, with curtailment alternating overextension; uneven development between regions; low economic results of economic construction; and failure to keep the improvement of people's livelihood commensurate with the amount of labour they had put it. Causes for above-mentioned problems are twofold. On one hand, a very weak foundation at the time of liberation and an international environment as it was then, required that the country quickly develop its heavy industry and increase its national defence capabilities, with the result that a considerable part of material wealth could not be directly used to improve people's livelihood. On the other hand, errors of over-eagerness to achieve quick success and rashness in advance were made in the guidelines for the economic construction. This was manifested in the impractically high speed and targets, particularly in the case of heavy industry, too large a scale of industrial construction to the

extent that it went beyond the limit of the national strength.

Learning a lesson from the past errors, the Chinese Government has started to carry out since 1979 the principle of "readjustment, restructuring, consolidation and improvement" of the national economy, in an effort to find a new road of construction that requires comparatively low investment, is practical in the speed and promises good economic results and greater benefits to the people. Economic readjustment over the past three years has yielded the expected results. The proportions between accumulation and consumption, between production and construction on one hand and people's livelihood on the other, and between agriculture, light industry and heavy industry have on the whole tended to be harmonized. The work of economic readjustment has entered a stage of greater depth.

This, in essence, represents a major shift in China's strategies for economic development.

The shift signifies that the fundamental objective of China's economic development will be to meet the material and cultural needs of the people, in an effort to correct the tendency of production for production's sake and industrial development for industrial development's sake that existed to a certain extent in the past.

It signifies that the past one-sided emphasis on high output value will give way to economic results as the first consideration.

It signifies the establishment of a rational economic structure for a proportional development of agriculture, light industry, energy, raw materials, machine building and construction industries and transport and communication, instead of putting one-sided emphasis on the development of heavy industry at the expense of agriculture and light industry.

It also signifies that future industrial growth will mainly rely on tapping the existing enterprises' potential through technical transformation, a departure from the past one-sided approach of resorting to expanded capital construction for growth.

III. Strategic objectives and main policies and measures for the future

Experience over the years proves that economic construction, including industrial construction, should be adapted to the national conditions, conform to the objective laws, be carried out within the country's capacity, and proceed in an orderly, step-by-step way. A construction project should go through scientific appraisal before it is undertaken and economic results should be emphasized.

On the basis of investigation and study, the Chinese Government has set the objectives for its economic modernization programme for the period from 1981 to 2000. Namely, on the premise of constantly improved economic results, the country will strive to quadruple its gross annual output value of industry and agriculture, from 710 billion yuan in 1980 to approximately 2800 billion yuan in 2000. This will place China in the front ranks of the countries of the world in terms of gross national income and outputs of major industrial and agricultural products and the Chinese people will be comparatively well-off both materially and culturally.

The strategic objectives will be realized in two steps. The main task of the first ten years, i.e. from 1981 to 1990, is to lay a sound foundation, accumulate strength and create conditions. In the second, i.e. from 1991 to 2000, China will usher in a new period of vigorous economic development, with an all-round upsurge of the national economy. The average annual growth rate of the gross industrial and agricultural output value of the first ten years is projected at 5 - 6 per cent and that of the second, at 8 per cent and more. The

average annual growth rate for the 20 years as a whole is 7.2 per cent.

The formulation and implementation of China's 6th Five-year Plan (1981-1985) is an important step towards realizing the grand goal of two decades.

The main policies and measures of the long-term industrial development include:

1. During the period of the 6th Five-year Plan, development of China's industrial and agricultural production will maintain an appropriate rate of growth. Under the plan, the gross industrial and agricultural output value for 1985 will reach 871 billion yuan, of which, the total industrial output value will be 605 billion yuan. This is an average yearly increase of 4 per cent for both industry and agriculture, but in practice, efforts will be made to bring the figure to 5 per cent in the course of carrying out the plan. Of the total industrial output value, the average yearly increase of light industry will be 5 per cent, while that of heavy industry will be 3 per cent. A better ratio among agriculture, light industry and heavy industry will be established.

2. The existing enterprises will be consolidated in an all-round way and vigorous efforts will be made to raise the efficiency of operation and management.

The number of industrial enterprises in China almost doubled in the ten years from 1971 to 1980, totalling 377,000 (not including those run by production brigades in rural areas). There was a good deal of blind expansion in the excessive growth. The Government has now decided that the following categories of enterprises must be the first to close down, suspend operations, amalgamate with others or

switch to the manufacture of other products: those that are heavy consumers of materials, turn out poor-quality products, and have been running at a loss over the years; those that have a huge overstock of products, and those which vie with the advanced ones for energy, raw and semi-finished materials, transport facilities and markets.

Present enterprises must be consolidated quickly and firmly. Rules and regulations for management and the responsibility systems must be established. Appropriate objectives must be set for the development of products suited to the social needs. Remarkable improvement of the performance in the major technical targets must be attained.

3. Promote technical progress energetically and give full play to the role of science and technology in industrial development.

To quadruple its gross industrial and agricultural output value by the end of this century, China should mainly rely on the technical transformation of existing enterprises, rather than to concentrate on the building of new ones. All branches of our industry will have to adopt extensively advanced technologies which have been in common use in the economically advanced countries since the 1970s or the early 1980s and which are applicable in China. Technical transformation of the machine building industry which provides technical equipment for all other branches should go ahead of others. Areas with better technical level should help and promote the improvement of industrial technical level in the minority nationality areas and outlying border regions.

4. Focus on construction of energy industry and transport and communications.

Energy, transport and communications are two weak links in China's economy. The Government has decided that while efforts are

made to bring down energy consumption, necessary funds will be pooled to strengthen the construction of coal, petroleum and power industries, railways, ports, inland rivers, roads and postal and telecommunication facilities. The volume of investment earmarked for capital construction in the 6th Five-year Plan is 230 billion yuan and 38.5 per cent of that is allocated to the above-mentioned sectors.

5. Energetically and steadily speed up the restructuring of management systems.

The guidelines for restructuring the management system is to correctly implement the principle of ensuring the leading role of the planned economy supplemented by market regulation. Strict control over the key enterprises and major economic activities should be exercised through planning while a flexible policy will be adopted towards lesser ones, which should be given necessary right to manage their own affairs. On the premise that the socialist public ownerships are predominant, multiple economic sectors and forms of management should be allowed to exist simultaneously. Egalitarian practice in distribution should be overcome and the principle of "from each according to his ability and to each according to his work" should be implemented among workers and staff, so as to bring the enthusiasm of the labourers into full play.

6. Expand economic and technical exchanges with outside world.

On the basis of independence and self-reliance, China actively expands its international exchanges in the field of economy and technology. The total volume of import and export is planned to reach 85.5 billion yuan by 1985, an increase of 51.8 per cent over 1980 and an average yearly increase of 8.7 per cent. Of the total, import will be 45.3 billion yuan, an annual increase of 9.2 per cent, which

is higher than the growth rate of export.

We do not favour autarchy or sticking to conventions. On the other hand, we are opposed to dependence on and blind faith in foreign countries. On the condition that its state sovereignty is respected, foreigners are welcome to invest in China and open mines and factories in the form of joint ventures. The legitimate interests of foreign investors are protected. We will make proper use of preferential foreign credits, import advanced foreign technologies and management expertise, study them, adapt them to China's conditions and popularize their use. Over recent years, the U.N. development system, including UNIDO, has provided China with technical assistance, which has been welcomed by Chinese industrial and other sectors.

On its part, China will continue to discharge its internationalist duties, and provide economic and technical assistance to friendly third world countries within its capabilities. It is our hope that through a variety of effective approaches and forms, "South-South co-operation" in a nature of mutual help will make constant advance in the field of industry and promote the establishment of the New International Economic Order.

It is also our hope that "South-North exchanges" in industrial field will make progress on the basis of equality and mutual benefit and mutual complementarity. Such international industrial co-operation will be beneficial not only to the development of "South" countries, but likewise to the "North" countries in overcoming their economic difficulties, as well as to the healthy international economic development.

Annex

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FOURTH
GENERAL CONFERENCE
OF UNIDO**

*Industrial Development Strategies and Policies
for Developing Countries
Lima, Peru, 18-22 April 1983*

**INDUSTRIALIZATION, RESTRUCTURING
AND ADJUSTMENT**

This paper was prepared by Professor Paul Streeten, as consultant to the UNIDO Secretariat.

The views expressed in it are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.

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FOREWORD

As part of the preparatory activities for the Fourth General Conference of UNIDO (UNIDO IV), a high-level expert group meeting on industrial development strategies and policies for developing countries is being organized in Lima, Peru, 18-22 April 1983.

This particular meeting is considered to be of crucial importance to the preparations of UNIDO IV, since it has as its objective the review of strategies and policies of the past as well as the identification of key elements in industrial strategies and policies for the 1980s as perceived by national policy makers. On this basis, the meeting will identify those issues on which further detailed work in the strategies and policies area should proceed in preparation for UNIDO IV.

Industrialization, Restructuring and Adjustment focuses on two themes: on the impact of the process of industrialization on income distribution, on poverty, and on people in general; and on the nature of the process of adjusting to structural change in the developing countries.

The paper was prepared by Professor Paul Streeten, as consultant to the UNIDO Secretariat.

The World Setting

The last five years have been marked by an intensification of many of the problems that have affected the world economy since the early 1970s. Sluggish output and productivity growth in the advanced industrialized economies, a contraction of the rate of expansion of international trade, and with it growing protectionist pressures, sustained inflationary pressure on the prices of manufactured goods, together with highly unstable prices for the primary commodities that have fallen to their lowest level (in real terms) in thirty years, steep increases in the cost of energy, huge payments imbalances, high interest rates, fluctuating exchange rates, and a growing world food crisis, are among the most acute of these. Partly as a result of this unfavourable world economic environment, the industrial growth performance of the developing countries -- especially the low-income countries containing the bulk of the population -- has been poor, and their prospects for growth and development in the 1980s are not encouraging. The centrally planned economies have also experienced a decline in their rates of growth; and some of them have experienced acute balance of payments problems.

In the developed market economies aggregate output grew at an average of just over 5 per cent per year in the 1960s, and inflation and unemployment were at low levels. Growth between 1973 and 1980 declined to an average of 2.5 per cent per year. Moreover, the pattern of annual growth became irregular -- GDP actually fell in 1975, and, after recovering in 1976-78, the

growth rate declined to just over 1 per cent in 1980, declining further through 1982. Slackening growth was accompanied by an upsurge in unemployment and inflation. By 1982, there were over 30 million unemployed in the OECD countries, nearly 9 per cent of the labour force. Inflation, which averaged only 3 per cent per year in the 1960s, averaged 10 per cent in the 1970s. The persistence of inflationary pressure led to the intensification of restrictive monetary and fiscal policies by the Governments of these economies, pushing interest rates to exceptionally high levels and delaying the recovery of output and the process of expansion. Hence, even optimistic forecasts do not suggest that the growth of these economies in 1980-1985 will exceed the average for the 1970s as a whole, and actual performance will, in all probability, fall below this.

These developments were reflected in changes in the field of international trade. The rate of growth of international trade declined from 8.4 per cent a year in the 1960s to 6.3 per cent in the 1970s. Preliminary figures show further declines for the years 1980-1982. But certain marked differences in export performance and the terms of trade emerged as between the developed market economies, oil-exporting developing countries, and middle-income and low-income oil-importing developing countries. The oil-exporting developing countries experienced a twofold increase in the purchasing power of their exports during the 1970s, due almost entirely to the effect of the OPEC price increases on their terms of trade. The developed market economies were able to counter the effects of the first round of oil-price increases by expanding their exports and through the effects of inflation on the prices of their manufactured exports: in the second half of the 1970s, their exports grew at 8.4 per cent per year and their average export prices rose by 9 per cent

per year. The middle-income oil importing developing countries were also able to expand their exports vigorously -- their export volume almost doubled in the 1970s -- and there was actually a slight improvement in their terms of trade. The low-income oil-importing developing countries fared very badly however: their export volume increased by less than 50 per cent during the 1970s, and the effect of more than half of this was wiped out by a deterioration in their terms of trade due not only to oil price increases, but also to increases in the prices of other imports, including foodstuffs and manufactures.

The role of industrialization

Before the depression of the last five years had brought back an awareness of the blessings of economic growth, industrialization had come under fire from several directions. Those disenchanted with industrialization have called it "exhausted" or "distorted", accused it of lacking integration, or of leading to a new and more insidious form of dependence and exploitation than colonial-type primary product dependence, especially through transnational corporations and a domestic "lumpenbourgeoisie". It has been said that social objectives, such as income distribution, jobs and meeting the basic needs of the poor are more important than high rates of industrial growth; that the drive for industrial growth has destroyed the environment and has rapaciously used up exhaustible resources and, in particular, non-renewable sources of energy. It has been claimed that development in countries in which cultivable land and capital are scarce, and where the labour force grows rapidly and mass emigration is ruled out, must aim at raising the yield of land to grow food for domestic consumption; that food output can grow only if markets exist in which the food can be sold; and that, exports apart, these markets must be

found in the countryside, among the mass of the rural population. Rural development, the argument goes, combined with income redistribution, is a necessary condition of economic growth. Finally, it has been argued that growth of agricultural productivity is the essential condition for progress on other fronts: improved international terms of trade, higher real wages, a larger marketable surplus to sustain industrial growth, etc.

In the face of all these apparent criticisms of industrialization the developing countries have insisted that industrialization is the key to their progress. At the 1975 World Conference in Lima the United Nations Industrial Development Organization (UNIDO) proposed that at least 25 percent of global industrial production (value added in manufacturing) by the developing countries should be the target for the year 2000. (It was 10.3 percent in 1981.) *

It would be easy to meet these criticisms once the purpose of industrialization is brought out more clearly, for most of the above arguments are not arguments against industrialization as such but against an inegalitarian, concentrated, dualistic, high-cost, inefficient form of industrialization. A broadly based, labour-intensive, efficient style of industrialization is not vulnerable to the strictures meted out above. But it presupposes clarity of objectives and a rational choice of instruments to achieve the objectives.

In a unified development strategy industrialization has a special role to play. The poorer the country, the larger the proportion of the population that is engaged in producing food. To rise above poverty, industrialization is necessary, for industrialization means the application of power to production and transport. Output and consumption per head can rise towards

* Recent revisions indicate a share in 1981 of 11.0%.

the desired modern levels only with the help of mechanical aids. In this sense development, including rural development, is industrialization.

In addition, manufacturing industry is subject to increasing returns, to learning effects and to cumulative processes. The exceptionally high growth potential of manufacturing industry has been demonstrated in several countries in recent years.

In the face of the charges against and criticisms of industrialization, it must be emphasized that in order to achieve the social objectives rightly advocated, and in order to fight the evils of pollution, premature raw material exhaustion, unemployment, inequality and market limitations, industrial growth is an absolutely essential condition. It must, of course, be growth that benefits the right groups, that is properly composed and properly measured, so that social costs are fully accounted for and proper relative weights are given to different components, to the working conditions and to the human relations in which production is carried out.

Statistically there is no evidence of an inevitable conflict between high rates of industrial growth and the achievement of other development objectives; if anything, there is evidence to the contrary. In many, though not in all cases, the achievement of social objectives has been consistent with high rates of industrial growth and, indeed, has depended on them. The causal links between these variables are complex, controversial, and still partly unknown, but the promotion of industrial growth is one of the strategic variables in the complex set of related national and international development policies.

Industrialization for what?

Many confusing and complex issues become clearer and simpler if the

purpose of development and the place of industrialization in a development strategy are borne in mind. In particular, questions about energy, the environment, pollution, appropriate technology, appropriate products and consumption patterns, markets, international trade and integration and the multinational corporation can be answered more easily if the objective is clear. Many apparently technical and separate problems are seen to be connected and become amenable to a solution if we know where we want to go.

Development is not about index numbers of national income, it is not about savings ratios and capital coefficients: it is about and for people. Development must therefore begin by identifying human needs. The objective of development is to raise the level of living of the masses of the people as quickly as is feasible. This implies meeting such needs as continuous employment or, for the self-employed, secure and adequate livelihoods, more and better schooling for their children, better medical services, clean water at hand, cheap transport and also a higher and growing level of measured income. Much of this can be achieved in ways which do not register a high growth rate of measured output, while a high and growing rate of national income growth is consistent with leaving these essential needs unsatisfied.

If development is approached in these terms the place of the motor car, of heavy demand on sources of energy, of highly sophisticated luxury goods, of the transfer of inappropriate products and technologies, of the role of the multinational enterprise, of urbanization, of the relation between industrial and agricultural policies, and of domination and dependence, all appear in a different light.

The disenchantment with industrialization has been based on a confusion: it is a disenchantment with the form that economic growth has taken in some

developing countries and with the distribution of its benefits. Certain types of modern product and modern technology have reinforced an income distribution and a style of development that is out of tune with the basic goals sketched out above. After a reorientation of goals, industrialization as the servant of development regains its proper place in the strategy. Industry should provide the producer and consumer goods required by the people, the majority of whom live in the countryside; hoes, simple power tillers and bicycles, not air conditioners, expensive cars and equipment for luxury flats.

An industrialization strategy guided by the goal of meeting the needs of the poor not only leads to a different composition of products and of techniques; it also contributes to stopping the drift to the towns and reduces the demands on highly skilled manpower and other scarce resources that rapid urbanization makes. By raising the level of living of the poor people in the countryside, it reduces the pressure to leave the farmsteads and to expand expensive urban services.

It also introduces different incentives and opportunities into international trade: it implies a reorientation towards more trade between developing countries. Starting with similar factor supplies and similar levels of demand, developing countries can more appropriately produce for one another what they consume and consume what they produce. This can be the basis of mutually beneficial trade. In simple mass consumption goods, often produced in a labour-intensive, capital-saving way, the developing countries have a comparative advantage and could expand their trade among themselves. The same goes for technical assistance. In agriculture, social services, family planning and appropriate technology, countries at similar levels of development are better suited to assist one another than countries with very

dissimilar experiences. But all this depends upon countries opting for a style of development that gives priority to satisfying the simple needs of the large number of poor people. Industries producing clothing, food, furniture, simple household goods, electronics, buses and electric fans would thrive without the need for heavy protection in a society that had adopted this style of industrialization and development. Much of the criticism of inefficient, high-cost industrialization behind high walls of tariffs and quantitative restrictions should be directed at the types of product and of technique which cater for a highly unequal income distribution and reflect entrenched vested interests. It is in no way a criticism of industrialization for the needs of the people.

This does not mean that opting for such a style is an easy matter. The required changes in the thrust of research and development expenditure and of science policy, the attack on the living standards of those profiting from the present type of technology and products, the more complex system of administration and the required co-ordination and changes in trade and investment policy are enormously difficult tasks. The point, however, is that no solution is possible unless the fundamental objective is borne in mind.

Technology and poverty

In analysing the impact of industrialization upon income distribution and poverty between and within countries, a major consideration is whether the beneficial spread and "trickle down" effects prevail over the cumulative effects of economies of scale, experience and learning. The unequalizing effects between countries arise from the fact that countries ahead in the race of industrialization have more opportunities to accelerate further their industrialization than those behind. The less industrialized countries would

have to make a very powerful effort at industrial promotion to catch up with those ahead of them. Eventually, the more industrialized developing countries will run into labour shortages and rising wages, offsetting and more than offsetting their advantages in labour productivity. But in some cases, such as India, this can be a long time ahead.

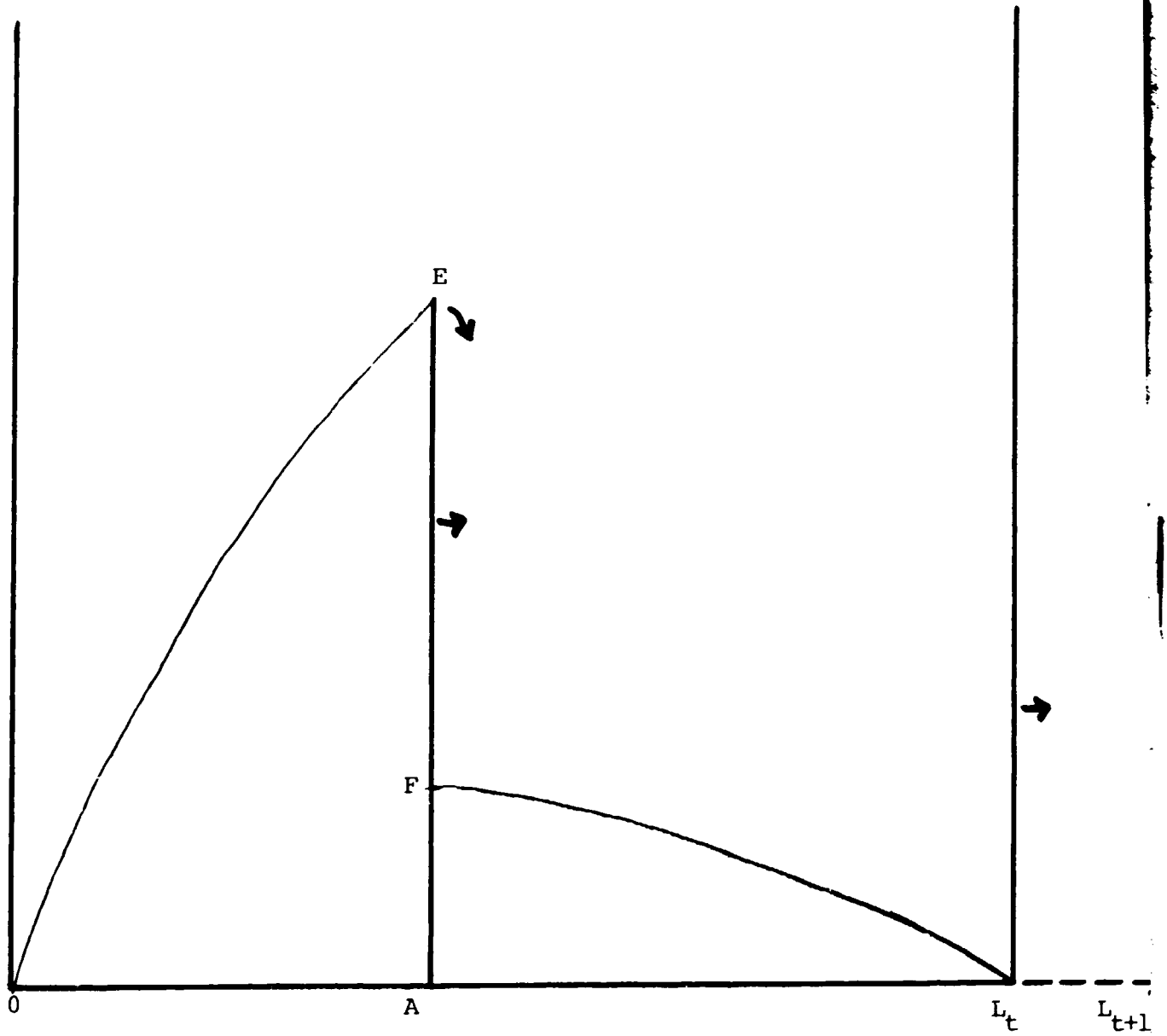
The impact on poverty and income distribution within a country will depend upon the factors mentioned above, i.e. the style of industrialization. Industrialization that is labour intensive and aims at simple products will create more jobs and primary claims of the poor on resources. There can, however, be a conflict between maximizing employment in the short run and eradicating poverty in the long run. The dilemma takes the following form. In order to use and adapt imported capital-intensive technology, a country needs an indigenous technological capacity and an indigenous capital goods sector, which may not generate many jobs. But they do generate the experience and skills that make future absorption of technology more suited to eradicating poverty. On the other hand, light consumer industries create more jobs now but do not lay the foundations for future adaptation and generation of appropriate products and processes.

Dualism and how to overcome it

Most developing countries suffer from industrial dualism. In the urban, organized industrial sector labour productivity and wages are high, but jobs are relatively few because capital is limited. In the informal sector productivity is low, in some cases at the margin approaching zero, but all surplus labour attempts to be accommodated in it. The situation is illustrated in the figure. We trace from left to right labour in the modern, organized sector, from right to left in the informal sector. OL is the total

Output
Worker

Figure 1



labour force. The slopes of the two curves indicate the marginal productivity of labour, which is much higher in the organized sector, approaching zero in the informal sector at A, as new entrants only take away business from existing ones. As capital accumulates, AE shifts to the right. But as population and the labour force grow, OL also moves to the right from OL_t to OL_{t+1} . The gap EF, which is a measure of the dualism, tends to be perpetuated.

Four measures are possible. First, capital might be accumulated at a faster rate, so that the organized sector can absorb more workers. Secondly, population growth may be slowed down, so that jobs have to be created for fewer people. Thirdly, modern technology may be adapted downwards, so that a given amount of capital can absorb more workers. And fourthly, the technology of the informal sector can be upgraded, so that its productivity rises and the gap of dualism is closed by higher earnings in the informal sector. The last method is the most promising, for it requires in the first instance only an end of the existing discrimination that many informal sectors now suffer from: better access to capital markets, information, foreign exchange and marketing facilities. Beyond that, it calls for a redirection of the thrust of R&D expenditure and an indigenous adaptive capacity for design of both products and processes.

Restructuring and Adjustment

The objectives of an industrial development strategy have to be pursued in a changing world. These changes have been particularly drastic in the last decade, and the future promises no relief from quite rapid and often unexpected change. The current world crisis has called into question the whole inherited framework of economic analysis and policy. The crisis has also underlined, if underlining is necessary, that economic and political forces cannot be treated separately and in isolation, for the demands of

organized political groups such as the trade unions, or the oil exporters are economic exercises in political power. Structural changes are both the cause and the effect of these radical changes in international economic and political relations, and adjustments in the industrial structure are called for.

Words like "structure", "restructuring" and "structural adjustments" suffer, however, from a lack of clarity, and it is therefore useful to begin by drawing some distinctions and clarifying the concepts.

Adjustment is adaptation to change, often unexpected change. The change may be favourable or unfavourable to the set of objectives pursued by a government. In the case of a favourable change (e.g., unexpected improvement in the terms of trade, unexpected additional capital available for investment), the challenge to policy makers is to derive the maximum benefits from it; in the case of an unfavourable change, to adapt with the minimum social costs, that is to say, the lowest sacrifice to the objectives and the minimum undesirable side-effects.

The adaptation to unfavourable change may be forced upon a country, the response may be "too little and too late", and therefore its social costs may be very high, or it may be anticipated and planned for, and therefore its costs minimized.

Change may be small and slow or large and sudden. For slow and gradual change, the price mechanism can be an effective instrument of adaptation. It combines a decentralized system of signals and incentives, to buyers and sellers, for the redeployment of resources in response to changes in demand and supply. Even then the growing importance of transnational corporations and of national governments limits the scope for the benign working of market forces. The growing volume of intra-firm transactions and transactions subject to government fiat is removed from the discipline of the market place.

For a large and sudden change, the price mechanism is less suited and has often to be supplemented by other measures. Some authors may even wish to define "structural" as those changes that cannot be accommodated through market forces. It may be useful to list possible meanings of "structural" change.

1. A large, drastic, and sudden change contrasted with "marginal" change. (This meaning may clash with the meaning 2 of a permanent though slow change.) An illustration would be destruction through war;
2. a permanent, compared with temporary or cyclical change;
3. change relating to real resources, such as capital or skill accumulation, technology, or tastes, compared with monetary change or policy change;
4. change in the fundamental conditions (parameters), ordinarily assumed unchanged, constant and given, for purposes of analysis, compared with change in dependent and independent variables;
5. change in the organization of markets ("market structure"), e.g. from competition to cartels or from arm's length transactions to intra-firm trade;
6. change in the distribution of economic power, either because some agents use the existing rules differently or because new rules are laid down, new processes followed, or new institutions set up;
7. change in the sectoral, geographical, occupational or product composition of production and trade.

To illustrate the limits of the price mechanism and market forces as instruments to bring about adjustments to large and sudden changes, consider the rise in oil prices. A sudden and very large rise in price would have the following consequences:

1. It would not discourage demand by much in the short run, given the low short-term price elasticity of demand for oil.
2. It would have repercussions on other prices, raising the general price level and contributing to cost-push inflation, thereby offsetting to some extent the impact on incentives of the rise in the "real" price of oil.
3. It would reduce the resources available to explore and invest in alternative energy sources (except for the sellers of oil who, however, may lack the incentive) and, while raising the incentive, would reduce the means to speed up the transition to the post-oil economy.
4. It would have detrimental effects on income distribution, hitting some of the poorest groups in the poorest countries, who depend upon kerosene, oil for irrigation pumps, fertilizers (20% of fertilizer cost is oil) and other products into which oil enters as an input.
5. If the consequent inflation were to be fought by monetary (or fiscal) measures of contraction, production and employment would be unnecessarily reduced by a multiple of the contraction that would have been necessary in order to economize in oil. And the means and incentive to search for substitutes would be further reduced.

A similar analysis could be conducted for changes in exchange rates in response to growing balance of payments deficits. The balance of payments of a developing country both reflects attempts of domestic adjustments and imposes the need for domestic adjustments to changes in the rest of the world. Thus, a change-over to an export-oriented strategy, an attempt to grow more food at home, a land reform, a tax reform or a redistribution of income, may lead to a temporary balance of payments deficit. On the other hand, global inflation, a fall in demand for a country's exports or policy changes

in foreign countries may cause a deficit, to which the developing country must adjust. It is now widely agreed that the use of exchange rates to equilibrate payments at each moment ("clean floating") is not acceptable and would inflict unnecessary damage, even if effective. There is also growing disillusionment with "dirty floating", and a general desire to return to a regime of more stable exchange rates.

The major changes to which adjustments by the developing countries are called for are:

1. Oil price changes, both up and down, and the accompanying changes in international financial flows;
2. the possibility of growing scarcities of foodgrains;
3. high, though falling, levels of inflation in the world;
4. slower growth in the OECD countries;
5. relocation of industries in accordance with changing comparative advantage, especially the revolution in microelectronics;
6. changing composition of financial terms, such as less aid, more bank loans.

In addition, there are other changes calling for adjustments, such as:

7. continuing high rates of population growth;
8. urbanization;
9. scarcities of certain raw materials;
10. policies adopted by the developed countries: protection of industry, agriculture and services;
11. environmental pollution;
12. international migration;
13. debt service, aggravated by lower rates of inflation while nominal interest rates remain high;

14. the arms race.

It is of the essence of interdependence that a single nation state is, by unilateral action, capable of inflicting considerable harm on other countries, and that the motivation for doing so is often entirely rational from the national point of view. The main danger here arises from beggar-my-neighbor protectionist employment policies, often disguised as regional or industrial policies, even policies that go under the name of "adjustment assistance" but that truly amount to adjustment resistance. Such measures affect most directly the NICs, in search of markets for their exports. But the low-income countries, also, can be harmed by them.

Exchange rate flexibility on the part of developed countries has trade-reducing effects on developing countries, and if they peg their rates to one major trading country, trade-diverting effects from the rest of the world. Both represent costs for countries attempting to raise and diversify their trade.

The analysis of the adjustment process should be conducted in three stages.

1. How severe is the adjustment problem, as registered, in the first instance, in the balance of payments deficit? (A secondary calculation would be the costs imposed by the best corrective measure.)
2. What range of medicines are available? E.g. pegging exchange rates reduces the cupboard by one medicine; forswearing increases in tariffs by another. The greater the degree of integration of the world economy, the barer will be the national maedicine cupboard.
3. How effective is any given medicine? E.g. with a more slowly growing volume of trade, demand elasticities will be lower and exchange rate

adjustments less effective. On the other hand, in wider and larger trading areas one would expect demand elasticities to be higher than under more protective national regimes, and trade therefore more responsive to small changes in the exchange rate.

The task is to combine financing and correcting deficits in such a way as to minimize reductions in employment, output and growth (and any other objectives such as income distribution). Appropriate methods of financing deficits (the right type of conditionality) do not frustrate the process of adjustment, but facilitate it, and can reduce its cost.

The Imperatives of Industrialization

The four principal imperatives for industrialization policy are:

- (1) the urgency to reduce poverty;
- (2) the need to diversify the economy;
- (3) the need to create jobs;
- (4) the need to generate foreign exchange to service the foreign debt and to pay for imports.

1. The urgency to reduce poverty, one of the most basic objectives, was discussed above and it was argued that an anti-poverty focus in industrialization policy not only removes many criticisms but also renders many apparently disparate issues more tractable.

2. Diversification is necessary for two reasons. First, it reduces dependency on a few products and a few markets and therefore leads to greater self-reliance, an important objective of development policy. The best way to reduce dependency is not national self-sufficiency but a diversified structure of production and foreign trade. Secondly, diversification is the best way to hedge against an uncertain future. The world economic environment is changing

rapidly. Today's comparative advantage may be tomorrow's comparative disadvantage. If it were possible to forecast the future precisely, provisions could be made for the industrial structure required in the future, with the lowest costs for the predicted outputs. Clearly, it is not. Diversification, even at somewhat higher costs in certain lines that turn out to be underutilised, or for certain amounts that turn out to be wrongly predicted, is the best response to an uncertain future.

3. Job creation has high priority because the total labour force is growing rapidly. The need to find jobs is made more urgent by the changing age distribution, with a higher ratio of the population in the years of earning, as birth rates decline, and by the growing female participation rate in the labour force.

Two arguments on employment policy are often heard, which defeat each other. On the one hand, it is said that for a developing country in which, say, 20 per cent of the labour force are in industry and 80 per cent in agriculture and services, and with a labour force growing to 3 per cent per year, to absorb only the additional entrants into the labour force (without reducing already existing unemployment) in industry would call for an absorption rate in industry of 15 per cent per year. Nowhere has industry shown a capacity to create jobs at that rate. Therefore, it is concluded, agriculture and services must provide the extra jobs. On the other hand, it is argued that agriculture and services already suffer from large excess population and gross underemployment, and it is therefore for industry to create the jobs that the primary and tertiary sectors cannot provide.

In fact, an employment strategy should be guided by the optimum efficient employment linkages between the sectors, so that jobs in industry create and support jobs in agriculture and services, and vice versa. The task is not

only to create jobs now, but also to accumulate the surpluses that will provide jobs in the future, for a growing labour force. The efficient use of labour is important for two reasons. First, it is necessary in order to avoid wasting other complementary factors of production, such as capital and management, in the present; secondly, it is necessary in order to accumulate the equipment and the wage goods for employment creation in the future. If the pressure for employment creation now leads to overmanning in industry and a reduced surplus for reinvestment because of a swollen wage bill, fewer jobs will be available in the future than would have been, had the surplus been used to produce additional machines and wage goods.

4. Industrialization is necessary in order to produce the manufactured exports that earn foreign exchange. Many industrializing countries are heavily in debt and if they are not to default need the foreign exchange to service this debt. With world inflation abating and interest rates remaining high, the real burden of the debt cannot be expected to be eroded as it has been in the past. Foreign exchange is also needed for inputs into the industrial sector, both capital goods and maintenance imports. The likely foreign exchange earnings from primary exports are limited, both because of the world recession and, were demand to pick up, because of the long time it takes to expand capacity. In industry, on the other hand, excess capacity can be mobilized and additions to capacity take less long, so that industrialization is an obvious response to the need for foreign exchange.

Industrialization and international adjustments

Of special interest is the relocation of industries resulting from changes in comparative advantage. More specifically, the impact of the microelectronics revolution (and other technical changes) on the international

division of labour, and the contribution of TNCs to the adjustments called for by continued technical change, deserve some attention.

Although fears are often expressed that the microelectronics revolution will reduce the comparative advantage of developing countries in labour-intensive activities, and although this is already happening in some sectors such as semiconductors and garments, there is also reason to believe that the new technology, by saving on specialized skills, will have a beneficial impact on the comparative advantage of developing countries. In addition, the rapidly expanding developing countries may find it easier to introduce the new systems technology that calls for human and institutional adaptation, than the more conservative and more slowly growing advanced countries. Which of these two counteracting forces will predominate is still difficult to predict, but it is likely that the impact will be quite different for different developing countries.

The high rate of growth of exports of manufactures until 1979, which was particularly noteworthy in the middle income oil-importing countries, was to some extent attributable to the growth of intra-firm trade in intermediate and finished goods among affiliates of related TNCs, and between parent companies and their affiliates, as well as to subcontracting arrangements. In addition, exports of machinery and equipment from the developed market economies often take place under turnkey contracts and other kinds of non-equity arrangements involving TNCs and the developing countries -- especially the oil exporters -- as well as the centrally planned economies. East-West trade in manufactured products has also grown rapidly as a result of co-production agreements and counter-trade arrangements involving the TNCs and the centrally planned economies.

Existing modes of thinking and analysis have not yet absorbed this rapid growth in intra-firm trade and the new types of arrangements, which have important implications for the distribution of the gains from trade, for the efficient allocation of world resources, and for the relationships between sovereign countries and TNCs.

The professional consensus among economists is that the liberal trading order established after the last war should be preserved, and that exports should be encouraged, not only because they yield foreign exchange, but also because they are the key to domestic growth, employment and poverty eradication. There is no doubt that some developing countries that have strongly promoted exports have done very well in achieving high growth rates with high degrees of equity and employment, and that countries that have promoted import substitution have grown more slowly, have often suffered from large unemployment and dualism, have been less able to withstand and adjust to the oil price shocks, and have in the end not saved foreign exchange.

It is common to advance a two-pronged argument. First, it is said that the key to the successful growth performance of a country such as the Republic of Korea has been the growth of exports, and, second, the instrument to achieving this good export performance has been the free market and the abstention from government interventions. Both prongs are doubtful as historical analysis or as policy guidelines. Successful export performance has indeed been associated with high growth, but exports can be the result of growth, rather than its cause. Or there can be a third factor, such as efficient management, that is responsible for both growth and good export performance. In view of the relatively small part that exports play in the economy of many countries, it is difficult to argue that they have been a very

important causal influence on economic growth, employment creation and income distribution. As Carlos Diaz Alejandro has said, exports may be regarded as the engine, the handmaiden, the brake or the offspring of growth. They may fulfill these different functions differently for different countries, and for the same country at different times.

As to the Invisible Hand guiding the successful export performance, there usually is a strong visible arm of government intervention guiding the Invisible Hand. This was certainly so in the Republic of Korea, which also had a successful policy of import substitution, as well as of export promotion, and efficient policies for the domestic sector. It is these policies together that have achieved high growth, low unemployment and poverty reduction. It is, however, true that government intervention is often done better by using prices as instruments of policy, including subsidies and indirect taxes, rather than quantitative restrictions, licences and rationing.

No doubt, non-discrimination between production for domestic use and foreign trade is the correct canon. But since investments take time to mature, policy makers have to anticipate the terms of trade some years hence, and have to make assumptions as to what rival countries are likely to do. There is no certainty that the nineteen-eighties will be like the 'seventies that export opportunities will be buoyant, that all developing countries together can do what a few have achieved, and that neither protective barriers will be erected against successful exporters, nor their terms of trade deteriorate. It is true that small countries face higher elasticities of demand for their exports than large countries. But, as Carlos Diaz Alejandro has pointed out, in a recession or stagnant world economy, every country becomes a large country. Foreign trade planning, whether by private

entrepreneurs or state planners, is a difficult matter and the canons of liberal trade policy are of limited value. Perhaps a useful guideline is to suggest that the costs of being wrong should be compared for different strategies. Would the country suffer more from having gone in for high-cost import substitution that turns out to be wrong in the sense that had foreign exchange be available the same products could have been more cheaply imported (over a specified time horizon, so as to meet the infant industry argument) than from having gone in for export promotion that turns out to be a failure, either because the terms of trade deteriorate more rapidly than costs for import substitutes rise, or because exclusion from markets through protection creates excess capacity? Alternatively, is it possible to put up industries and processes that are more costly for any given distribution between exports and import substitutes, but show lower costs if the actual outturn deviates from the expected, because they are flexible and adaptable from one to the other?

Planning industrial adjustment in an uncertain world involves decisions both at the macroeconomic level and at the industry and firm level. Some kind of guess must first be made about the probable shifts in the world economic environment. Next, an assessment is necessary as to the industrial structure appropriate for the alternative world economic environments. Next, some decision is necessary as to the techniques available for decision-making under uncertainty.

There are, of course, other methods of planning for an uncertain future, the costs and benefits of which have to be compared with those of flexibility. It would be possible to build industrial excess capacity or to hold inventories against unexpected price increases of imports, or foreign

exchange reserves or access to lines of credit against unexpected changes in the balance of payments.

Adjustments to changes in international comparative advantage are clearly much easier in a fully employed and rapidly growing world economy than in a stagnant economy with large-scale unemployment. First, changes in industrial employment can be brought about by relative adjustments. Normal attrition through retirement and death often looks after the whole or a large part of the adjustment, so that only new workers have to be steered into the growing industries. In a stagnant economy with unemployment, there is actual loss of jobs and the need for retraining and relocation. Second, the incentives to move are much weaker in a stagnant economy. If there is unemployment in all sectors and occupations, the signals as to where to move fail. Third, workers' and trade unions' incentives to accept productivity-raising, labour-displacing innovations are much stronger in an expanding economy where everyone can find a job, than in one where their acceptance can spell added unemployment. A primary condition for progressive expansion and readjustment is therefore the return to higher rates of growth and fuller levels of employment.

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**HIGH-LEVEL
EXPERT GROUP MEETINGS
PREPARATORY TO THE
FOURTH
GENERAL CONFERENCE
OF UNIDO**

*Industrial Development Strategies and Policies
for Developing Countries*

Lima, Peru, 18-22 April 1983

SELECTED STATISTICAL INDICATORS

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FOREWORD

As part of the preparatory activities for the Fourth General Conference of UNIDO (UNIDO IV), a high-level expert group meeting on industrial strategies and policies for developing countries is being organized in Lima, Peru, 18-22 April 1983. This paper forms part of the preparatory documentation.

This particular meeting is considered to be of crucial importance to the preparations of UNIDO IV, since it has as its objective the review of strategies and policies of the past as well as the identification of key elements in industrial strategies and policies for the 1980s as perceived by national policy makers. On this basis, the meeting will identify those issues on which further detailed work in the strategies and policies area should proceed in preparation for UNIDO IV.

Selected Statistical Indicators focuses on the growth rate and structure of manufacturing value added by country grouping. It is not intended to be an exhaustive statistical investigation, but rather to provide selected indicators that will serve as a statistical aid and provide a quantitative basis for deliberations at the meeting.

The statistics were derived from the UNIDO data base. Supplementary sources of information include the Statistical Office and the Office of Development Research and Policy Analysis of the United Nations Secretariat, the regional commissions, the World Bank and the International Monetary Fund. The paper was prepared by the Statistics and Survey Unit, Division for Industrial Studies, UNIDO.

EXPLANATORY NOTES

The following classification of economic groupings is used in the text and in most tables, in conformity with the classification adopted by the United Nations Statistical Office: "Developing countries" includes the Caribbean area, Central and South America, Africa (other than South Africa), West Asia (other than Israel) and South and East Asia (other than Japan). "Developed market economies" includes North America (Canada and the United States of America), Europe (other than Eastern Europe), Australia, Israel, Japan, New Zealand and South Africa. "Centrally planned economies" includes Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the Union of Soviet Socialist Republics. Unless otherwise specified, "world" excludes Albania, China, the Democratic People's Republic of Korea, Mongolia and Viet Nam.

Countries are generally arranged in the order adopted in the Statistical Yearbook. Inclusion of a particular country or area in, or its exclusion from, any economic or geographical grouping has been dictated by considerations of the availability of comparable data in statistics of the United Nations and other international agencies.

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Where the designation country or region appears in the heading of tables, it covers countries, territories, cities or areas.

The designation "developed" and "developing" economies is intended for statistical convenience and does not necessarily express a judgement about the stage reached by a particular country or area in the development process.

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TABLE 1. SHARE OF MANUFACTURING VALUE ADDED IN GROSS DOMESTIC PRODUCT BY ECONOMIC GROUPING AND FOR DEVELOPING REGIONS, AT CONSTANT (1975) PRICES, SELECTED YEARS
(Percentage)

| Year | All developing countries | Of which: least developed countries | Centrally planned economies | Developed market economies | Developing regions: | | | |
|------|--------------------------|--|-----------------------------|----------------------------|---------------------|-----------|---------------------|---------------|
| | | | | | Africa | West Asia | South and East Asia | Latin America |
| 1963 | 14.95 | 6.03 | 35.43 | 26.62 | 7.77 | 8.79 | 12.75 | 21.41 |
| 1970 | 16.72 | 8.25 | 41.05 | 28.19 | 8.61 | 10.45 | 14.00 | 24.22 |
| 1973 | 18.05 | 9.27 | 43.54 | 29.19 | 9.21 | 10.36 | 15.22 | 26.03 |
| 1975 | 18.23 | 8.93 | 47.25 | 27.50 | 9.62 | 10.42 | 15.65 | 25.81 |
| 1978 | 18.86 | 8.58 | 48.88 | 28.52 | 9.35 | 10.98 | 18.23 | 25.78 |
| 1979 | 19.07 | 8.56 | 49.70 | 28.68 | 9.55 | 10.25 | 19.10 | 25.95 |
| 1980 | 19.15 | 8.37 | 49.84 | 27.47 | 9.67 | 10.25 | 18.94 | 25.98 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis and the Statistical Office of the United Nations, with estimates by the UNIDO secretariat.

TABLE 2. SHARE OF MANUFACTURING VALUE ADDED IN GROSS DOMESTIC PRODUCT FOR THE TEN DEVELOPING COUNTRIES WITH THE LARGEST MANUFACTURING VALUE ADDED^a, AT CURRENT PRICES, SELECTED YEARS

(Percentage)

| Rank | 1963 | | 1973 | | 1980 | |
|------|-------------|-------|---------------|-------|---------------|-------|
| | Country | Share | Country | Share | Country | Share |
| 1 | Brazil | 26.4 | Brazil | 28.2 | Brazil | 26.6 |
| 2 | India | 15.7 | Argentina | 29.0 | Argentina | 32.6 |
| 3 | Argentina | 27.5 | Mexico | 22.8 | Mexico | 24.6 |
| 4 | Mexico | 19.2 | India | 14.1 | India | 17.8 |
| 5 | Venezuela | 13.1 | Chile | 26.1 | Rep. of Korea | 29.3 |
| 6 | Turkey | 16.6 | Turkey | 20.0 | Iran | 19.2 |
| 7 | Chile | 24.6 | Iran | 13.0 | Turkey | 20.1 |
| 8 | Philippines | 22.3 | Rep. of Korea | 25.0 | Philippines | 25.6 |
| 9 | Colombia | 20.8 | Venezuela | 17.8 | Venezuela | 13.9 |
| 10 | Egypt | 22.1 | Peru | 26.0 | Colombia | 22.6 |

^a/ Countries are ranked according to their manufacturing value added, in U.S. dollars, in the year indicated.

Source: UNIDO data base; information supplied by the United Nations Office of Development Research and Policy Analysis.

TABLE 3. SHARE OF ECONOMIC GROUPINGS IN WORLD MANUFACTURING VALUE ADDED^{a/}, SELECTED YEARS, 1938 to 1982

(Percentage)

| | 1938 | 1948 | 1953 | 1963 | 1970 | 1973 | 1975 | 1978 | 1980 | 1982 ^{b/} |
|-----------------------------|------|------|------|------|------|------|------|------|------|--------------------|
| Developed market economies | 61.0 | 72.2 | 72.0 | 77.3 | 73.4 | 72.0 | 67.5 | 66.8 | 65.2 | 64.0 |
| Centrally planned economies | 34.5 | 22.1 | 23.2 | 14.6 | 17.8 | 18.7 | 22.5 | 22.9 | 23.8 | 25.0 |
| Developing countries | 4.5 | 5.7 | 4.8 | 8.1 | 8.8 | 9.3 | 10.0 | 10.3 | 11.0 | 11.0 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis and the Statistical Office of the United Nations; and Monthly Bulletin of Statistics, Vol. XXXVI, No. 11 (November 1982), with estimates by the UNIDO secretariat.

a/ Data for the years 1938-1953 are in current prices. Figures for 1938-1953 were derived from data compiled according to industrial census concepts. Figures for the years 1963-1980 were compiled from national accounts sources for manufacturing value added expressed in US dollars at 1975 prices.

b/ Estimate.

TABLE 4. THE TEN DEVELOPING COUNTRIES WITH THE LARGEST MANUFACTURING VALUE ADDED^{a/} AND THEIR SHARE IN THE MANUFACTURING VALUE ADDED OF ALL DEVELOPING COUNTRIES, AT CURRENT PRICES, 1980

(Percentage)

| Country | Share |
|---------------|-------|
| Brazil | 18.67 |
| Argentina | 12.42 |
| Mexico | 12.25 |
| India | 8.42 |
| Rep. of Korea | 5.14 |
| Iran | 4.62 |
| Turkey | 3.43 |
| Philippines | 2.68 |
| Venezuela | 2.46 |
| Colombia | 2.19 |

^{a/} Measured in U.S. dollars

Source: UNIDO data base; information supplied by the United Nations Office of Development Research and Policy Analysis.

TABLE 5. GROWTH^{a/} OF MANUFACTURING VALUE ADDED, BY ECONOMIC GROUPING AND FOR DEVELOPING REGIONS, AT CONSTANT (1975) PRICES, SELECTED PERIODS
(Percentage)

| | 1963-1973 | 1973-1980 | 1973-1982 |
|-----------------------------|-----------|-----------|-----------|
| Developing countries | 8.0 | 5.8 | 4.7 |
| Least developed countries | 5.8 | 3.0 | ... |
| Africa | 7.2 | 5.6 | ... |
| West Asia | 9.4 | 6.3 | ... |
| South and East Asia | 7.6 | 8.5 | ... |
| Latin America | 8.1 | 4.4 | ... |
| Centrally planned economies | 9.8 | 6.6 | 5.4 |
| Developed market economies | 5.5 | 2.4 | 1.7 |

^{a/} Calculated from annual data using a semi-log regression on time.

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis and the Statistical Office of the United Nations, supplemented by the Monthly Bulletin of Statistics, vol. XXXVI, no. 11 (November 1982), with estimates by the UNIDO secretariat.

TABLE 6. CONTRIBUTION OF LEAST DEVELOPED COUNTRIES AND DEVELOPING REGIONS TO THE MANUFACTURING VALUE ADDED OF ALL DEVELOPING COUNTRIES, AT CONSTANT (1975) PRICES, SELECTED YEARS

(Percentage)

| Year | Least developed countries | Developing regions: | | | |
|--------------------|---------------------------|---------------------|-----------|---------------------|---------------|
| | | Africa | West Asia | South and East Asia | Latin America |
| 1963 | 2.18 | 9.56 | 6.00 | 26.26 | 58.18 |
| 1970 | 2.07 | 9.53 | 5.73 | 24.94 | 58.79 |
| 1973 | 1.87 | 8.84 | 6.73 | 25.14 | 53.29 |
| 1975 | 1.81 | 8.80 | 6.70 | 25.97 | 58.52 |
| 1978 | 1.65 | 8.47 | 7.11 | 29.55 | 54.87 |
| 1979 | 1.59 | 8.60 | 6.90 | 27.95 | 54.56 |
| 1980 | 1.57 | 8.82 | 6.64 | 28.59 | 55.35 |
| 1981 ^{a/} | ... | 9.45 | 6.97 | 30.00 | 53.58 |
| 1982 ^{b/} | ... | 10.05 | 7.23 | 31.14 | 51.58 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis and the United Nations Statistical Office, supplemented by the Monthly Bulletin of Statistics, vol.XXXVI, no.11 (November 1982), with estimates by the UNIDO secretariat.

^{a/} Preliminary figures.

^{b/} Estimates.

TABLE 7. GROWTH OF MANUFACTURING VALUE ADDED PER CAPITA, BY ECONOMIC GROUPING AND FOR DEVELOPING REGIONS, AT CONSTANT (1975) PRICES, 1963-1982.

(Percentage)

| Year ending | All developing countries | Of which: least developed countries | Centrally planned economies | Developed market economies | Developing regions: | | | |
|--------------------|--------------------------|-------------------------------------|-----------------------------|----------------------------|---------------------|-----------|---------------------|---------------|
| | | | | | Africa | West Asia | South and East Asia | Latin America |
| 1964 | 7.3 | 4.3 | 4.0 | 6.8 | 6.7 | 5.8 | 4.3 | 8.6 |
| 1965 | 3.8 | 5.7 | 10.4 | 5.2 | 5.1 | 7.1 | 2.4 | 3.7 |
| 1966 | 3.2 | 10.6 | 7.1 | 5.6 | 3.1 | 7.4 | -0.2 | 4.1 |
| 1967 | 1.7 | 5.0 | 10.6 | 1.6 | -2.2 | 6.0 | 3.6 | 0.9 |
| 1968 | 6.8 | 4.2 | 9.6 | 6.4 | 7.8 | 9.3 | 6.9 | 6.2 |
| 1969 | 6.9 | 4.2 | 10.8 | 6.4 | 7.2 | 7.3 | 8.0 | 6.2 |
| 1970 | 5.9 | -4.1 | 8.0 | 1.4 | 7.8 | 3.3 | 5.7 | 5.8 |
| 1971 | 5.5 | -4.9 | 7.5 | 1.9 | 2.5 | 5.1 | 3.9 | 6.5 |
| 1972 | 6.0 | -0.2 | 8.2 | 5.9 | 1.1 | 5.3 | 7.2 | 6.2 |
| 1973 | 7.4 | 15.0 | 7.5 | 7.8 | 7.0 | 7.7 | 9.1 | 6.6 |
| 1974 | 2.8 | 1.4 | 9.8 | -2.1 | -0.6 | -0.8 | 3.7 | 3.2 |
| 1975 | 0.7 | -1.3 | 8.5 | -5.1 | 3.1 | 3.4 | 3.4 | -1.2 |
| 1975 | 5.2 | 0.8 | 6.0 | 7.7 | -0.4 | 7.4 | 11.3 | 2.9 |
| 1977 | 3.0 | 3.8 | 6.4 | 4.0 | 3.6 | 4.6 | 6.8 | 0.8 |
| 1978 | 3.6 | -2.4 | 4.2 | 2.3 | 3.7 | 5.2 | 7.9 | 1.2 |
| 1979 | 3.9 | -0.2 | 3.2 | 3.2 | 5.1 | 0.6 | 5.4 | 3.2 |
| 1980 | 0.5 | -1.2 | 2.2 | -3.6 | 2.7 | -3.5 | -3.9 | 2.9 |
| 1981 ^{a/} | -2.7 | ... | 0.9 | -0.5 | 3.7 | 2.4 | 2.4 | -7.2 |
| 1982 ^{b/} | -2.2 | ... | 1.6 | -3.9 | 3.4 | 1.7 | 1.7 | -6.2 |
| Average: 1963-1973 | 5.2 | 3.1 | 8.8 | 4.5 | 4.4 | 6.4 | 5.0 | 5.2 |
| 1973-1982 | 2.1 | 0.2 ^{c/} | 4.6 | 1.0 | 2.9 | 2.6 | 4.7 | 0.4 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis and the Statistical Office of the United Nations, supplemented by the Monthly Bulletin of Statistics, vol. XXXVI, no.11 (November 1982), with estimates by the UNIDO secretariat.

^{a/} Preliminary figures

^{b/} Estimates

^{c/} Figure refers to the period 1973-1980

TABLE 8. SHARE OF WORLD MANUFACTURING VALUE ADDED (EXCLUDING CHINA) BY ECONOMIC GROUPING, AT CONSTANT (1975) PRICES, SELECTED INDUSTRIAL BRANCHES, 1970, 1975 AND 1980.

(Percentage)

| Branch | ISIC | Developing countries | | | Centrally planned economies | | | Developed market economies | | |
|--|-------------------|----------------------|------|------|-----------------------------|------|------|----------------------------|------|------|
| | | 1970 | 1975 | 1980 | 1970 | 1975 | 1980 | 1970 | 1975 | 1980 |
| Food products | 311/2 | 13.9 | 13.8 | 15.1 | 25.4 | 27.8 | 26.9 | 60.7 | 58.4 | 58.1 |
| Beverages | 313 | 12.8 | 14.5 | 18.6 | 21.7 | 23.7 | 23.8 | 65.5 | 61.8 | 57.5 |
| Tobacco | 314 | 27.1 | 29.0 | 30.7 | 14.9 | 15.3 | 16.8 | 58.0 | 54.8 | 52.5 |
| Textiles | 321 | 17.1 | 18.7 | 18.7 | 26.3 | 30.8 | 32.4 | 56.4 | 50.5 | 48.9 |
| Footwear | 324 | 9.3 | 11.3 | 11.1 | 36.8 | 41.4 | 44.3 | 53.9 | 47.4 | 44.6 |
| Wood and cork products | 331 | 9.7 | 11.0 | 12.0 | 19.8 | 23.4 | 22.7 | 70.5 | 65.6 | 65.3 |
| Paper | 341 | 6.6 | 7.7 | 8.2 | 7.2 | 9.6 | 8.7 | 86.2 | 82.8 | 83.1 |
| Printing and publishing | 342 | 6.3 | 6.9 | 6.1 | 5.7 | 7.3 | 6.9 | 88.0 | 85.8 | 86.9 |
| Industrial chemicals | 351 | 6.3 | 7.7 | 7.7 | 22.3 | 28.3 | 28.0 | 71.4 | 64.0 | 64.3 |
| Other chemicals | 352 | 14.1 | 17.4 | 18.0 | 6.3 | 8.0 | 7.5 | 79.6 | 74.6 | 74.5 |
| Petroleum refineries | 353 | 40.0 | 38.1 | 41.8 | 11.2 | 16.1 | 16.6 | 48.9 | 45.8 | 41.6 |
| Miscellaneous products of petroleum and coal | 354 | 10.3 | 12.9 | 14.6 | 38.7 | 40.7 | 41.5 | 51.0 | 46.4 | 43.9 |
| Rubber products | 355 | 10.8 | 12.7 | 14.2 | 16.4 | 21.0 | 21.6 | 72.7 | 66.2 | 64.2 |
| Pottery, china and earthenware | 361 | 11.9 | 12.7 | 13.1 | 27.8 | 35.5 | 40.5 | 60.3 | 51.8 | 46.4 |
| Glass | 362 | 8.2 | 10.5 | 9.9 | 19.0 | 25.9 | 27.9 | 72.8 | 63.7 | 62.2 |
| Other non-metallic mineral products | 369 | 8.7 | 10.5 | 12.1 | 31.3 | 36.2 | 34.6 | 60.0 | 53.3 | 53.3 |
| Iron and steel | 371 | 6.4 | 8.1 | 10.3 | 19.4 | 23.9 | 24.2 | 74.2 | 68.0 | 65.5 |
| Metal products, excluding machinery | 381 ^{a/} | 6.0 | 7.0 | 7.3 | 18.7 | 26.6 | 30.4 | 75.3 | 66.4 | 62.4 |
| Non-electrical machinery | 382 ^{a/} | 3.0 | 4.9 | 5.0 | 17.6 | 23.8 | 26.7 | 79.4 | 71.3 | 68.3 |
| Electrical machinery | 383 ^{a/} | 5.1 | 6.2 | 6.6 | 18.5 | 25.3 | 26.3 | 76.4 | 68.5 | 67.2 |
| Transport equipment | 384 ^{a/} | 5.5 | 7.5 | 7.5 | 16.9 | 23.1 | 27.3 | 77.6 | 69.4 | 65.2 |

Source: UNIDO data base; information supplied by the United Nations Statistical Office, with estimates by the UNIDO secretariat.

a/ Shares for branches within ISIC 38 may be somewhat distorted, due to variations in the national reporting practices of several important producers of fabricated metal products, machinery, and transport equipment.

TABLE 9. SHARE OF WORLD MANUFACTURING VALUE ADDED (EXCLUDING CHINA) FOR ALL DEVELOPING COUNTRIES, LEAST DEVELOPED COUNTRIES AND DEVELOPING REGIONS, AT CONSTANT (1975) PRICES, SELECTED INDUSTRIAL BRANCHES, 1970 AND 1979.

(Percentage)

| Branch | ISIC | All developing countries | | Of which: least developed countries | | Developing regions: | | | | | | | |
|--|-------------------|--------------------------|-------|-------------------------------------|------|---------------------|------|-----------|-------|---------------------|-------|---------------|-------|
| | | 1970 | 1979 | 1970 | 1979 | Africa | | West Asia | | South and East Asia | | Latin America | |
| | | | | | | 1970 | 1979 | 1970 | 1979 | 1970 | 1979 | 1970 | 1979 |
| Food products | 311/2 | 13.92 | 14.73 | 0.70 | 0.44 | 1.89 | 1.72 | 0.56 | 0.73 | 3.43 | 4.03 | 8.04 | 8.25 |
| Beverages | 313 | 12.79 | 17.66 | 0.38 | 0.40 | 1.86 | 2.56 | 0.60 | 1.12 | 1.92 | 3.58 | 8.41 | 10.40 |
| Tobacco | 314 | 27.10 | 30.76 | 1.14 | 1.18 | 2.92 | 3.33 | 3.37 | 4.39 | 12.04 | 13.79 | 8.78 | 9.24 |
| Textiles | 321 | 17.07 | 18.63 | 0.82 | 0.69 | 2.18 | 2.13 | 1.27 | 1.19 | 5.87 | 7.06 | 7.76 | 8.25 |
| Footwear | 324 | 9.35 | 10.94 | 0.28 | b/ | 1.46 | 1.67 | 0.45 | b/ | 1.74 | 2.13 | 5.69 | 6.49 |
| Wood and cork products | 331 | 9.69 | 11.54 | 0.26 | b/ | 1.29 | 1.32 | 0.41 | 0.42 | 3.50 | 4.73 | 4.49 | b/ |
| Paper | 341 | 6.56 | 7.86 | 0.04 | b/ | 0.66 | 0.75 | 0.26 | 0.31 | 1.34 | 1.84 | 4.31 | 4.96 |
| Printing and publishing | 342 | 6.35 | 6.14 | 0.06 | b/ | 0.54 | b/ | 0.12 | b/ | 1.30 | b/ | 4.39 | 3.64 |
| Industrial chemicals | 351 | 6.32 | 7.45 | 0.05 | b/ | 0.40 | 0.35 | 0.42 | 0.74 | 1.49 | 2.22 | 4.01 | 4.15 |
| Other chemicals | 352 | 14.11 | 17.56 | 0.18 | 0.19 | 0.98 | 1.32 | 0.44 | 0.62 | 3.37 | 3.96 | 9.32 | 11.65 |
| Petroleum refineries | 353 | 39.97 | 39.74 | 0.22 | 0.10 | 1.11 | 1.89 | 11.66 | 10.67 | 11.74 | 11.89 | 15.46 | 15.26 |
| Miscellaneous products of petroleum and coal | 354 | 10.25 | 14.12 | - | - | 1.50 | b/ | 1.06 | 1.02 | 2.51 | 4.50 | 5.19 | 6.29 |
| Rubber products | 355 | 10.83 | 13.22 | 0.03 | b/ | 0.94 | b/ | 0.39 | 0.27 | 2.82 | 4.03 | 6.67 | 7.85 |
| Pottery, china and earthenware | 361 | 11.95 | 13.00 | b/ | b/ | 0.53 | b/ | 0.81 | b/ | 2.23 | 2.19 | 8.39 | 9.53 |
| Glass | 362 | 8.19 | 10.02 | 0.13 | b/ | 0.52 | b/ | 0.54 | 0.62 | 2.01 | b/ | 5.11 | 5.86 |
| Other non-metallic mineral products | 369 | 8.67 | 11.58 | 0.14 | 0.12 | 0.91 | 0.92 | 0.48 | 0.79 | 2.28 | 3.48 | 5.00 | 6.38 |
| Iron and steel | 371 | 6.38 | 9.54 | 0.05 | 0.06 | 0.37 | 0.40 | 0.49 | 0.60 | 1.28 | 2.06 | 4.24 | 6.48 |
| Metal products, excluding machinery | 381 ^{a/} | 5.96 | 7.07 | 0.08 | b/ | 0.57 | 0.61 | 0.35 | b/ | 1.21 | 1.50 | 3.83 | 4.67 |
| Non-electrical machinery | 382 ^{a/} | 2.97 | 4.83 | 0.01 | b/ | 0.10 | 0.12 | 0.10 | 0.20 | 0.70 | 0.98 | 2.07 | 3.53 |
| Electrical machinery | 383 ^{a/} | 5.08 | 6.65 | 0.01 | b/ | 0.22 | 0.27 | 0.12 | 0.19 | 1.25 | 2.34 | 3.50 | 3.85 |
| Transport equipment | 384 ^{a/} | 5.51 | 7.18 | 0.02 | b/ | 0.25 | 0.36 | 0.10 | 0.22 | 1.03 | 1.33 | 4.13 | 5.26 |

Source: UNIDO data base; information supplied by the United Nations Statistical Office, with estimates by the UNIDO secretariat.

^{a/} Shares for branches within ISIC 38 may be somewhat distorted, due to variations in the national reporting practices of several important producers of fabricated metal products, machinery, and transport equipment.

^{b/} Figures are not shown separately because the underlying data from which they would have been derived do not meet minimum standards of quality.

TABLE 10. STRUCTURE OF NET MANUFACTURING OUTPUT, BY ECONOMIC GROUPING, AT CONSTANT (1975) PRICES, 1963, 1973 AND 1979
(Percentage)

| Branch | ISIC | Developing countries ^{a/} | | | Centrally planned economies | | | Developed market economies | | |
|---|-------|------------------------------------|-------|-------|-----------------------------|-------|-------|----------------------------|-------|-------|
| | | 1963 | 1973 | 1979 | 1963 | 1973 | 1979 | 1963 | 1973 | 1979 |
| Food products | 311/2 | 17.7 | 13.7 | 13.1 | 15.3 | 11.9 | 9.7 | 10.1 | 8.3 | 8.5 |
| Beverages | 313 | 3.1 | 2.7 | 3.3 | 2.7 | 2.0 | 2.0 | 2.1 | 1.9 | 1.9 |
| Tobacco | 314 | 3.4 | 2.4 | 2.3 | 1.0 | 0.7 | 0.6 | 1.0 | 0.7 | 0.7 |
| Textiles | 321 | 13.4 | 10.1 | 8.8 | 8.8 | 7.0 | 6.0 | 5.4 | 4.5 | 3.9 |
| Wearing apparel | 322 | 3.4 | 2.5 | 2.3 | 5.4 | 4.6 | 4.3 | 3.6 | 2.9 | 2.6 |
| Leather and fur products | 323 | 0.8 | 0.5 | 0.5 | 1.0 | 0.7 | 0.6 | 0.6 | 0.4 | 0.4 |
| Footwear | 324 | 1.3 | 0.9 | 0.8 | 2.1 | 1.5 | 1.4 | 1.0 | 0.6 | 0.6 |
| Wood and cork products | 331 | 2.5 | 2.1 | 2.0 | 2.7 | 1.9 | 1.5 | 2.4 | 2.2 | 1.9 |
| Furniture and fixtures excluding metal | 332 | 1.3 | 1.1 | 0.9 | 1.4 | 1.4 | 1.4 | 1.9 | 2.0 | 2.0 |
| Paper | 341 | 2.3 | 2.4 | 2.3 | 1.2 | 1.1 | 0.9 | 3.9 | 3.8 | 3.8 |
| Printing and publishing | 342 | 2.8 | 2.4 | 1.9 | 1.0 | 1.0 | 0.8 | 5.1 | 4.3 | 4.3 |
| Industrial chemicals | 351 | 2.4 | 3.9 | 4.2 | 3.8 | 5.4 | 5.7 | 3.4 | 5.2 | 5.7 |
| Other chemicals | 352 | 4.8 | 5.9 | 6.5 | 0.9 | 1.1 | 1.1 | 3.3 | 3.8 | 4.4 |
| Petroleum refineries | 353 | 10.7 | 10.5 | 8.9 | 0.9 | 1.4 | 1.4 | 1.5 | 1.7 | 1.6 |
| Miscellaneous products of petroleum and coal | 354 | 0.3 | 0.5 | 0.5 | 1.2 | 0.8 | 0.7 | 0.4 | 0.3 | 0.3 |
| Rubber products | 355 | 1.6 | 1.9 | 1.9 | 1.1 | 1.2 | 1.1 | 1.4 | 1.5 | 1.4 |
| Elastic products | 356 | 0.8 | 1.4 | 1.3 | 0.3 | 0.7 | 0.8 | 0.9 | 2.0 | 2.4 |
| Pottery, china and earthenware | 361 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.5 | 0.5 | 0.4 |
| Glass | 362 | 0.7 | 1.0 | 1.0 | 0.7 | 0.9 | 1.0 | 0.9 | 0.9 | 1.0 |
| Other non-metallic mineral products | 369 | 3.0 | 3.4 | 3.9 | 5.3 | 5.1 | 4.3 | 3.2 | 3.0 | 2.8 |
| Iron and steel | 371 | 4.3 | 4.9 | 5.6 | 7.5 | 5.8 | 4.9 | 6.9 | 6.7 | 5.8 |
| Non-ferrous metals | 372 | 1.8 | 1.9 | 2.0 | 2.4 | 2.8 | 2.6 | 1.8 | 1.8 | 1.7 |
| Metal products, excluding machinery | 381 | 4.0 | 4.5 | 5.0 | 30.6 | 37.6 | 43.6 | 7.2 | 7.2 | 7.0 |
| Non-electrical machinery | 382 | 2.7 | 5.4 | 5.4 | | | | 10.6 | 11.1 | 11.4 |
| Electrical machinery | 383 | 2.9 | 4.4 | 6.0 | | | | 6.7 | 8.6 | 9.3 |
| Transport equipment | 384 | 5.0 | 7.2 | 7.2 | | | | 10.4 | 10.4 | 10.3 |
| Professional and scientific equipment, photographic and optical goods | 385 | 0.3 | 0.4 | 0.4 | 2.0 | 2.7 | 2.9 | 7.8 | 1.9 | 2.3 |
| Other manufactures | 390 | 1.8 | 1.4 | 1.3 | | | | 1.9 | 1.7 | 1.7 |
| Total manufacturing | 300 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: UNIDO data base; information supplied by the Statistical Office of the United Nations, with estimates by the UNIDO secretariat.

a/ The data for 1963 cover 59 countries which, in 1975, accounted for 95 per cent of the manufacturing value added of all developing countries; the data for 1973 and 1979 cover 50 countries which, in 1975, accounted for 88 per cent of the manufacturing value added of all developing countries. Therefore, although the structures for all years are probably representative of developing countries as a whole, the variation in country composition should be noted.

Note: Data exclude Albania, China, Iceland, Luxembourg, Netherlands and New Zealand.

TABLE 11. GROWTH OF MANUFACTURING VALUE ADDED BY ECONOMIC GROUPING^{a/} AND BRANCH, AT CONSTANT (1975) PRICES, 1963-73 AND 1973-79.
(Percentage)

| Branch | ISIC | Developing countries | | Centrally planned economies | | Developed market economies | |
|---|-------|----------------------|---------|-----------------------------|---------|----------------------------|---------|
| | | 1963-73 | 1973-79 | 1963-73 | 1973-79 | 1963-73 | 1973-79 |
| Food products | 311/2 | 4.7 | 4.8 | 6.0 | 3.4 | 3.7 | 2.8 |
| Beverages | 313 | 6.0 | 9.3 | 5.4 | 6.1 | 5.1 | 2.6 |
| Tobacco | 314 | 4.3 | 4.5 | 4.2 | 3.9 | 2.4 | 1.7 |
| Textiles | 321 | 4.3 | 3.2 | 6.2 | 4.5 | 3.9 | -0.1 |
| Wearing apparel | 322 | 3.5 | 3.0 | 8.2 | 5.5 | 2.8 | 1.4 |
| Leather and fur products | 323 | 2.0 | 5.1 | 5.2 | 4.1 | 1.4 | 1.6 |
| Footwear | 324 | 3.6 | 3.0 | 5.6 | 4.8 | 0.8 | 0.5 |
| Wood and cork products | 331 | 5.8 | 5.7 | 5.0 | 3.3 | 4.1 | 0.7 |
| Furniture and fixtures, excluding metal | 332 | b/ | b/ | 8.5 | 7.2 | 6.1 | 1.9 |
| Paper | 341 | 7.0 | 4.3 | 7.7 | 4.7 | 5.5 | 1.8 |
| Printing and publishing | 342 | 5.5 | 1.1 | 8.4 | 4.7 | 3.8 | 2.5 |
| Industrial chemicals | 351 | 11.7 | 6.9 | 12.2 | 8.2 | 10.1 | 3.8 |
| Other chemicals | 352 | 9.1 | 7.0 | 10.9 | 6.7 | 7.4 | 5.1 |
| Petroleum refineries | 353 | 5.9 | 3.0 | 13.4 | 7.3 | 7.4 | 0.9 |
| Miscellaneous products of petroleum and coal | 354 | 14.7 | 4.5 | 3.2 | 4.2 | 1.0 | 0.7 |
| Rubber products | 355 | 7.8 | 5.4 | 8.7 | 6.0 | 5.6 | 2.2 |
| Plastic products | 356 | b/ | b/ | 16.9 | 10.5 | 15.1 | 5.9 |
| Pottery, china and earthenware | 361 | 5.3 | 4.5 | 8.9 | 7.8 | 4.4 | 1.0 |
| Glass | 362 | 8.1 | 6.0 | 10.6 | 9.5 | 5.9 | 3.6 |
| Other non-metallic mineral products | 369 | 8.7 | 7.6 | 8.2 | 4.0 | 4.3 | 1.6 |
| Iron and steel | 371 | 7.8 | 7.3 | 5.6 | 4.0 | 4.7 | -0.5 |
| Non-ferrous metals | 372 | 5.8 | 7.3 | 9.8 | 6.0 | 5.5 | 1.7 |
| Metal products, excluding machinery | 381 | 7.8 | 6.9 | } 10.9 | } 9.7 | 5.4 | 2.1 |
| Non-electrical machinery | 382 | 12.5 | 5.3 | | | 5.9 | 2.1 |
| Electrical machinery | 383 | 11.4 | 10.6 | | | 8.3 | 3.6 |
| Transport equipment | 384 | 9.6 | 4.7 | | | 5.4 | 2.7 |
| Professional and scientific equipment, photographic and optical goods | 385 | b/ | b/ | | | 6.3 | 4.9 |
| Other manufactures | 390 | b/ | b/ | 11.2 | 9.2 | 4.3 | 2.0 |

Source: UNIDO data base; information supplied by the Statistical Office of the United Nations, with estimates by the UNIDO secretariat.

a/ Excluding China

b/ Figures are not shown separately, because the underlying data from which they have been derived do not meet minimum standards of quality.

TABLE 12. INDEX NUMBERS OF INDUSTRIAL PRODUCTION IN MANUFACTURING (1975=100), FOR SELECTED COUNTRIES, 1963-1980

| Year | Developing countries of South and East Asia | | | | | | Developing countries of Latin America | | | Developed market economies | | | | |
|-------------------------|---|-----------|----------|-------------|-----------|----------|---------------------------------------|--------|--------|-----------------------------|--------|-------|----------------|---------------|
| | Hong Kong | Indonesia | Malaysia | Philippines | Singapore | Thailand | Argentina | Brazil | Mexico | Federal Republic of Germany | France | Japan | United Kingdom | United States |
| 1963 | 33 | 37 | 33 | 49 | 22 | 27 | 44 | 34 | 38 | 61 | 52 | 37 | 73 | 73 |
| 1964 | 36 | 37 | 37 | 49 | 23 | 32 | 53 | 36 | 45 | 66 | 55 | 42 | 80 | 78 |
| 1965 | 41 | 36 | 42 | 52 | 26 | 34 | 61 | 35 | 49 | 72 | 58 | 42 | 82 | 84 |
| 1966 | 47 | 37 | 48 | 55 | 29 | 38 | 61 | 40 | 54 | 73 | 63 | 47 | 83 | 91 |
| 1967 | 51 | 38 | 52 | 60 | 35 | 43 | 62 | 40 | 57 | 71 | 65 | 54 | 84 | 91 |
| 1968 | 60 | 41 | 56 | 63 | 41 | 46 | 66 | 46 | 63 | 79 | 70 | 62 | 91 | 96 |
| 1969 | 70 | 47 | 62 | 66 | 51 | 52 | 74 | 51 | 69 | 89 | 77 | 72 | 94 | 98 |
| 1970 | 80 | 52 | 64 | 72 | 61 | 56 | 79 | 58 | 75 | 94 | 82 | 81 | 95 | 92 |
| 1971 | 89 | 59 | 65 | 76 | 72 | 66 | 87 | 66 | 77 | 96 | 87 | 85 | 95 | 94 |
| 1972 | 100 | 67 | 72 | 81 | 84 | 75 | 92 | 76 | 83 | 99 | 93 | 93 | 97 | 103 |
| 1973 | 110 | 77 | 89 | 92 | 98 | 83 | 98 | 89 | 91 | 105 | 99 | 105 | 107 | 112 |
| 1974 | 93 | 89 | 97 | 96 | 102 | 91 | 104 | 95 | 97 | 105 | 102 | 103 | 107 | 105 |
| 1975 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 1976 | 122 | 109 | 118 | 108 | 111 | 115 | 96 | 111 | 104 | 106 | 107 | 113 | 104 | 109 |
| 1977 | 127 | 125 | 131 | 119 | 120 | 137 | 101 | 114 | 107 | 104 | 110 | 122 | 104 | 117 |
| 1978 | 144 | 140 | 148 | 128 | 134 | 148 | 93 | 123 | 117 | 106 | 109 | 130 | 105 | 122 |
| 1979 | 143 | 152 | 167 | 134 | 153 | 163 | 96 | 131 | 126 | 107 | 113 | 141 | 104 | 126 |
| 1980 | 150 | 165 | 188 | 143 | 167 | 169 | 102 | 142 | 134 | 108 | 113 | 128 | 93 | 119 |
| Averages: ^{a/} | | | | | | | | | | | | | | |
| 1963-1973 | 13.3 | 7.9 | 9.2 | 6.6 | 17.6 | 11.5 | 7.5 | 10.2 | 8.5 | 5.5 | 6.8 | 11.4 | 3.2 | 3.4 |
| 1973-1980 | 6.8 | 11.5 | 11.7 | 6.9 | 8.4 | 11.6 | -0.3 | 6.8 | 5.6 | 0.6 | 2.0 | 4.6 | -1.1 | 2.5 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis.

^{a/} Calculated from the annual data using a semi-log regression on time.

TABLE 13. GROWTH^{a/} OF LABOUR PRODUCTIVITY IN MANUFACTURING, BY ECONOMIC GROUPING AND FOR SELECTED DEVELOPING REGIONS, 1963-1973 AND 1973-1980
(Percentage)

| Branch | ISIC | Developing countries | | Latin America | | Developing Asia | | Centrally Planned Economies | | Developed Market Economies | |
|---|---------|----------------------|-----------|---------------|-----------|-----------------|-----------|-----------------------------|-----------|----------------------------|-----------|
| | | 1963-1973 | 1973-1980 | 1963-1973 | 1973-1980 | 1963-1973 | 1973-1980 | 1963-1973 | 1973-1980 | 1963-1973 | 1973-1980 |
| Food, beverages and tobacco | 31 | 2.2 | -0.9 | 0.5 | -0.1 | 4.0 | 0.2 | 3.2 | 2.5 | 3.1 | 2.7 |
| Textiles | 321 | 2.0 | -0.1 | 2.8 | 1.1 | 1.4 | 0.9 | 4.8 | 3.8 | 5.2 | 3.2 |
| Wearing apparel, leather, footwear | 322-324 | -0.2 | -2.6 | 1.6 | -2.2 | -1.4 | -1.6 | 4.2 | 4.2 | 1.2 | 1.7 |
| Food and wood products, including furniture | 33 | -0.3 | 1.4 | ... | ... | 0.3 | 3.9 | 5.3 | 4.5 | 3.4 | 1.7 |
| Paper and paper products, printing and publishing | 34 | 4.0 | -0.3 | 2.2 | -1.8 | 1.6 | 1.8 | 4.7 | 3.3 | 3.6 | 2.4 |
| Chemicals | 35 | 4.4 | -0.4 | 5.3 | 0.2 | 5.2 | -0.9 | 6.6 | 5.2 | 6.1 | 3.5 |
| Non-metallic minerals | 36 | 2.7 | 1.2 | 3.5 | 1.0 | 3.2 | 2.5 | 4.7 | 3.7 | 4.3 | 3.1 |
| Basic metals | 37 | 1.3 | 1.7 | 3.9 | 0.3 | -0.9 | 4.3 | 4.7 | 3.4 | 4.6 | 1.9 |
| Metal products, machinery and equipment | 33 | 4.4 | 2.4 | 5.9 | 2.0 | 1.8 | 5.1 | 7.3 | 7.0 | 3.7 | 2.8 |
| Total manufacturing | | 2.8 | 0.7 | 3.3 | 0.8 | 2.5 | 1.9 | 5.7 | 5.2 | 4.0 | 2.8 |
| Light manufacturing | | 1.3 | -0.2 | 1.4 | -0.3 | 1.0 | 1.2 | 4.3 | 3.8 | 3.3 | 2.7 |
| Heavy manufacturing | | 4.0 | 1.3 | 5.0 | 1.4 | 4.0 | 2.3 | 6.1 | 5.8 | 4.4 | 2.9 |

Source: Based on information supplied by the Statistical Office of the United Nations.

a/ Calculated from annual data using a semi-log regression on time.

TABLE 14. SHARE OF ECONOMIC GROUPINGS IN WORLD MANUFACTURED EXPORTS^{a/} AT CURRENT PRICES, 1963-1981

(Percentage)

| Year | Developing countries | Centrally planned economies ^{b/} | Developed market economies |
|--------------------|----------------------|---|----------------------------|
| 1963 | 4.2 | 13.3 | 82.5 |
| 1964 | 4.3 | 12.8 | 82.9 |
| 1965 | 4.4 | 12.3 | 83.3 |
| 1966 | 4.5 | 11.6 | 83.9 |
| 1967 | 4.6 | 11.7 | 83.7 |
| 1968 | 4.5 | 11.0 | 84.6 |
| 1969 | 4.9 | 10.4 | 84.7 |
| 1970 | 5.0 | 10.1 | 84.9 |
| 1971 | 5.2 | 9.7 | 85.0 |
| 1972 | 5.7 | 9.9 | 84.4 |
| 1973 | 6.7 | 9.5 | 83.9 |
| 1974 | 6.8 | 8.4 | 84.7 |
| 1975 | 6.3 | 9.3 | 84.4 |
| 1976 | 7.4 | 8.9 | 83.7 |
| 1977 | 7.7 | 8.9 | 83.4 |
| 1978 | 8.1 | 8.7 | 83.2 |
| 1979 | 8.8 | 8.4 | 82.9 |
| 1980 | 9.2 | 8.1 | 82.7 |
| 1981 ^{c/} | 9.2 | 8.7 | 82.1 |

Source: UNCTAD, Handbook of International Trade Statistics, various issues; and Monthly Bulletin of Statistics, various issues, with estimates by the UNIDO secretariat.

a/ Codes 5-8 (except 68) of the Standard International Trade Classification, Revised (United Nations publication, Sales No.E.68.XVII.6) (SITC, Revised).

b/ Excluding trade among the centrally planned economies of Asia.

c/ Estimates.

TABLE 15. WORLD TRADE IN MANUFACTURES ^{a/}, BY ORIGIN, DESTINATION AND ECONOMIC GROUPING, AT CURRENT PRICES, SELECTED YEARS

| Origin of exports | Year | Exports to developing countries | | Exports to centrally planned economies ^{b/} | | Exports to developed market economies | |
|---|------|---------------------------------|--------------------|--|--------------------|---------------------------------------|--------------------|
| | | Value (millions of dollars) | Share (percentage) | Value (millions of dollars) | Share (percentage) | Value (millions of dollars) | Share (percentage) |
| Developing countries | 1963 | 1 404 | 41.2 | 102 | 3.0 | 1 902 | 55.8 |
| | 1970 | 3 413 | 35.4 | 472 | 4.9 | 5 756 | 59.7 |
| | 1975 | 11 335 | 37.9 | 1 172 | 3.7 | 18 352 | 58.3 |
| | 1979 | 28 903 | 35.2 | 1 747 | 2.1 | 51 488 | 62.7 |
| | 1980 | 38 599 | 38.7 | 2 878 | 2.9 | 58 197 | 58.4 |
| Centrally planned economies ^{b/} | 1963 | 1 635 | 15.1 | 8 045 | 74.3 | 1 147 | 10.6 |
| | 1970 | 2 833 | 15.2 | 13 381 | 70.2 | 2 772 | 14.6 |
| | 1975 | 6 790 | 14.6 | 31 835 | 68.6 | 7 756 | 16.7 |
| | 1979 | 12 955 | 16.5 | 49 977 | 63.7 | 15 483 | 19.7 |
| | 1980 | 15 782 | 18.0 | 54 692 | 62.3 | 17 268 | 19.7 |
| Developed market economies | 1963 | 16 950 | 25.7 | 2 168 | 3.3 | 46 740 | 71.0 |
| | 1970 | 32 827 | 20.5 | 6 269 | 3.9 | 121 257 | 75.6 |
| | 1975 | 111 289 | 26.5 | 26 518 | 6.3 | 282 152 | 67.2 |
| | 1979 | 188 794 | 24.3 | 38 051 | 4.9 | 550 604 | 70.8 |
| | 1980 | 233 718 | 26.0 | 42 430 | 4.7 | 622 646 | 69.3 |

Source: See table 14.

^{a/}SITC codes 5-8, excluding 68

^{b/}Excluding trade among the centrally planned economies of Asia.

TABLE 16. BALANCE OF TRADE FOR SELECTED ECONOMIC GROUPINGS AND DEVELOPING REGIONS, AT CURRENT PRICES,
SELECTED YEARS

(Millions of U.S. dollars)

| | 1963 | 1970 | 1973 | 1975 | 1978 | 1980 |
|--------------------------------|----------|----------|----------|-----------|-----------|-----------|
| Least developed countries | -236.0 | -473.9 | -1,528.5 | -3,383.2 | -4,729.8 | -6,612.9 |
| Developing Africa | -792.3 | 341.2 | 497.4 | -7,227.7 | -15,409.7 | 18,716.6 |
| OPEC members | -235.7 | 1,098.1 | 1,717.5 | 72.4 | -2,246.2 | 32,417.4 |
| Others | -556.6 | -756.9 | -1,220.2 | -7,300.1 | -13,163.6 | -13,700.8 |
| Developing West Asia | 1,339.7 | 2,129.0 | 8,755.4 | 28,856.7 | 16,516.5 | 51,406.1 |
| OPEC members | 1,850.0 | 2,768.8 | 9,705.5 | 33,155.1 | 21,441.1 | 60,857.4 |
| Others | -510.3 | -639.7 | -950.1 | -4,298.4 | -4,924.5 | -9,451.2 |
| Developing South and East Asia | -1,358.6 | -1,943.2 | 3,182.0 | -1,631.1 | -6,091.5 | -18,663.7 |
| OPEC members | 486.2 | 356.6 | 4,269.1 | 4,721.9 | 1,732.8 | 3,710.4 |
| Others | -1,844.8 | -2,299.8 | -1,087.1 | -6,353.0 | -7,824.3 | -22,374.1 |
| Latin America | 1,200.9 | -1,548.6 | -377.1 | -11,418.2 | -8,174.9 | -9,529.4 |
| OPEC members | 1,765.6 | 453.3 | 1,763.2 | 1,920.3 | -5,529.6 | 4,065.1 |
| Others | -564.7 | -2,001.9 | -2,140.3 | -13,338.5 | -2,645.3 | -13,594.5 |
| All developing countries | 389.6 | -1,021.7 | 12,057.6 | 8,579.6 | -13,159.6 | 41,929.6 |
| OPEC members | 3,866.1 | 4,676.7 | 17,455.4 | 39,869.8 | 15,398.1 | 101,050.3 |
| Semi-industrialized countries | -1,902.4 | -2,978.1 | -1,308.3 | -17,815.7 | -9,705.8 | -34,197.7 |
| Other developing countries | -1,574.1 | -2,720.2 | -4,089.5 | -13,474.4 | -18,851.8 | -24,922.9 |
| Developed market economies | 3,033.8 | 8,409.1 | 5,356.0 | 6,962.1 | 14,988.7 | -73,865.3 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis.

TABLE 17. SHARE OF INVESTMENT^a IN GROSS DOMESTIC PRODUCT FOR SELECTED ECONOMIC GROUPINGS
AND DEVELOPING REGIONS AT CURRENT PRICES, SELECTED YEARS

(Percentage)

| | 1963 | 1970 | 1973 | 1975 | 1978 | 1980 |
|--------------------------------|------|------|------|------|------|------|
| Least developed countries | 11.4 | 11.3 | 11.8 | 14.4 | 14.2 | 15.5 |
| Developing Africa | 14.5 | 17.5 | 20.9 | 27.1 | 27.7 | 25.5 |
| OPEC members | 15.2 | 19.0 | 26.3 | 33.0 | 35.1 | 28.9 |
| Others | 14.3 | 16.8 | 17.9 | 22.8 | 21.8 | 21.7 |
| Developing West Asia | 14.5 | 17.4 | 17.0 | 19.4 | 28.4 | 24.6 |
| OPEC members | 13.1 | 14.9 | 14.7 | 16.8 | 30.9 | 25.5 |
| Others | 15.4 | 19.0 | 19.1 | 23.5 | 24.4 | 22.3 |
| Developing South and East Asia | 16.7 | 18.5 | 19.2 | 23.4 | 22.9 | 23.6 |
| OPEC members | 9.9 | 15.7 | 18.0 | 25.4 | 18.7 | 17.6 |
| Others | 17.7 | 19.0 | 19.5 | 22.6 | 24.7 | 25.9 |
| Latin America | 20.2 | 22.5 | 22.8 | 26.7 | 26.5 | 26.8 |
| OPEC members | 20.2 | 28.6 | 30.3 | 30.2 | 40.2 | 24.9 |
| Others | 20.2 | 22.0 | 22.2 | 26.4 | 25.1 | 27.0 |
| All developing countries | 17.6 | 20.0 | 20.9 | 24.9 | 25.8 | 25.4 |
| OPEC members | 14.7 | 19.3 | 21.9 | 25.7 | 29.3 | 24.6 |
| Semi-industrialized countries | 19.4 | 21.5 | 22.5 | 26.6 | 26.3 | 27.9 |
| Other developing countries | 15.6 | 17.0 | 16.6 | 19.1 | 19.4 | 19.6 |
| Developed market economies | 21.7 | 23.0 | 24.6 | 21.2 | 22.8 | 22.6 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis.

^a/ Gross capital formation

TABLE 18. NET CAPITAL INFLOWS^{a/} FOR SELECTED ECONOMIC GROUPINGS AND DEVELOPING REGIONS, SELECTED YEARS

(Millions of U.S. dollars)

| | 1963 | 1970 | 1973 | 1975 | 1978 | 1980 |
|--------------------------------|----------|-----------|----------|-----------|-----------|-----------|
| Least developed countries | -274.2 | -504.4 | -1,585.2 | -3,266.1 | -4,486.8 | -6,320.3 |
| Developing Africa | -1,430.4 | -1,259.2 | -2,172.5 | -9,815.5 | -19,196.2 | 11,989.7 |
| OPEC members | -234.6 | 338.8 | -103.7 | -1,541.6 | -4,493.3 | 28,137.7 |
| Others | -1,195.8 | -1,598.0 | -2,068.8 | -8,273.9 | -14,702.9 | -16,148.0 |
| Developing West Asia | 307.1 | 795.6 | 5,650.3 | 26,405.8 | 20,390.0 | 60,553.2 |
| OPEC members | 784.3 | 1,146.0 | 5,444.2 | 29,501.1 | 24,061.4 | 67,453.1 |
| Others | -477.1 | -350.4 | 206.1 | -3,095.3 | -3,671.4 | -6,899.9 |
| Developing South and East Asia | -4,980.8 | -9,369.9 | -390.2 | -3,723.5 | -10,322.9 | -22,117.6 |
| OPEC members | -2,888.5 | -6,584.2 | 1,542.1 | 3,164.6 | -2,871.8 | 947.8 |
| Others | -2,092.3 | -2,785.7 | -1,932.4 | -6,888.1 | -7,451.1 | -23,065.4 |
| Latin America | -920.2 | -6,060.4 | -8,484.8 | -16,645.5 | -20,061.5 | -26,957.9 |
| OPEC members | 840.5 | -273.3 | 49.4 | 1,904.6 | -5,898.0 | 4,121.9 |
| Others | -1,760.6 | -5,787.1 | -8,534.2 | -18,550.1 | -14,163.5 | -31,079.8 |
| All developing countries | -7,024.2 | -15,893.9 | -5,397.2 | -3,778.6 | -29,190.5 | 23,467.4 |
| OPEC members | -1,498.3 | -5,372.7 | 6,932.1 | 33,028.8 | 10,798.4 | 100,660.5 |
| Semi-industrialized countries | -2,891.6 | -5,977.6 | -5,639.3 | -10,738.8 | -18,261.6 | -48,827.0 |
| Other developing countries | -2,634.3 | -4,543.6 | -6,690.0 | -16,068.7 | -21,727.3 | -28,366.0 |
| Developed market economies | 8,768.2 | 15,418.1 | 21,947.3 | 19,722.6 | 39,425.4 | -34,409.0 |

Source: UNIDO data base; information supplied by the Office of Development Research and Policy Analysis.

^{a/} Net capital inflow financed from transfer payments, as well as foreign aid and borrowings, foreign currency reserves, etc. Includes direct foreign investment.

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INDUSTRIAL DEVELOPMENT STRATEGIES AND
POLICIES FOR DEVELOPING COUNTRIES*

PAPERS FROM THE HIGH-LEVEL EXPERT GROUP MEETING HELD AT LIMA IN APRIL 1983
PREPARATORY TO THE FOURTH GENERAL CONFERENCE OF UNIDO

VOLUME II

Background documentation on specific issues

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Background Documentation on Specific Problems and Topics
in the area of Strategies and Policies

STRATEGY FOR ECONOMIC DEVELOPMENT OF THE PEOPLE'S REPUBLIC OF BULGARIA IN THE 1980s
by Ivan Angelov*

ECONOMIC AND SOCIAL PRIORITIES IN THE 1980S

The main socio-economic objective of Bulgaria during the current decade is the strengthening of the production basis and the socio-economic relations inherent to the developed socialist society. That means: considerable improvement of the living standard of the population by complex satisfaction of its material, spiritual and social needs; improvement of the living and working environment in order to ensure higher working and social activity of all members of society and harmonious development of the personality. These objectives are to be achieved through an increased production achieved by way of a higher efficiency.

The implementation of this major socio-economic objective requires the identification of certain priorities in the economic and social areas. There are four most important economic priorities.

The first of these priorities is to increase the level of intensification of economic growth. That means that the planned growth rates should be achieved mainly through higher efficiency in the utilization of production resources and not by commitment of additional resources—manpower, capital, materials and energy.

Complex measures are being undertaken for considerable upgrading the skill of the manpower at all levels, for rationalizing the organization and management of the working processes, and for substantial expansion of the area of application of various economic incentives and disincentives aiming at the individual workers, the factories and the state economic corporations. All this is expected to generate relatively high growth rates of labour productivity throughout the 1980s.

Various measures are also being taken for improving the utilization of capital, for upgrading the quality of both existing and new production capacities, for considerable improvements throughout the whole investment cycle, for radical rationalization of industrial sectoral, sub-sectoral and

* Mr. Ivan Angelov, Senior Researcher, Institute of Economics, Academy of Sciences, Bulgaria.

product structures as well as the structures of fixed and working capital, and for substantial expansion of the room of application of economic policy measures in order to create the required economic climate. All these important measures are expected to help, first, to gradually abate the increasing trend in capital intensity and, later on, to stabilize it and even to turn towards its gradual reduction.

Vigorous measures are being and will be taken to reduce the physical expenditures of raw materials, fuels and energy per unit of output in order to relax the high dependence on the import of expensive materials and energy sources as well as on the ever growing extraction costs at home. To achieve this, action is being taken for improving materials processing technologies, for recycling, for rationalization of production structures as well as the composition of the raw materials and of the energy sources used, and for broader application of economic incentives and disincentives.

Such an orientation of the economic growth strategy for the next 10-15 years is indispensable for medium-level developed economy of Bulgaria^a, which ranks somewhere between the advanced developing countries and the developed ones. There is no other way but a complex and comprehensive intensification, i.e. increasing the role of economic efficiency as a factor of growth. This is imposed on the country by both the internal economic condition - limited availability of production factors - and the external economic conditions - deteriorated terms-of-trade of the 1970s which is continuing in the 1980s. This deterioration of the overall economic conditions requires in an imperative manner a radical orientation of the economy towards more efficient utilization of the limited resources available.

Such reorientation is an exceptionally complex process with multiple socio-economic and techno-economic implications. It is only natural at a time of such radical reorientation from quantity to quality to allow some slowing down of the growth rates in the 1980s presently in the range of

4-5%. This is the only way, under the present conditions, to readjust the economy and prepare the necessary prerequisites for a dynamic and stable growth in the 1990s.

The second priority is a considerable improvement of the technological and quality level of the final products for the domestic and international markets. The emphasis on science and technology and on structural and investment policies is upgrading the technological level and the quality of output. This means reducing the importance of quantitative indicators at all levels of planning and orientation towards qualitative criteria. Larger and larger portions of investments will be allocated for upgrading the quality and for ensuring dynamic, efficient, competitive exports and higher quality goods for the domestic market to meet the ever growing and more sophisticated demands of the population.

This orientation of the economy would also mean in practice a declining role of quantitative, and an increasing role of qualitative, criteria for assessment of end results of any economic activity as well as in the application of economic incentives and disincentives towards the producers.

The third priority is the vigorous rationalization of the economic structures, greater consistency in the components of economic growth, and increasing the reserve margin in their planning. What is meant is a more rational relationship between the first and second subdivisions of the national production system - between groups A and B of industry, between mining and manufacturing industries - and between various branches and sub-branches of industry; radical changes in the product structures; rationalization of the structural characteristics of the population and particularly of labour resources; rationalization of production capital, of the material balances for the most important strategic and in short supply raw materials and primary energy resources; a more rational relationship between the national construction programme and the capacities of construction industry; and increasing the share of final social product and of the consumption fund in the gross social product.

The fourth priority is the strengthening of the integration of our economy with the economies of the other CMEA countries and the expansion of the mutually advantageous international economic cooperation with both the developed and developing countries. At present the Bulgarian economy is open. This will be even more typical in the future: the volume of foreign trade will get closer and closer to the volume of the national income produced. In spite of the growing difficulties due to deterioration of the terms-of-trade for us on the world market, the intention is to maintain in the future faster rates of the volume of foreign trade as compared to national income. This margin will be greater in our exchanges with developing countries.

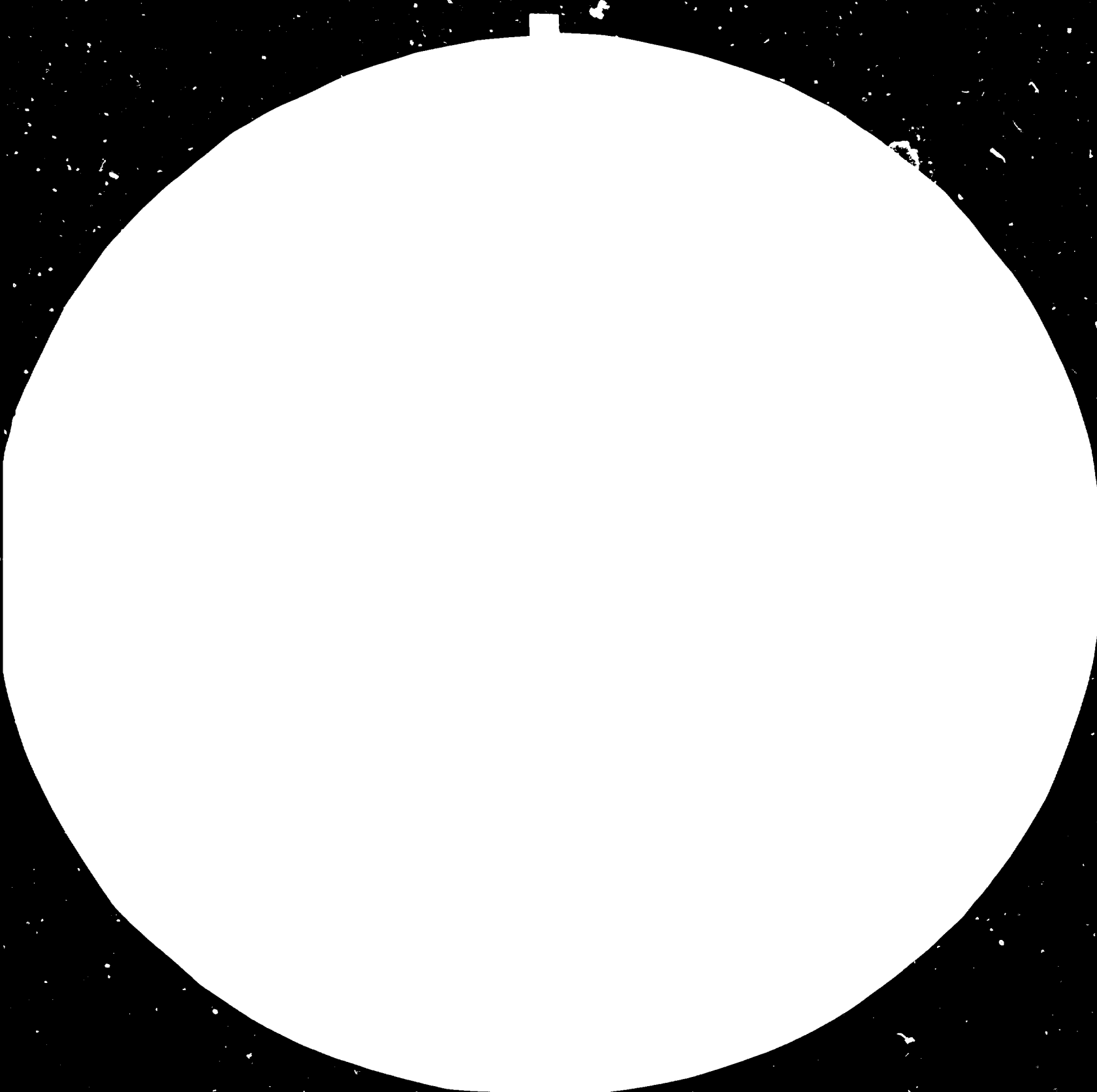
The long-term strategy envisages ever growing socio-economic orientation of economic development. This adds to the already existing strong social emphasis in Bulgaria's overall development strategy.

Some important priorities have been identified in the social area. There are two that can be considered the most important.

First, maintaining the present relatively high rates of growth of the overall consumption fund and of the real incomes of the population and making further efforts for their even more equitable distribution by increasing the wages as well as the minimal and low pensions. Additional measures will be taken for substantial increases in the public consumption funds through which the population gets additional income (in addition to wages and other forms of direct remuneration) by way of subsidized and/or free-of-charge education or other forms of upgrading skills, holidays, health services, special care for mothers and children, (including three years paid maternity leave), transport services, food in the cafeterias belonging to factories or offices, housing, cultural and sporting facilities.

The greater social orientation of the growth rates can also be noticed in the improving ratio between the dynamics of the national consumption fund and the produced national income. It is also envisaged that the

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total volume of commodities - both in monetary terms and in variety - provided to the market should grow faster than the purchasing power of the population.

Secondly, the greater social orientation of the economic growth will also materialize in an accelerated over-all schedule (as compared to previous social programmes) for the solution of some important social problems: providing an independent home for each family; substantial improvement of the quality of medical services while retaining their free-of-charge nature; providing subsidized holiday opportunities to everybody who works; considerable improvements in the system of transport, administrative, legal and banking services; and taking complex preventive measures for maintaining the ecological balance and even for some improvements of the environment.

INDUSTRIAL COOPERATION BETWEEN THE PEOPLE'S REPUBLIC OF BULGARIA AND THE DEVELOPING COUNTRIES IN THE 1980S

The People's Republic of Bulgaria maintains active and mutually advantageous industrial cooperation with more than 70 developing countries. Undeniable success has been achieved in different areas of this co-operation due to the mutual interests, the complementarities in our economic structures and the growing industrial potential of Bulgaria and her partners in the developing world. The very fact that some 3-4 decades ago Bulgaria was at approximately the same level at which many developing countries are now is probably of some importance too. The ways and means used in Bulgaria to overcome the socio-economic backwardness during the past 2-3 decades may prove to be of some relevance to a number of developing countries which have set themselves the task of solving similar problems under their own specific conditions.

Cooperation between Bulgaria and developing countries has always been based on the principles of mutual benefit, equality and sovereignty of the partners; i.e., what is usually meant under the New International Economic Order. For Bulgaria there has never been and there will never be another approach in economic relations with developing countries but the rule of equality and justice.

Bulgarian international economic relations have been laid on a sound legal contractual basis: intergovernmental long-term agreements and contracts for trade, economic, scientific and technical co-operation as well as for co-operation in specific industrial fields.

The cooperation between Bulgaria and some developing countries is being carried out in a particularly favourable political climate. Intergovernmental agreements for bilateral cooperation until 1990 have been signed with some of these countries. This provides stability and complexity to our economic relations with these developing countries.

The planned character of the economy provides conditions for steady industrial cooperation with developing countries. This cooperation corresponds to the socio-economic priorities of these countries and promotes the fulfilment of their own national development plans and programmes. The industrial projects so established become an integral part of the national industrial complex of the countries concerned.

The Bulgarian exports to developing countries comprise mainly industrial goods: machinery, equipment, materials, etc. The increase in the share of the engineering industry products suits the priorities of these countries. The growing specialization within the CMEA would enable Bulgarian producers to offer a greater variety of industrial goods in the future.

The import from developing countries to Bulgaria squares with the capacities and interests of these countries and with their industrial strategies. The commodity list reflects an increase and diversification of the import of semi-manufactured and finished industrial products. Some of these products are consumer goods such as: garments, shoes, household appliances, medicines, etc. Others are products of the recently developed heavy industries in these countries: chemicals, tools, devices, steel-hawser, cables, insulation materials, machinery.

The increase of the degree of processing of the imported raw materials and goods is a very important trend in the imports from developing countries: import of phosphate fertilizers instead of raw phosphates, cotton-yarn and fabrics instead of raw cotton, etc. These important phenomena reflect a process of gradual adaptation of the Bulgarian industry to the emerging new industrial structure and more diversified export potential of the developing countries.

Bulgaria promotes the development of new industrial capacities and the launching of production of new industrial products, based on domestic resources. The potential for such industrial co-operation is ever increasing in line with the stage of development reached by the economy. These opportunities are particularly broad and promising in the field of agro-industries, where Bulgaria possesses experience, traditions, skills and appropriate modern technologies. Industrial co-operation is developing successfully in other branches as well - such as light industries: textiles, leather and footwear, extraction and processing of minerals, construction industry, electric power generation, chemical industry as well as engineering industries.

An important feature of the industrial co-operation between Bulgaria and the developing countries is the provision for repayment of credits by the products of the newly established projects. This provides far more certainty in the start of the new production, which by itself generates resources for repayment of loans and does not cause balance-of-payment's difficulties to the developing countries concerned.

The training of tens of thousands of specialists and skilled workers is one of the important elements of the industrial co-operation between Bulgaria and developing countries. Such training is being carried out both in Bulgaria and on the spot in the respective countries as agreed upon within the framework of the joint intergovernmental commissions and their subsidiary bodies.

The industrial cooperation between Bulgaria and the developing countries materializes through various practical forms. A traditional form of co-operation is the selling of complete sets of equipment and production lines for different industrial branches. This form is very promising for future industrial economic relations, as it provides for very broad opportunities for the carrying out of various other industrial cooperation activities: preparation of feasibility studies, construction services, training of local personnel, provision of know-how, extension services, marketing and distribution services and so on.

Very promising also is the activity of the joint ventures, as well as international industrial specialization and subcontracting. The joint ventures help to establish longer lasting economic ties between the partners, who are equally involved and responsible for the production and marketing of the output. The main difficulties faced so far in this type of co-operation have been caused by the differences in the economic and legal arrangements of the countries concerned and by the insufficient experience.

The international specialization and production subcontracting with developing countries in the industrial field is in its early stages. The assembly of Bulgarian machines in developing countries is being carried out with a progressively growing local production of components. Contracts have been signed for deliveries of specialized products. There are many engineering industry products which provide room for international subcontracting with developing countries: hoisting and transport material-hanging equipment, machine tools, wood processing machines, electrotechnical equipment, agricultural machinery, tools and implements, etc. Opportunities for co-operation in other industrial branches are also available.

The promotion of some important industrial branches in the developing countries, which demand large investments and modern technologies provides opportunities for tri-lateral and multi-lateral industrial co-operation.

Bulgaria has certain experience in such co-operation - in the construction of complete plants and installations in developing countries in partnership with other socialist and Western countries. This form of co-operation will expand in the future. The ever growing economic integration among the CMEA countries offers additional opportunities for expansion of tri-lateral and multi-lateral industrial co-operation for the benefit of the developing countries.

The People's Republic of Bulgaria has been cooperating actively with UNIDO for many years in assisting developing countries in selected areas of industrial development. This co-operation will continue in the future on a broader basis.

STRATEGIES AND POLICIES FOR INDUSTRIALIZATION IN THE DEVELOPING COUNTRIES by
Ivan Angelov*

The development of the strategy for industrialization in the developing countries during the next 15-20 years is taking place under difficult internal and international conditions.

The world capitalist economy is still in recession. The 1980s are likely to be a difficult period for the developed Western countries. This will affect the economies of the other countries, and particularly the developing countries.

The growth rates in the socialist countries have also slowed down in recent years, due to the implications of the economic crises in the Western countries, the energy price, and the very important transformations of the economy from an extensive type of growth to an intensive one. However, even under such complicated conditions the economy of the socialist countries remains the most dynamic sub-system of the world economy.

The crises of the world capitalist economy badly affects the socio-economic progress of the developing countries. The growth rates declined in almost all developing countries and especially in the less developed ones, where the per capita gross national product has fallen. The social problems become more and more acute and the societies are confronted with very serious social conflicts. The 1980s promise to be extremely difficult for these countries.

The successful industrialization of the developing countries depends to a great extent on the choice of an over-all strategy for industrialization and its major components. This paper does not and cannot claim to have described all components of the strategy for industrialization and all policy measures supporting the industrialization strategy. The paper only tries to elaborate briefly on some key elements of the strategy for industrialization and some relevant policy measures. The paper does not claim to be exhaustive.

* Dr. Ivan Angelov, Senior Researcher, Institute of Economics,
Academy of Sciences, Bulgaria.

The choice, the elaboration and implementation of a strategy for industrialization and of an appropriate policy instrument is an exclusive prerogative of the peoples and governments of the developing countries. The thoughts, expressed here on these issues, only aim at contributing to the exchange of views on the subject matter. The intention is not to impose our views on these countries.

SOCIO-ECONOMIC ORIENTATION OF THE STRATEGIES FOR INDUSTRIALIZATION IN THE DEVELOPING COUNTRIES IN THE 1980S and 1990S

Nobody argues today that industrialization has to be done simply for the sake of industrialization. Industrialization is a means for solving socio-economic problems of vital importance for the nation and for overcoming the socio-economic backwardness.

Under the conditions of the developing countries this means: production of the necessary goods and services in terms of quantity, quality and structure, in order to satisfy the needs of the majority of the people and not mainly those of the rich classes and for export, achievement of fair distribution of income among the various social groups of society; providing jobs for everyone who can and wants to work; much more care for education and health services; liquidation of the inadmissible for our times absolute poverty and starvation of about 800 million people; satisfaction of the basic needs, such as food, clothing and shelter; integration into the stream of social and economic progress of all citizens of the developing countries, regardless of sex, religion, race, political convictions, tribal and cultural affiliations; upgrading the attractiveness of the working process; solution of the social problems, connected with the more even development of the different regions of the countries; preserving the ecological equilibrium and so on. In brief, industrialization must provide better working and living conditions for all members of the society. No social group should be deprived of access to the fruits of the industrialization.

When developing a strategy for industrialization the focal point must be man and not the machines, the technology or the institutions. One should look for such machines, technologies, institutional and economic structures - and if necessary should change existing social structures - so that the life of hundreds of millions of ordinary people becomes longer, more attractive, more productive and societies, in which these people live, become fairer both internally and internationally. This should, from a socialist point of view, be the main socio-economic content of a national, regional or international strategy for industrialization. The national strategies for industrialization may differ only in the ways and means of achieving these noble socio-economic objectives.

The Lima target for the 25% is well known. Equally well known are the different views concerning the attainability of this target. The setting up of such a global target for the developing countries by the year 2000 is a very important event. But it is not less important to take a look at the socio-economic content of these 25%. Because even if this quantitative target was achieved, the real impact on the well being of millions of ordinary people in the developing countries would be determined mainly by the socio-economic content of this industrialization. The life of these ordinary people will hardly improve and the number of starving, illiterate, unemployed and sick persons will hardly decline if behind these 25% there are economic structures which do not serve the majority of the population; if these structures and technology levels are tailored predominantly to the needs of the upper classes and the foreign markets; if the transnational corporations dominate entirely over the economies of the developing countries, behave as all-powerful owners, set up ultra-modern projects manned mainly by foreign skilled labour and having closer production ties with daughter enterprises in other countries rather than with production units from the host country; and if the foreign exchange earnings are not used for means of productions and import capital and other goods, necessary for the broad masses of the population.

Therefore the Lima target can be considered achieved only if these 25% contain industrial capacities and structures which serve the vital national interests of the developing countries, the interests of the majority of their population, if they contribute to the acceleration of economic growth, to overcoming the socio-economic backwardness and to facilitating an integration in the international division of labour, which would help to achieve the strategic national objectives.

Feelings are being expressed here and there that giving priority to the socio-economic orientation of the industrialization would be at the expense of the rates of economic growth. This might be true for the short-term. For the long-term however, a dynamic and stable growth can be guaranteed only by a strategy which draws dynamism from both the economic and socio-economic forces and aims at solving the major socio-economic problems of a nation.

The substantial difference between the notions "growth" and "development" boils down to this. The subject has been discussed at length during the last 15-20 years both in the developing and developed Western countries. It has been solved a long time ago in the socialist countries in theoretical as well as in practical terms. The results of the socio-economic orientation of the strategy for industrialization in the socialist countries are well known.

Industrialization, however, does not solve these important social and socio-economic problems of society automatically. A strategy which has been ill planned or implemented can even bring about a deterioration in existing social contradictions; an increase in the scale of starvation; more acute social inequality; larger unemployment and underemployment; more uneven regional development within a country; deteriorating living conditions in the urban industrial centres; brutally ruining centuries old moral and ethical values, without helping to create new ones, and providing for some sort of continuity between them.

Therefore, what developing countries need is a genuinely democratic, socially oriented strategy for industrialization. A strategy is needed, which not only sets up democratic socio-economic goals to the process of industrialization, but also provides democratic conditions, institutional mechanisms and means for their implementation. This strategy must give a clear answer to the question of industrialization for whom. One cannot rely here on automatism. It is well known that the hope that rapid economic growth would by itself solve the acute social problems of developing countries did not materialize. Even less promising are the models for industrialization offered by the developed Western countries. A characteristic feature of these models is the dominating role of the market, with its well known mechanism and driving forces. In this mechanism the rate of profit is the ultimate criterion for a sectoral or sub-sectoral allocation of resources. Such a criterion is not a suitable instrument in solving the social problems of the majority of the developing countries. There are numerous examples in the developing countries supporting this conclusion. They hardly need to be commented upon.

This logic of thinking leads us to the conclusion that only the state is able to develop and implement a truly human, democratic and socially oriented strategy for industrialization. This could be achieved only by a state with democratic institutions, taking into consideration first of all the interests of the majority of the population and providing real conditions for their participation in the elaboration of such a strategy and pertinent policies. One of the most important prerequisites for this is the establishment of such social relations, which would enable the development and implementation of a genuinely humanistic strategy for industrialization. These social relations can only be based on public ownership of the means of production - state and cooperative - and on appropriate mechanisms of distribution of income among the participants in the social national production process.

If we agree that industrialization should contribute to improving the living conditions of the entire population, it follows that it should also contribute to a gradual elimination of the social and economic contrasts. But does it really happen?

In the course of the last two to three decades one has witnessed a process of socio-economic polarization on a large scale within as well as among developing countries; between the developed and the developing countries. There are enough reasons to believe that this process will continue unabated in the 1980s and the 1990s. Taking into account the real purchasing power of the currencies, the average per capita income in the least developed countries in the year 1980 was 12 times lower than the level in the developed Western countries. By year 1990 this gap will grow bigger, because the per capita GNP of the least developed countries is expected to grow 1.8% per annum, as compared to 3.1% for the developed Western countries. And this is under an optimistic scenario for economic growth. In the pessimistic case the gap would be even larger.

The GNP per capita in 1980 of the least developed countries was 7.7 times lower than the level of the more advanced developing countries. By 1990 this gap is expected to be 9 times, and by 2000 over 10 times larger. The number of people living in conditions of absolute poverty is expected to increase by 1990 and 2000. Very complex socio-economic factors are at the roots of the process of differentiation among the developing countries. Differences in their historical backgrounds as well as substantial divergencies in their present socio-economic conditions may help in understanding the logic of this process. Such differences, however, should not overshadow the important common features and common strategic interests of the developing countries. The curbing of the process of socio-economic polarization at a national scale demands profound democratic, socio-economic restructuring in many developing countries. The checking of this process at an international scale necessitates large-scale democratic restructuring in the international economic order, in its entire mechanism and supporting institutions. Such reshaping would create the prerequisites for social equality and justice both at national and international scale.

THE ROLE OF THE STATE IN THE DEVELOPMENT AND IMPLEMENTATION OF STRATEGIES
FOR INDUSTRIALIZATION IN THE 1980S and 1990S

It is difficult to talk about strategy and policies for industrialization in developing countries without reviewing the role of the subject of this strategy - the national state. The only institution in these countries, capable of developing and implementing a national strategy and policies for industrialization is the state. Hardly anybody in our days would argue seriously against it.

Of course, the views of some followers of the neo-liberal school, who claim "that the end of sovereignty" has come, and that the "functions of the national state as an economic unit are historical facts", that the national state becomes "an anachronism" and so on, are well known. It turns out that, according to this school of thinking, the young national states in the developing countries have no other choice but to surrender their economic functions to the transnational corporations and to retain for themselves only the police functions - the maintenance of law and order.

The social practice in developing countries, and not only there, has rejected categorically such statements a long time ago, so that it is not necessary to do it again.

In these times one could hardly find a country, no matter of its ideological and political orientation, where the state does not exercise some kind of economic-organizational functions more or less actively: by using instruments for direct administrative interference, or economic policy measures; applying the methods of directive planning or of indicative planning; and so on. The choice of one way or the other is a sovereign right of the nations and their governments, bearing in mind the local conditions and dominating political orientation in these countries.

And if this subject is nevertheless dwelt upon, it is because it is believed that every developing country needs a clear cut concept and should make its own choice. The lack of a concept and of appropriate practical steps for its implementation may have negative implications for the economies of the developing countries concerned.

This is so because under the expected difficult domestic conditions for economic growth in the 1980s in most of the developing countries, the significance of an appropriate strategy and policies for industrialization increases considerably. As has already been pointed out the current decade offers extremely difficult international conditions for industrialization of the developing countries. This obliges the state to carry out as actively as possible its economic-organizational functions in order to soften at least partially some of the negative effects on the economies of the developing countries. Under these difficult internal and international conditions for industrialization, the developing countries have to determine by themselves whether it would be sufficient for the state to confine its economic activities just to some regulating, stimulating, indicative and other auxiliary supporting functions, aiming at the creation of a favourable economic climate for the private national capital or for the foreign capital.

The main issue however boils down to the following: should the economic-organizational function of the state in the developing countries be confined to such subsidiary supporting activities and does this correspond to the long-term strategic socio-economic interests of these countries?

May be the vital interests of the people of the developing countries demand much more under the anticipated difficult domestic and international conditions of economic growth? By saying much more one means: a decisive and direct interference of the state in running the over-all production and economic activities, in assuming direct economic functions and responsibilities, in mobilizing and allocating investments, in developing and implementing a strategy in the science and technology area, in

setting up more rational economic structures; in industrial manpower training, in creating highly efficient state and cooperative enterprises in the key sectors of the national economy, in exercising an effective control over the activities of the transnational corporations in the respective developing countries and in developing and implementing long-term strategies for participation in the international division of labour.

One also means a more active role of the state in the expansion and consolidation of the domestic market and its protection when and as necessary, in strengthening the export potential of the national industry, in stabilizing the national banking system, in selecting a suitable type of combination between extensive and intensive economic growth which would be the most appropriate for solving the existing social problems, and in exercising a full sovereignty over the national resources and over all economic activities taking place on the national territory.

It is difficult to imagine the successful fulfillment of these important economic-organizational functions without resorting to national planning - short, medium and long-term. In doing so, it is important to look for a rational combination between direct administrative orders and economic policy measures with a view of applying relevant incentives and disincentives and to create the most appropriate economic climate for achieving the targets of the plan.

In this connection, a clear strategy is needed on the role and place of the state sector in the industry and in the national economy and a clear definition of its social and economic functions. With a view of avoiding unnecessary often openly biased discussions on the role of the state sector one needs a comprehensive criterion or a set of criteria for assessment of its real socio-economic contribution to the national economy. Apparently narrowly defined economic or techno-economic criteria would not serve the purpose. Much broader and more comprehensive socio-economic criteria should be applied.

Is it not obvious that the public sector in the economy of developing countries is usually expected to perform multiple interrelated socio-economic functions, some of them being of strategic importance, such as: contributing to achieving full employment; more even distributing the industrial activities throughout the various regions of a country; developing infrastructure and key industrial sectors, such as basic industries, energy generation, capital goods; implementing appropriate science and technology strategies; investment, structural and foreign trade policies, strategies for human resources development; policies of labour remuneration and price policy and producing strategic raw materials as well as manufactured products guaranteeing independence, vis-à-vis potential foreign pressures and the national security of a country under certain circumstances? The successful performance of these extremely important strategic functions of the public sector cannot be properly evaluated by the rate of profit. The rate of profit is a too narrow and misleading criterion for assessment of the socio-economic functions of the public sector.

These considerations prove unambiguously that there is no ground for underestimating the role of the public sector in developing countries. Moreover, a neglect of the public sector contradicts the strategically vital socio-economic interests of the majority of the population in these countries. The public sector deserves an appropriate place, alongside with the private one in the industrial structures of the developing countries. Moreover, in some key sectors of the economy it has proven undeniably that it can perform vital socio-economic functions which the private sector can not.

The mechanism of the international economic cooperation should be used for rendering assistance to developing countries and especially to the least developed among them for strengthening the public institutions entrusted with running the economies at various levels. There are sufficient reasons to expect that the role of the state in the development and implementation of strategies and policies in developing countries will become a key political and economic issue in these countries in the 1980s and the 1990s. The experience of the socialist countries in this field

during the last 30-40 years is instructive enough. One can state without exaggeration the considerable socio-economic achievements in their industrial development would have been impossible without the active economic organizational functions of the state, applying various management instruments subject to the specific national circumstances and the international environment.

STRATEGY ON FINANCING THE INDUSTRIALIZATION OF DEVELOPING COUNTRIES IN THE 1980S AND 1990S

One of the most complex problems of the majority of the developing countries is the financing of their industrialization. The complexity and the difficulties connected with the industrial development financing during the next 15-20 years will probably increase. That requires a re-examination and updating of the existing strategies and the relevant economic policy measures in compliance with the changing external and internal economic development conditions in the 1980s and the 1990s.

For the majority of the developing countries the main sources of finance are the domestic savings. Such savings are collected through different channels and well-known instruments are used for the purpose: profit taxes, direct and indirect taxes and excises, tariffs, customs, domestic loans, personal savings, the mechanism of the credit system, etc. The rational use of the various economic policy instruments for the mobilization of domestic resources for savings has always been an issue in developing countries. These countries will be facing such problems during the next 15-20 years, naturally with different subtlety, depending on the specific situation. It is hardly possible to give instructions on the use of these instruments valid for all developing countries.

An important problem the majority of the developing countries face is the limited capacity for internal savings due to the low productivity, the low level of per capita income, its unfair distribution and irrational consumption. No matter how rational the domestic saving mechanism is, the

possibilities for increasing the saving rate are modest especially in the least developed countries; and there are limits that cannot be exceeded on economic, social and political grounds. The achieved rate of gross domestic savings in a number of developing countries is not at all low - about 22% in 1980 - and it is expected to grow slowly to about 24% by 1990.

The limited potential for domestic savings will probably be felt even stronger during the current decade, due to the anticipated greater increase of the prices, under which the developing countries purchase goods on the international capitalist market in comparison with their selling prices. That imposes additional restrictions on their possibilities for real accumulation. Added to that are the low efficiency in the use of the limited investments due to the long lasting and expensive construction, slow commissioning, underutilization of available capacities, etc. In one way or another this is a typical feature for most of the developing countries.

In this complex economic situation it is necessary to elaborate the most rational possible strategy for better mobilization and more rational utilization of the domestic financial resources applying the adequate economic policy measures. This task is especially difficult for the least developed countries.

A second major source for financing the industrialization are the different forms of external resources: aid, credit, foreign capital. At a first glance for the developing countries as a whole the share of the external resources is not so high - about 13% of the total investments in these countries - but for the least developed countries it is substantially higher. Besides that, the importance of the external financial resources is determined also by their utilization for import of machines, strategic materials, new technologies.

The use of foreign credits for industrial development financing is not a novelty for the developing countries. What is new during the last years and will be felt in the remaining part of the current decade is

the sharp increase in the share of the private bank credits, the aggravated terms for obtaining such credits and for their repayment due to well-known causes. This led to astronomic increases of the developing countries' foreign debts to a total of about 450 billion dollars at the end of 1981, and of about 620 billion dollars at the end of 1982. This was particularly a phenomena characterizing a number of countries, especially in Latin America.

The deterioration in the international economic climate makes the payment of the debts more difficult. And this leads to a chain aggravation of the internal economic conditions in the respective developing countries. This situation very much increases the relative share of the gross foreign exchange earnings from exports, used for payment of credits and interests on them. In some developing countries this share has reached dangerous limits, due to the large debts and drastically reduced foreign exchange earnings. That undoubtedly will restrict their capacities to take new credits during the 1980s. This in turn will contribute to the decline of their industrial growth during the 1980s and further delay the solving of outstanding acute economic and social problems. The balance-of-payments positions of some developing countries will be further aggravated by the reduced remittances of their emigrant workers in other countries due to the unfavourable economic conditions.

The deteriorating structure of the use of the acquired credits is also alarming. The share of the resources used for the payment of interest is growing from less than 20% in 1975, to about 30% by 1990 under favourable variants of growth, while the share of the credits used for imports and reserves is declining from about 50% in 1975 to less than 20% in 1990 under favourable variants of growth.

This alarming situation requires the governments of the developing countries to re-examine and to adapt their strategies on the utilization of foreign credits and to take adequate measures, using wisely the available instruments of economic policy.

The national strategies of the developing countries should be supported by adequate constructive measures of the developed Western countries who bear the major responsibility for the present situation due to their economic policies during the last 20-25 years. Turning to the facts, a lot has been said about the official development assistance of the OECD countries for the developing countries. Sometimes it is being used to illustrate the generosity of the developed Western countries in contrast to the socialist countries, whose aid - it is being said - is several times smaller.

Leaving aside the fact that uncomparable phenomena are being compared, what are the figures? According to the World Bank the official development assistance from the OECD countries reached its maximum of 27.3 billion dollars in 1980. At first sight this is an impressive figure. But, according to Tinbergen's assessment about 50-100 billion dollars are repatriated annually from the developing countries to the OECD countries in the form of excess profit. Very impressive figures indeed. Even more impressive is the margin between the granted aid and the excess profits received. This figure is so impressive that one can not refrain from asking a legitimate question - how long in the future will such "aid" be provided to the developing countries?

STRUCTURAL STRATEGY FOR THE INDUSTRY IN DEVELOPING COUNTRIES IN THE 1980S AND THE 1990S

It is well known that the branch structure of industry depends on many factors: the scale and structure of domestic and world markets, the available material resources, the skilled manpower, the participation in the international division of labour, etc. These and a number of other factors should be taken into account for the elaboration of a structural strategy in any developing country. Since the combination among these conditions varies in the different countries, it is natural to have different structures as well.

A strategic consideration in the formation of an industrial structure during the following 15-20 years should be increasing the degree of local processing of the mineral and agricultural raw materials and producing more manufactured goods for the domestic market and for export. However, the criterion for the elaboration of one or another industrial structure should not be only an economic one. The process of industrialization and the formation of an industrial structure is part of the broader and more complex process of deep social and economic transformations. The creation of an industrial structure should be subordinated to and serve that process.

The priority given to the development of industry and the formation of an appropriate industrial structure does not mean neglecting the other sectors of the economy. It is obvious that the development of industry should not be at the expense of agriculture. The economic links between the two basic sectors of the national economy leave their profound mark on the branch structure of industry. In principle, after an appropriate evaluation of the specific conditions, the developing countries should give priority to industrial branches which serve the agriculture and facilitate its modernization (agricultural tools, implements and machines, irrigation systems, fertilizers and other chemicals) as well as to agro-based industries such as the food processing industries and light industries.

Considering the possibilities and necessities, some of the basic industrial branches should also be developed: production of metals, chemicals, construction materials, as well as power production and some other branches of the manufacturing industry among which engineering industries are of particular importance. A suitable combination between modern and traditional industries should be maintained as both groups perform important economic functions in most of the developing countries. The efforts for overcoming the monocultural character of the economic structures of a number of developing countries should also continue.

The process of restructuring of world industry will also effect the sectoral structure of industry in developing countries during the next 15-20 years. The intensity of this impact will depend on the scale of the restructuring process. The socio-economic implications of such a restructuring for the developing countries will depend on the character of this process.

Obviously, the companies from the developed Western countries participating in this restructuring will follow their own interests. The developing countries have also their interests. An appropriate co-ordination of the partners' interests is needed by taking account of the national socio-economic objectives of the respective developing countries. If the future transfer of industrial activities to developing countries is allowed only because they have already become inefficient in the developed Western countries, or because of the changes in the market conditions, in the prices of primary commodities and power resources, in the salaries and wages, in the tariffs of transport services, or because of environmental pollution, it will not be difficult to guess who would benefit from such a restructuring.

The participation of transnational corporations in the restructuring process usually harms the developing countries. These companies concentrate their investments in highly monopolized industrial activities; these investments are not technologically and economically interconnected with the existing economic structure of the developing countries and they do not develop or complement it. These companies usually use technologies which are not suitable for the developing host countries and they neither ensure additional employment for the local labour forces, nor contribute to upgrading local skills for further usage in other important branches of the national economy. Quite the contrary, very often they deprive other branches of the local industry of their skilled staff by offering higher salaries, promises of a better professional career and other forms of material and moral incentives.

The so-called "Restricted Business Practices" of the transnational corporations cause considerable damages to the developing countries. The matter is that a greater part of the host country's profit is illegally taken out of it by means of artificially high prices of materials, semi-manufactured products, components, technical documentation, etc., supplied by the mother company or subsidiary branches in countries with lower profit taxation. For the scale of these operations one can judge by the fact that the so called "intra-company trade" - trade with the company - amounts to about 30% of the whole volume of world trade.

Other forms of such internal transactions used to harm the developing countries are: giving credit from one branch to another at an artificially high rate of interest; selling patents and licences of technologies at extremely high prices; and rendering different services at unjustified high tariffs, etc. Similarly, evasion of taxation, customs, foreign exchange and other laws are accomplished also by remittance of the foreign specialists' salaries.

Very often the governments of the developing countries are not able to counteract against these unfriendly practices of the transnational corporations. As a result, the interference of these giants in the restructuring in most cases leads to slowing down the rate of industrial development in the developing countries instead of assisting it. This is noted down in UNIDO publications, where Tinbergen declares that the transnational corporations at an increasingly high degree enter in conflict with the universal and national aspects of development both in the rich and poor countries.

The appetite of the transnational corporations is not confined only to industrial restructuring in developing countries. There is a good number of cases indicating that these companies often go beyond their official terms of reference by trying to "restructure" the political systems of the host countries, if the existing political structures are not to their liking. The examples are well known. Some of them are referred to in UN publications as well as in the Brandt Commission Report.

Perhaps, a clarification is needed here. It is evident from the above, that the consequences of that unequal "co-operation" with the transnational corporations are often harmful to developing countries. This "co-operation" boils down to an uncontrolled usage of the scarce resources of the developing countries by these companies. One must underline again the word "uncontrolled".

It does not however follow from this that one can not recommend the developing countries to avoid any co-operation with transnational corporations. Such a recommendation would have been unrealistic, incompatible with the existing economic conditions. The main objective of our observations is to stress on the necessity of a truly equal co-operation between those unequal partners; the absolute necessity for the authorities of developing countries to control effectively the activities of these companies; the unconditional and absolute subordination of the transnational corporations to the legislation of the host countries; and the need for international arrangements for helping developing countries in exercising such control. The branches and spheres of activities of the transnational corporations should be specified by the governments of developing countries and they must correspond to the socio-economic priorities and interests of their people.

In this respect, the socialist countries within their capacities, conduct a policy of industrial co-operation with developing countries aiming at the co-ordinated development of selected industrial branches, sub-branches and important commodities on a long-term basis. The principles and conditions of this co-operation are negotiated at the level of existing joint intergovernmental commissions, specified in details at the respective working levels and implemented within the contractual agreements.

Considerable untapped opportunities for improvement in the industrial structure are available through co-operation among developing countries on sub-regional, regional and inter-regional basis. The general principles

and the main directions of co-operation among them for developing mutually complementary industrial structures have been discussed at high-level meetings of the leaders of these countries. One of the promising forms is the establishment of joint enterprises and joint economic organizations. The efforts should now be directed to the concretization and implementation of the agreed general principles, as well as to further improvement of the economic, legal, institutional and other mechanisms of this co-operation.

STRATEGY FOR THE MARKET ORIENTATION OF INDUSTRY IN DEVELOPING COUNTRIES
IN THE 1980S AND THE 1990S

Developing countries have already gathered a significant experience in the development and application of import substitution strategies, the export oriented strategies, and strategies of industrialization oriented towards the basic needs of the population for food, clothing, and shelter. Other alternatives or combinations of alternatives of these strategies may be listed as well.

Taking into account the great variety of internal and external conditions of the economic growth in developing countries during the following 15-20 years, it would be hardly possible and advisable to recommend any unified strategy, valid for all developing countries - small and big; advanced and backward; possessing raw material and power resources and deprived of such; possessing financial resources or in need of such; etc. Besides, the political orientation of the respective governments undoubtedly influences the choice of inward or outward market orientation or a combination between them. This also influences one or another foreign economic orientation - to the developed Western countries, to the socialist countries or to the other developing countries.

The exclusive variety of conditions in the developing countries during the current and the following decades will set its mark on the choice of a relevant strategy and the relevant economic policy measures. It is therefore difficult to draw general conclusions.

One conclusion may be drawn, however, without running the risk of making a mistake. Many developing countries are expected to strengthen the export orientation of their industrial structures by trying to earn foreign exchange for purchasing machines, raw materials, fuels, food, etc., under deteriorating terms of trade and worsening conditions for the repayment of the accumulated debts. An additional argument in favour of such an orientation may be the impressive success during the 1960s and 1970s of some developing countries which have adopted an export oriented strategy of industrialization.

But caution is needed here while making such comparisons and assessments. Leaving aside the geo-economic and geo-political factors that played a decisive role for the success of some developing countries in South-East Asia, one should bear in mind that the international economic conditions in the 1980s differ from those in the 1960s and the 1970s. The average figures should also be interpreted very carefully. The prevailing part of the exports of the developing countries at that time was generated by several countries - three of them with less than 3% of the population of the Third World - provided 40% of the exports of industrial products to developed Western countries. Their number will now increase, the competition among the very developing countries will become tougher, while the market conditions are getting worse. The tariff and non-tariff protection measures of the developed Western countries are being intensified. The most dangerous competitors - exporters - are forced to "voluntarily refrain" from exporting their goods on foreign markets.

Contrary to the non-discrimination principle, the developed Western countries apply towards the developing countries, more strict restrictions for import of industrial goods than towards each other, which is very obvious with the non-tariff restrictions. The higher the degree of processing, the bigger are the import duties. This is the so-called escalation of the tariff rates, which means that a considerably higher effective protection of the local products is hidden behind the nominal increase of the customs duties. And all this is being done accompanied with

statements for "understanding" and promises for "help" while the developed Western countries export into the developing countries about four times more manufactured goods than they import from them.

One can add to that the not very favourable prospects for reviving the economic growth in the Western countries during the forthcoming years. The difficult market situation in the developed countries limits the demands for industrial goods from developing countries and incites additional protection measures. Naturally, this will continue to hamper the export of industrial goods from developing countries.

For the time being, there are no reasons to expect essential changes in the forthcoming years in the intensity of the neo-protectionist measures. At the present situation, the chances for success of the export-oriented strategy during the 1980s are considerably less than those during the 1960s and the 1970s. The developing countries will have to take this into account and to explore actively opportunities for possible co-ordination of their national export-oriented strategies.

As a result, the developing countries oriented mainly towards the developed Western countries are risking their economies to a greater extent. All cyclic variations in the Western countries' economies, the protectionism, the raising prices and international transport tariffs, the more expensive credits, etc., will be passed to the economies of the developing countries, as well. The latter, being more fragile, will bear the drops more painfully.

The interference of the transnational corporations in such an export orientation of the developing countries' industry will further complicate their situation in spite of the statements one hears that these corporations facilitate the export of manufactured goods from these countries. Publications of the UN also confirm that transnational companies do not participate constructively in the implementation of the export strategies of developing countries.

The governments of the developing countries should duly search for strategic decisions concerning the preparation of their economies for the severe international economic conditions and for identifying acceptable alternatives.

One of the possible strategic directions is diversified export orientation in order to avoid a complete binding to the economies of the Western countries. In practice this would mean the exploration of opportunities for expansion of economic relations with socialist countries and with other developing countries. It is quite obvious that the 1980s and the 1990s will offer additional opportunities for enlargement of the mutual economic exchanges in both directions.

Another area could be the more active co-operation among the developing countries in elaborating a co-ordinated strategy and policies in their export orientation towards the markets of the developed countries. Even greater are the potential opportunities for expansion of regional industrial co-operation, among developing countries - especially among countries with complementary industrial structures, for gradual step-by-step integrations of their economies in the future. The specific forms of such co-operation are well known. Attempts for such co-operation have been made and are being made, although not always successfully. Bearing in mind the complexity of these problems one should not dramatise such failures. One should learn proper lessons from them.

What is important to notice, is the gradual ripening of the necessary economic and political conditions for the activation of regional and sub-regional co-operation during the 1980s and the 1990s. The governments of the developing countries should jointly analyse and reveal these opportunities and take the necessary practical measures. The developed countries may also play a useful role on the basis of bilateral, trilateral or multilateral co-operation. Socialist countries have already certain experience in this respect.

Another important direction could be the adoption of a strategy for active involvement of the state in promoting a rational industrial structure; in the choice of export orientation; in strengthening the position of the state and co-operative sectors in the key branches; in the rational utilization of the instruments of economic planning and so on.

In facing the hard external economic conditions of the 1980s, it is more imperative for most of the developing countries to take measures for increasing their foreign exchange earnings through expansion of exports and reducing foreign exchange expenditures through import limitations. The parallel conduction of such a strategy is difficult even for developed countries, and far more difficult for developing countries. Therefore, the decision should be sought in some realistic balancing between import substitution and export orientation of the industry.

The current practice offers well known economic instruments for the achievement of such balancing. The difficulties are related to the practical application of the same sets of instruments, at the same time and with the same purpose by a number of countries - both developed and developing: quotas, tariffs, credits, subsidies, prices; foreign exchange rates, voluntary restraints, administrative control, etc. The indiscriminate utilization of these instruments by all countries hides great dangers, especially for the developing countries. It is necessary to look for decisions by means of bilateral or multilateral co-operation in the utilization of these instruments, paying special attention to interests of the weaker partners - the developing countries.

STRATEGY FOR INDUSTRIAL MANPOWER TRAINING IN DEVELOPING COUNTRIES
IN THE 1980S AND 1990S

It is well known, that man is the most important productive force of every society. This applies both to the developed and to the developing countries. The availability of sufficient manpower in terms

quantity and quality is the most important precondition for the accomplishment of the designed strategy for industrialization in developing countries during the following 15-20 years.

The developing countries exert a lot of efforts for manpower training and allocate considerable funds for the purpose. The share of the expenditures for education amounts to about 4% of their gross domestic product. However in many least developed countries the expenditures for education are only symbolic - the central government budgets in some of these countries allot only 2-7 US dollars per capita for education and 1-4 US dollars per capita for public health services.

Some rough assessments indicate that the manpower in the world would increase by about 40% by the year 2000 in comparison with 1980. This growth will exceed 50% for the developing countries. These figures, though approximate, are indicative enough of the enormous scale of the task of training this manpower. The successful fulfillment of this gigantic task is hardly possible without the development of clear-cut national and international strategies for the training of industrial manpower in developing countries.

The national strategy for training of industrial personnel has to be co-ordinated with the overall strategy for industrial development; with the structural strategy; with the strategy for technological orientation, including the strategy for labour-intensive technologies; the strategy for application of mechanization and automation of production processes, etc. In other words, the strategy for industrial manpower training should be interrelated with all other strategic aspects of socio-economic development.

The strategy so adopted should then materialize in long and medium-term plans and programmes for development of the sub-systems of the formal education system and for other forms of industrial manpower training. This strategy should define the profile of the national education system, the character of the primary and of the secondary

general education, of the secondary technical and vocational education and training of the general and specialized university education, and of the relationship between the formal education system and the other forms for acquiring or improving skills. In addition, it ought to show the role of the state, of the co-operatives, and of the private sectors in training of the required qualified workers, specialists and managerial personnel.

The capacities of most of the developing countries are insufficient for solving this enormous task. The assistance of other countries and of the international organizations is indispensable. There is no other area of the socio-economic development of these countries where the necessity of international assistance is more useful and urgent.

The strategy for training of industrial personnel has also to take into account the social conditions in the developing countries. The larger part of the families do not have sufficient incomes to finance the education of their children. In some cases the difficulties are psychological, religious and the like. Acting in the line with the specific national conditions, an important task of the state is to make the educational system, including the higher education, a democratic and accessible one for all fractions of the population and not only for the social groups with the highest incomes. This can be achieved by a number of well tried expedients. In this respect the experience of the socialist countries is instructive enough. Some of the developing countries have accomplished a valuable experience too.

Indeed it is very important to train skilled industrial personnel with university and specialized secondary education for the needs of the developing countries. But it is equally important to retain these personnel and make them apply their knowledge to the benefit of their countries. In this respect developing countries are again the losing partner, while the Western countries, which have enough trained personnel

and sufficient training capacities, use free of charge the cream of the scientific and technical intelligentsia of the developing countries. The phenomenon of the brain drain is well known; well known is also the fact of enormous losses of the developing countries as a result of this drain of thousands of their best specialists.

Assessments by UNCTAD indicate that during the 1960s and the beginning of the 1970s approximately 300,000 specialists left developing countries for the Western countries. Some 230 thousand settled in the USA, Canada and the UK. Moreover, 85% of the immigrant specialists in the USA come from developing countries. The total imputed capital value of the brain drain in the developing countries for the 1960s and early 1970s amounted to some 50 billion US dollars. If the benefits forgone by developing countries were added, their loss would be even larger. At the same period the official development assistance from OECD countries to developing countries was 4.6 billion US dollars in 1960 and 6.9 billion US dollars in 1970. These figures clearly lead to the conclusion that the net loss of the developing countries only from the brain drain is hardly covered by the official development assistance from the OECD countries. Is this not a sad fact for the existing international economic order, imposed by the Western countries? The same countries which claim that they do their best to help developing countries. Is it not logical in this case to ask the question who helps whom?

It is very important for the developing countries' governments to take a clear position on the retaining and using of their skilled personnel during the following 15-20 years. It is also necessary for the developed Western countries, as well as some more advanced developing countries and the OPEC countries to co-ordinate their policy on accepting such specialists with the policy of the developing countries, from which the skilled personnel originates, in order to control that outflow of brains. Maybe it is worth considering appropriate legal and economic arrangements, including fair compensation, for the countries who have trained these specialists?

The socialist countries demonstrate in practice in this area too, that they take account of the interests of the developing countries. They neither stimulate, nor tolerate, the brain drain from these countries.

THE SCIENCE AND TECHNOLOGY STRATEGY OF DEVELOPING COUNTRIES FOR THE NEEDS OF THEIR INDUSTRIALIZATION IN THE 1980S AND 1990S

The success of every overall strategy for industrialization to a great extent depends on the chosen science and technology strategy. The developing countries almost entirely depend on the developed countries for acquiring the necessary machines and technology. If these countries now produce about 9-10% of the world industrial output, their share of the expenditures for scientific and technological research is only 3-4%. Of all the expenditures for scientific research in the developed countries, amounting to approximately 150 billion US dollars per year, less than 1% is somehow related to the needs of the developing countries, while 51% belong to the research for military purposes, nuclear research and space research.

The science and technology strategy should cater for solving the basic socio-economic objectives of industrialization. This is an exclusively complex strategic problem, considering that almost all machines and technology methods used in the modern branches of the developing countries' industries are designed and produced in developed countries and are adapted for their conditions. Almost all world patents are registered in the developed countries and most of them are in the hands of the transnational corporations. The share of technologies, designed and developed for the needs of developing countries is still small. Most of the patents used by the developing countries belong to foreigners and the larger part of them is not used in these countries.

The technology strategy and the corresponding instruments of the economic, science and technology policies have to ensure the selection

of such technologies in the developing countries that will also take account of the social aspects of development by maintaining a reasonable balance between labour-intensive and capital-intensive technologies. When designing a technology strategy the focal point must be man.

It is hardly justifiable to apply in developing countries at a very large scale technology methods, which do not contribute to employment. The unemployment in these countries is roughly estimated between 300 and 350 million people, i.e. 10 times more than in the developed Western countries. The developing countries have to choose for themselves the most appropriate technologies for their condition - the resource-saving, capital-saving, labour-saving.

The national science and technology strategy should be interrelated with all other strategic aspects of socio-economic development: the dynamics and structure of industrial development; extensive versus intensive factors of development; the availability of raw materials; energy, manpower and finance for this development; import substitution versus export-oriented development; labour-intensive and capital-intensive orientation; prospects for the modern and traditional sectors of industry; policy towards the transnational corporations; degree of integration in the international division of labour; and so on.

A technology strategy can be implemented through comprehensive economic planning policy measures; by a clear science and technology policy in the field of standardization and unification; by a licence and patent system, science and technology information; by the system of diffusion and implementation of new technologies; by consultants services, etc.

The technology strategy and policies should guarantee the acquisition of the most appropriate technologies from abroad, by using all known channels for such transformation as well as new methods and means in compliance with the specific circumstances. Such a strategy should ensure the purchasing of technologies under the best possible terms

regardless of all the difficulties nowadays on the international technologies' market. They dictate the conditions for technology transfers: the types of permitted and forbidden technology transfer, the prices, the terms of credit, the royalties, the licence fees, the restricting clauses for the customers, etc.

Apparently the transnational corporations or the other companies in the developed Western countries have been and will be interested mainly in technology developments promising a maximum rate of profit. But very often their criterion for good or bad technologies does not coincide with the criterion and interests of the developing countries.

In view of that, the national technology strategy of developing countries should take the course of gradual step-by-step development of their own science and technology potential, designed to provide a technological basis for industrialization of these countries. This will be a long, steep, complex and extremely complicated process, which would take decades to bear fruits.

Maybe, to start with, one should begin with establishment of a science and technology basis for adaptation of available machines and technologies designed and delivered by developed countries. Appropriate economic incentives may also be needed for promoting such type of research and development activities. The establishment of appropriate systems of science and technology information and for horizontal diffusion of these adaptation technologies should be considered as well.

Meanwhile, one should start elaborating, without any delays, long-term programmes for the development of science at the national level, with its basic profile in the field of natural and social sciences; the gradual establishment of a network of research institutes, development activities, and designers bureaus; the training of scientific research personnel; the setting up of a lasting mechanism of science and technology co-operation both with more advanced developing countries and with developed countries. It is hardly necessary to underline that every developing country should approach these complex problems bearing in mind the specific conditions and its long-term national interests, and displaying the necessary realism.

Most of the developing countries are faced at present with the development and realization of such a science and technology strategy. While trying to tackle this gigantic task, they could use the experience of more advanced developing countries, as well as the experience of some socialist countries, which had to solve, very recently, similar problems to those facing many developing countries.

STRATEGY FOR INDUSTRIALIZATION AND PEACE

Even the most successful strategies and plans for industrialization and restructuring of the international economic relations would have remained only a wishful thinking in the absence of the most important prerequisite, i.e. peace and mutual trust among the nations. The burden of armament is a heavy one not only to the economies of the developed countries (both Western and socialist). It exhausts even to a greater extent the weak economies of the developing countries.

The military expenditures of developing countries in constant 1973 US dollars and 1973 exchange rates amounted to 16.0 billion US dollars in 1960, 44.7 billion US dollars in 1970 and 67.5 billion US dollars in 1978. The imports of major weapons by the developing countries at constant 1975 US dollars absorbed 1.5 billion US dollars in 1960, 2.9 billion US dollars in 1970, and 13.9 billion US dollars in 1979. Some assessments indicate that the annual military expenditures in the world have reached the astronomical figure of 650 billion US dollars, 240 billion of which belong to the USA. One could easily imagine the growth of the world military expenditures in a few years, if the US Government accomplished its intentions to reach the average annual figure of about 400 billion US dollars for this purpose during the second half of the 1980s.

This armament race leads to non-productive consumption of manpower and material resources, which otherwise could be allocated to peaceful economic development. In many countries the cream of the science and technology intelligentsia is engaged in activities connected with

armament, and only "the wastes" and the by-products of the military research find application in industry and other branches of the economy. In many countries the military expenditures contribute considerably to more acute budget deficits, difficulties in the balance-of-payments, increase indebtedness, intensify inflation and the rise in the cost of living.

During the whole history of mankind there has hardly been such a big gap between the level of prosperity which could have been provided for the people by the existing economic and technology potential if put in service to the socio-economic development, and the actual level of well-being on our planet during the second half of the 20th century. The armament race is the main culprit to be blamed for that discrepancy.

Many developing countries are forced to use more resources for armament than for education and health protection together due to the existence of burning or potential local conflicts and other reasons left intentionally as a heritage by the former colonial empires.

Besides, the armament race imposed by the Western countries, and mainly by the USA, deprives developing countries of additional external financial assistance for acceleration of their socio-economic development. Is it not evident that part of the saved funds, resulting from simultaneous and concerted reduction of the military budgets of the developed Western countries and of the socialist countries, could be allocated for acceleration of the socio-economic progress in the developing countries?

It is known that constructive proposals in this sense have already been presented on several occasions both in the UN and outside the world organization. It is also known that some spheres reject such proposals before studying them thoroughly, labelling them as "propoganda". It is difficult to understand what is wrong with such "propoganda" and particularly what is wrong with the practical implementation of these "propoganda" proposals. It may be worth trying to answer the question - what would developing countries gain from worldwide disarmament?

DISCONTINUITIES WITHIN THE WORKING OF THE INTERNATIONAL INDUSTRIAL SYSTEM by
Jacques de Bandt*

INTRODUCTION

The main focus of this paper is on the actual and expected international environment resulting both from the transformations in the working of the international system and from the national policies adopted by the advanced industrial countries as a response to those transformations of the international system.

The international capitalist system is going through a deep structural crisis, which is affecting the existing organization and structure - both the sectoral and locational organization - of world production capacities. While technical progress is changing the available set of production techniques and products, competition between new and old capital is increasing. The strategies of firms and countries, aiming either at dominating the new emerging accumulation processes or at participating in these processes, are changing the relative positions and shares within the new hierarchy which tends to be imposed on the world system. Beside some new constraints, those strategies and policies are the main determining forces of the world "order" which is going to emerge out of the actual crisis.

Still more important socio-economic transformations are likely to emerge, such that, to a large extent, the sectoral and locational configurations of the world system might radically change over the next 15 to 20 years. The pure arithmetics of differential growth rates may already play a decisive role. At the same time, however, available degrees of freedom do seem to remain important, even within the hierarchical structure of the world system, allowing for the definition and adoption of autonomous strategies.

Taking account of these transformations within the working of the international system, it does seem important to:

- try to evaluate the main forces and tendencies at work. A distinction should be made between these forces and tendencies which can be considered as being independent (at least partially and within the chosen time horizon, up to the year 2000) of the policies and strategies of the economic agents, and on the contrary, those

* Professeur Jacques de Bandt, Directeur de Recherches CNRS,
Institut de Recherche en Economie de la Production, Paris X-Nanterre.

tendencies which are essentially dependent on those policies and strategies and on the interplay between them; and

- try to identify the existing degrees of freedom, the possible fields for action and the levels at which these degrees of freedom can be exploited, taking account of the necessity at the same time to increase the degrees of self-reliance.

The accent is here on the first of these two points: trying to assess for forces and tendencies at work. Several discontinuities within the working of the international system - which are different aspects of the world crisis and of the likely ways and means of getting out of the crisis - must be successively considered, taking account of the fact that they are closely interrelated. Each of these discontinuities will only be briefly suggested here while the list of discontinuities is by no means exhausting the set of transformations which are to be considered as being significant.

The discontinuities discussed are the following:

- the changing hierarchical structure of the world system;
- the role of the transnational corporations;
- the technological revolution;
- the upcoming information society;
- the energy and raw material situation and prospects;
- the financial system;
- the new protectionism in the developed countries;
- the national adjustment policies; and
- the changing conditions for technological and industrial co-operation.

THE "NEW" GEO-POLITICAL AND ECONOMIC HIERARCHY WITHIN THE WORLD (INDUSTRIAL) SYSTEM

The hierarchical structure of the world economic system is changing. Some tendencies have been at work reducing this hierarchical structure in the past. Was the main tendency before the crisis not that of the catching up among the advanced industrial societies, i.e. the progressive disappearance of the gap between the U.S. and the followers. This is

the so-called convergence hypothesis. On the other hand, the growth of the NICs (and of a bunch of other NICs-to-be), while diversifying the relative situations within the Third World, has been replacing the simple North-South split by a continuum of intermediate and rapidly changing positions. This is seen by observers as another form of convergence (equalization) on the basis of an extension of the Fordist system to those countries.

Questions are thus raised for the future:

- what is the likelihood of these convergent scenarios or, on the contrary, of new divergence phenomena, which would lead to a new hierarchical structure and to renewed power and unequal exchange relations? and
- what are these new divergence phenomena likely to be; what kind of combination of firms and countries (technology and natural resources) strategies will tend to create these new gaps and inequalities?

Some possible features could be:

- new U.S. dominance or some form of U.S.-Japan dominance (the Pacific scenario), based on a completely renewed technological leadership and an accordingly finalized socio-political setting;
- relative decline of Europe, due to the opposite elements: retarded technological evolution and absence of socio-political consensus (or forms of dualism), together with internal divergence phenomena remaining stronger than common policy approaches;
- to what extent will European countries be able to implement new forms of industrial management or policies and new forms of co-operation, both within Europe and with the Third World countries (Africa, Arab countries, Latin America) introducing a new dimension within the hierarchy of the world system;

- for Eastern Europe, the integration within the world industrial system will be largely depending - besides the exploitation of the natural resource base - on the ability to reduce the technological dependency; and
- the possible scenarios for the developing countries are all conditioned, to a larger or lesser extent, by the various forms of their dependency: technological (a renewed new technological gap or barrier?), financial, commercial; by relative prices of primary products, etc.

The transnational corporations: future role and power

It is of course difficult to make up one's mind with regard to the likely evolution of the role and power of the transnational corporations. Divergent opinions do exist, depending on the assessment of:

- the general economic conditions: to what extent are the crisis conditions more or less favourable for the TNCs:
 - reduced investment and growth opportunities;
 - but new technological opportunities;
 - competition of new and old capital.
- the power relations between TNCs and Governments:
 - the attempt by Governments to regain part of their control: problems of capability but also of relative weight attached to control as against importance of TNCs in international power relations;
 - codes of conduct: progressive introduction of some supra-national rules?
- the own capacities of the TNCs:
 - organizational problems of big organizations;
 - superiority for mastering the operational (both of scientific and technological and of industrial and commercial) information systems;
 - capacity of restructuring the composition of their assets.

What is the outcome likely to be? It is either that changing power relations on the basis of which the countries, individually and collectively, are able to reduce their degrees of freedom, such that their organizational decreasing returns affect their performances. Or that, due to their superior international and technological capacities, the TNCs are more that offsetting the countervailing power: at the international level. At the same time, they are retiring more and more from the direct production activities and the management of the work force, and imposing unequal subcontracting relations with the national production bases.

The technological revolution

The pervasive nature of the new technological revolution is becoming more and more evident. This revolution has many different dimensions, but the principal technological transformations do concern, on the one hand, micro-electronics and the stream of induced innovations in the field of informatics and telecommunications and, on the other hand, the new organic and mineral materials (new composite materials chemically transformed minerals, biotechnology). These transformations are interrelated (micro-electronics require new materials, biotechnology require micro-electronics). This has two important implications:

- a new technological or technical system is emerging. Not only are completely new sets of products and equipments beginning to appear, not only are all industrial sectors likely to be affected (the whole of the input-output matrix), but the new technologies are leading to the possibility of completely transformed ways of doing things, i.e. of completely transformed production (and consumption) models; and
- the technological competition and hierarchy will depend on the capability to master not only specific techniques of production but most of the strategic elements of the new technical system, as a whole.

Some of the characteristics of the new production methods are already clear:

- skilled human resources intensive, but with a very strong tendency to displace the human resources from production plants to R and D conception, design of equipment and software. The share of capital goods within the industrial value-added is likely to increase;
- radically changed work conditions;
- more autonomous functioning of the equipment; and
- greater flexibility.

The stakes are such that the rules of the game are changing. Governments in the advanced industrial countries are putting increasing resources in finalized R and D programmes, and technological research co-operation among big firms (largely TNCs is gaining momentum notwithstanding in both case the adherence to competitive market principles.

The upcoming information society

Many aspects of the technological revolution can be viewed in terms of the upcoming information society, which essentially means that the working of the productive system is more and more based on information. This term is being used to indicate a variety of immaterial activities (R+D, design, marketing, training, transfer of technology and know-how, software, etc.), which are largely concerned with information treatment. This information is on the one hand, the scientific and technical information corresponding to the technologies (used and to be) and on the other hand the industrial and commercial information (which concern markets and competition). These activities account within and outside the production firms for an increasing share of value-added. This evolution has several implications:

- one is the shift from material capital to non-material factors of production. While part of the information or non-material investments can be transformed into non-material capital, the functioning of the productive system is likely to be dependent more on the skilled human resources (design, use and control of equipment) than on material capital;

- at the same time, information becoming one of the main inputs will also become a predominant source of the value produced and thus of the surpluses generated within the productive system; and
- the technical as against the legal control of the organization of the information systems and in particular of the trans-border flows of information will increasingly become a decisive element of power relations (between firms, between countries and between firms and countries).

The energy and raw materials situation and prospects

The actual demand and supply situation on the world petroleum market by no means reflects the future prospects, which are characterized by increasing (relative and even absolute in a few cases) scarcities of natural resources. The relative prices of energy and of a large number of raw materials are likely to be on a rising trend in the future.

As the petroleum situation has shown, higher relative prices are needed, in order to cover the costs of possible substitutes. But there are strong ceilings: once prices get too high economies and substitutes do reduce consumption. At the same time producers (old and new ones) are increasing production and supply in order to reap actual benefits. More fundamentally, beyond the exploitation of existing technologies, the scientific and technical system is set to work. The effectiveness of the technological solution appears to be considerable indeed.

The whole technological revolution as defined above is changing the relationship between the productive system and the raw material basis: the two main technological trends represent important steps away from the material basis. Even without taking account of the concentration of natural resources in developed countries (U.S. and USSR), energy and natural resources do not seem to be able to play an important redistribution role within the world economy.

The financial system

It is of course impossible not to take account of the financial aspects of the working of the international system, even if these financial aspects are not confined to the industrial system.

The recent history has shown the limits of the existing international system, and as a matter of fact the breakdown of the system, from the standpoint of the requirements which such a system is supposed to meet. The development of a private international financial system, quantitatively important, but by his very nature unstable (and which had to be rescued politically) illustrates this breakdown. Another fundamental aspect is of course the importance of financial flows, the high volatility of exchange rates and the transmission of the high US interest rates throughout the international financial system. These characteristics show the renewed US international dominance at the financial level (but also at the technological level).

The consequences are well known in terms of debts and debt services. The other consequences are by those of the restrictive financial (external and internal) policies imposed by the international community. Those restrictions are leading the countries concerned into vicious circles; the required equilibria are only to be found at much reduced levels of activity and income. These restrictive policies are inducing under-utilization of the capital stocks, absence of maintenance and replacement, capital losses, and in some cases, the breakdown of the industrial system. This means destruction of scarce capital resources.

Besides the energy bill and the higher interest rates, the increased debt situation of the developing countries is also a consequence of the biases inherent in the international financial system - the procedures and criteria for the financing of projects to be realized mostly by the TNCs conducive to high capital consumption levels.

To what extent will it be possible to revise the international financial system and within the system as organized to reduce the dependency on the international system and its rules?

The new protectionism in the North

Protectionism has been increasing, more or less openly, in the advanced industrial countries, since the onset of the crisis (beginning of the 1970s). This is of course well known. The developing countries have rightly been complaining against the new protectionism.

This protectionism has of course been introduced in traditional sectors, mostly in the labour-intensive sectors (e.g. textile, clothing, wood, shoes) but also in basic industries (e.g. steel, maritime construction, fibres). The developed countries have themselves been stimulating investments in these sectors in the developing countries, either in order to lower the production costs or in order simply to sell capital goods. Competitive pressures originating from the developing countries have been gaining momentum throughout the 1970s. With the progressive deepening of the crisis these traditional sectors are under increasing pressures, due to the competition of new as against old capital. The new technical system is progressively taking the lead. The social consequences of the difficulties of those traditional sectors are likely to feed systematic strong protectionistic attitudes and reactions.

Of course one solution for these traditional sectors will come from the new technologies: new techniques, based on micro-electronics, will introduce radical changes in the characteristics of some production processes, changing accordingly the competitive position of the sectors concerned, whose comparative disadvantage is likely to disappear. Of course these technical solutions will fundamentally reduce, at the same time, the employment figures in these sectors. This means another argument, during the transition period, for maintaining strong protectionistic barriers.

More fundamentally, the question can be raised whether the actual slowdown of international trade is a short-term phenomenon, linked with the deepening of the crisis and the protectionistic moves of the various countries, or whether this has not to be considered as a more durable tendency.

Many countries feel that their integration within the international system - in terms of exported shares of production or imported shares of consumption - has been going too far: the costs of worldwide multilateral trade with very differentiated (in terms of resources endowment, socio-political setting and price systems) partners are felt to be too high.

Those costs are reduced within regional groupings of less differentiated countries and can be reduced through more contractual exchange procedures.

National adjustment policies

All advanced industrial countries are taking measures in order to aid trade-injured sectors or industries. The meaning of adjustment policies has been changing accordingly.

The adjustment policies asked for by the developing countries, aim at either restoring competitiveness or transferring resources into other activities or at taking charge of the trade injuries, in order in both cases to maintain free trade, or at least to reduce the moves against free trades. With the crisis, more and more countries have been obliged to take defensive measures in order to sustain weak sectors.

The whole OCDE approach concerning the positive adjustment policies aims at reorienting the adjustment policies so as not to reject the burden of the adjustment on the partners. These policies are working in the same direction as the market mechanism and are stimulating the production capacities which the market mechanism would bring about.

It is not the place to discuss this approach: beside the fact that it is of course impossible to know what the market mechanisms would bring about and beside the fact that the adjustment policies have always a defensive aspect, these policies mean that the countries are more and more decidedly acting on their productive capacities. Within the framework of these industrial policies, the increasing importance of R and D policies must be viewed as a significant feature. The adjustment policies thus appear to be a new more systematic approach for mastering the industrial system, and for managing it according to the internal socio-economic objectives.

To what extent are countries likely to introduce, within their system of objectives, due consideration of the industrialization requirements of the developing countries. As an objective in itself the chances look dim (but for some like minded countries?). To what extent are the North-South power relations changing so as to impose on the developed countries consideration of these dynamic adjustment requirements of the industrialization of the South?

The changing conditions for technological and industrial co-operation

South-South trade relations, exchanges of capital goods, transfers of technology and direct investments are increasing. The NICs and some others, which have succeeded in developing an industrial base and some autonomous technological capabilities, are able to be more exacting in their exchange relations with the North. While the transfers of technology are quantitatively growing worldwide, competition among the suppliers of technology is also growing.

All this means that the terms of trade are changing, not just in the sense of relative prices (which are anyway difficult to assess when the exact nature of the obligations and responsibilities is not immediately apparent) but in the sense that the advanced industrial countries are willing to transfer more, in terms of the effective transfer of know-how and industrial mastership, i.e. in terms of non-material assets.

There is a growing awareness within the industrial countries of these changing market conditions. To a certain extent and under certain conditions, interests appear thus to be convergent.

Three main problems are raised. The first concerns the availability of human resources, in order that the co-operation and the transfers of technology may become effective. This implies some level of technological capabilities (to be a receiver, but also for evaluating and negotiating the terms of the co-operation), trained people (at various levels), organizational structures in order to play as a partner. Part of this may be included in the co-operation.

The second problem concerns the object of the transfer: which technology is transferred? How appropriate is the technology? In order to answer these questions, evaluation criteria and procedures are needed, in relation with the socio-economic objectives and priorities, within well defined strategies. The third question has to do with the guarantees which exist concerning the effectiveness of the transfer.

To the extent that the terms of trade thus tend to change within the North-South relations, what kind of collective organization and bargaining will make the developing countries better capable of taking advantage of this new situation?

SOME CONSIDERATIONS ON THE LATIN AMERICAN INDUSTRIALIZATION STRATEGY by the
Economic Commission for Latin America (ECLA)

INDUSTRIALIZATION SINCE 1950

International Framework

The great cycle of expansion and recession of the central economies.

After the end of the Second World War a cycle of expansion began in the advanced industrialized countries during which the per capita product rose several times faster than in the previous cycle. In the period 1913-1950, it grew at an annual average rate of 1% for Western European countries; but between 1950 and 1970 this rate rose to 4% per year. (Maddison, 1978: Vol. 5, 444).

Unlike previous periods, when unemployment was a recurring threat and rarely fell below 10%, with the post-war prosperity the unemployment rates declined to levels below 4% and in many European countries under 2%. (Maddison, 1978: 479). All of this happened in a framework of a relative stability of the economies and with none of the major fluctuations of the past.

As a result of this rapid growth, changes occurred in the structure of production, which in turn took on considerable importance in the patterns of consumption and lifestyles of the population. These changes included a displacement of manufacturing production towards two major categories: the chemical and petrochemical industry and the metal manufactures and machinery industry, especially that related to the automotive, consumer durables and capital goods branches. In more recent periods, the electronics industry has come to play a preponderant role in economic and social transformation. These changes in the structure of the advanced economies clearly reveal the high technological content of the modern industrial society.

The relatively stable and sustained expansion referred to is highly related to the pragmatic and flexible character of the global policies applied in the industrial centres. Significant in this respect is the growing participation of the State in the economic processes, as demonstrated by the creation of public enterprises, the promotion and

development of investment, the regulation of many activities based on their impact on the level of collective life, the application of social welfare policies and, no less important, the encouragement of research and technological development.

This expansive phase, however, was interrupted at the beginning of the 1970s when the industrialized countries entered a severe period of recession and contraction of their economic activity, with its well-known extent and consequences.

The internationalization of the economies.

Closely related to the trends described is the phenomena of the internationalization of the economies, which has now become an extremely relevant characteristic in the early 1980s.

As a result of successive rounds of negotiations among the industrialized countries, there occurred a sizeable tariff reduction on world trade, especially in the trade of manufactures produced by these countries. This made it possible to raise the annual growth rates of exports from the Western European countries from less than 1% in 1913-1950 to 8% in the 1950s and 9% in the 1960s. Similarly, world trade of manufactures grew by 1.7% annually in 1900-1950, and 8.8% in 1950-1975. (ECLA, 1979). This latter trend may be compared with a growth in world production of manufactures of 6.1%, with which the share of trade in the industrial product rose from nearly 14% in 1950 to almost 26% in 1975. Undoubtedly this manufacturing trade growth was of decisive importance for a greater international specialization, which in turn contributed to the high growth rate of productivity in the industrial centres mentioned above.

Of equal or greater importance than the growth in trade - or internationalization through trade - is the presence of transnational corporations, the principal agents of internationalization through production, which represent one of the most powerful instruments on the contemporary scene for the transfer of capital, technology, access to markets, knowledge and experience, patterns of consumption and even lifestyles. In fact, for many advanced countries, the production carried

out by their subsidiary companies abroad represents a large proportion of their exports of manufactures, sometimes amounting to double or even quadruple the value of their own exports. Some estimates also indicate that trade within the transnational firms, associated with internationalized industrial production, probably represents about 25% of world trade of manufactures. (Comercio Exterior, 1980: vol.30). For Latin America and the Caribbean, this aspect is especially relevant, as it brings out the fact that more than 50% of the imports of manufactures by the United States (1977) from the region come from US subsidiary firms. (Calcagno, 1980).

The regional framework

Original objectives and policies of industrialization.

During the period immediately following the war, decided efforts began to be made in Latin America to formulate and rationalize industrialist objectives. For in view of the inefficiency of the pre-crisis development schemes, and especially their different nature in the central countries as compared to the periphery, industrial development strategies were established on the basis of three basic objectives: the absorption of technological progress so as to achieve a more equitable participation in the benefits of development; the need to generate jobs for a population which was growing rapidly and experiencing intense rural-urban migration; and the need to sustain development on the basis of domestic efforts in order to free the economies from their traditional external vulnerability. Moreover it was felt that industrialization should be the engine of social change and modernization.

The fundamental policies were aimed at achieving these objectives, and based on the active presence of the State they stimulated the domestic production of manufactured goods. The instruments used were tariff protection and para-tariffs (quantitative restrictions on imports); subsidies granted to the industrial activity either directly in order to lower prices or indirectly by fixing prices of inputs, tariffs, exchange rates or interest rates; other incentives to private investment, such as tax exemptions, tariff exemptions for imports of capital goods; public investment; training of labour, etc. Frequently, moreover, industrial policy was supported by the operation of specialized government development and/or financial support agencies.

Difficulties and criticisms.

In various sectors, and of course also in the view of ECLA, some difficulties and obstacles were noted which tended to frustrate some of the original expectations. Employment problems grew, and pockets of unemployment and underemployment proliferated in the cities; market structures which were not very competitive were generated, and this led to the formation of industrial monopolies and the production of goods at high cost; marked trends towards the production of all types of goods occurred with little selectivity, but exports of manufactures were not developed sufficiently; a new external trade dependency was created because of the inputs and capital goods which had to be imported, leaving a small margin of compression of imports in order to deal with adverse situations; a new form of structural, technological and social heterogeneity arose within the industrial sectors; possibilities of development in other sectors, particularly agricultural, were limited, etc.

The criticisms, however, are not meant to question the industrialization strategy, but rather to diagnose an insufficiency of development and investment, and the need to introduce some structural corrections in the economic systems, particularly those related to the distribution of income. Moreover, the study of what happened emphasizes the need for medium and long-term planning in order to co-ordinate and balance the development of the various sectors.

New objectives in the 1960s.

On the basis of this critical analysis and on international events such as the Cuban revolution, as well as efforts to set up integration agreements (ALALC, CACM, Andean Group), new central objectives were formulated: redistribution of income and structural reforms of systems of ownership in order to incorporate the low-income masses into the benefits of development and consumption of industrial goods; and inter-American and regional co-operation to encourage a new and massive effort at investment in trade and growth of industrial exports which would diversify the structure of external sales and make it possible to achieve more advanced structures of manufacturing production.

The implementation of these objectives must be sought in the framework of long-term planning in order to ensure the necessary consistency, as well as provide for a systematic evaluation of the degree of progress being made in the accomplishment of the objectives.

Changes in approach.

But the 1960s and the first years of the 1970s became a period of profound political changes in various countries of the region. These may be characterized, on the one hand, by some failures in mesocratic alliances, both in their populist and in their development-based forms, which had given political and institutional support to the industrializing strategies; and, on the other hand, by the emergence of systems which made room for the existence of neo-liberal ideologies which generally did not assign an explicit role to industrialization. Alternatively, the approach of trade opening and liberalization of markets and prices was encouraged. The dynamic role which the State had played in the past was restricted to establishing the general operating rules of the economy and correcting the most flagrant excesses. Although the extreme form of this approach only occurred in a few cases, especially in the Southern Cone, the model was attractive to other countries, partly because its diagnosis answered criticisms which, although they had been expressed before, had not been completely overcome; and also because it included certain values and objectives which coincided with those proposed by traditional power groups. A recent ECLA study on industrializing policies, social order and neo-liberal styles expands on this subject and describes its impact on the process of industrialization.

In addition to the difficulties experienced by Latin American industrialization due to world stagnation, shrinking demand for primary products from the advanced countries there were also problems resulting from the low priority given to industry, lack of protection, paralyzation of investments and the resulting regressive changes in the distribution of income. However, these changes in approach in no way represent a general rule in Latin America, since in many cases industrial efforts persist and the corresponding investments are becoming larger.

Latin American industry and the international scene

Production of manufactures in the period 1950-1980.

In 1950 Latin American industry on the international scene corresponded to under 4% of world production of manufactures, while 80% was concentrated in North America and Western Europe. (ECLA op.cit.) But this panorama experienced some major variations, basically because of the emergence of Japan as an industrial power and the considerable increase in participation of Eastern Europe and the Soviet Union on the one hand, and various regions of the Third World on the other, especially the countries of Southeast Asia. Latin America, for its part, increased its share by over 5% in 1980.

This meant that the region could expand its industrial production at a faster rate than the world average, particularly than that of the advanced industrial centres of the West. Average worldwide growth amounted to 5.7% in the period 1950-1980, while the Latin American rate was 6.7%. (ECLA. E/CEPAL/L.231). It can be said, then, that the evolution of regional industry shows a positive result in the above terms, although it must also be recognized that other relatively backward regions underwent an even more dynamic industrial development.

A closer look at the experience in terms of groups of countries shows that the regional average obscures a variety of national situations. For on the basis of a vast set of factors, such as the scope of domestic markets, levels of development previously reached, forms of opening and insertion in the international economy, character resulting from the presence of transnational corporations, political and institutional conditions and the orientation of the national development strategies and policies, to mention just a few, the intensity of industrialization shows uneven results. Thus, for example, there are countries which are relatively highly dynamic, with annual industrial growth rates higher than 7%. This is the case both in large countries, such as Brazil and Mexico, and in some medium and small countries, including Venezuela, Costa Rica, Ecuador, Honduras and Nicaragua. On the other hand, there

are countries which show more modest results, with rates lower than 4% annually, such as Argentina, Chile and Uruguay, in the Southern Cone, as well as Bolivia and Haiti. It is noteworthy that the countries having the oldest industrialization, such as those of the Southern Cone, have had a lower rate of growth than the regional average. (ECLA op.cit.)

Trade of manufactures.

A relevant feature of Latin American industrial growth is the increase in the degree of international competitiveness, which made it possible to raise the share of exports of manufactures of the region from 0.8% to 1.3% of the world total between 1955 and 1975.

Despite the increase in the international competitiveness of Latin America and the Caribbean, the region continues to have a low coefficient of industrial exports in relation to the gross manufacturing product. In 1970 the world average of this coefficient was 21%, with 40% for Western Europe, 30% for Asia (except Japan and Israel), 25% for Japan, 13% for Africa^{1/} (excluding South Africa) and North America, 8% for Eastern Europe and the Soviet Union, and only 5% for Latin America and the Caribbean (7% in 1975). This indicator reveals one of the problems that has had to be faced by Latin American Industrialization - its relative lack of ability to penetrate export markets, a fact which should be taken into account in defining new industrial policies. Many countries of the region, however, applied active policies to develop and support the export of manufactures. Occasionally there were very early antecedents, at the beginning of the century, but the concern for this aspect of industrial development arose with some strength only during the 1950s and even more in the 1960s, when fairly dynamic attempts began to bear fruit and ideas began to mature on integration and reciprocal trade among the countries of the region. Furthermore, the persistent protectionism of the centres against manufactures exported from Latin America is proof of the degree of competitiveness achieved by many industries of the region.

1/ The case of Africa, and partly that of Asia, corresponds to incipient export industries, or rather, some very simple semimanufactures, whose high relative importance is measured against a very small manufacturing sector. In Asia, moreover, the calculation is very much influenced by the countries of the Southeast.

In any case, the progress of Latin American industry is clearly obvious in the reduction of the relative weight of regional imports of industrial goods in the world total, which dropped from 13% in 1955 to 7.2% in 1975.

These two trends, that is, the increase in the amount of industrial exports and the sizeable decrease in the share of the volume of industrial goods imported, tended to improve the relative trade balance of manufactures of Latin America compared with the rest of the world, although with rapidly growing negative balances in absolute terms. At the same time, the extreme concentration of exports on raw materials was reduced considerably. For while in 1955 only about 3% of the total value of exports of the region came from the industrial sector, in 1978 this proportion had risen to nearly 26%. (ECLA: E/CEPAL/L/235 1980). This latter fact of course represents one of the principal successes of the industrialization and export promotion policy, along with the effects of the integration agreements and intra-regional trade.

From the viewpoint of national experiences, the growth of Latin American industrial exports shows great heterogeneity. Most of this expansion was concentrated in the three largest countries, Argentina, Brazil and Mexico. This group of countries increased its share in the region from nearly 64% in 1961 to more than 72% in 1978, consistent with the more advanced industrialization of these countries.

Industrial employment

One of the most interesting aspects of the assessment of industrial growth trends is their effect on employment, since, as mentioned above, one of the original reasons taken into account in encouraging the process of industrialization in Latin America was the dynamic imbalance between the high rate of population expansion (2.8% annually between 1950 and 1980) and the labour absorption capacity of the primary sectors. Studies are often done on the response of industry to the challenge to create new sources of employment. Generally, these analyses consider the magnitude of the different forms of underutilization of labour in

Latin America, which have been estimated at levels of around 20 or 30% of the labour force, in terms of total equivalent unemployment. (PREALC/198).

A closer look at the problem particularly the rising trend in industrial employment, shows far from negligible results. The average annual growth of manufacturing employment in 14 countries of Latin America amounted to 3.4% annually between 1950 and 1980. Excluding Argentina, a country which had a high proportion of industrial employment at the beginning of the period and whose rate of labour absorption was slow, or 0.9% annually. (PREALC, Trabajo ocasional/49). An evaluation of these figures should take into account that regional expansion of the labour force was 2.4% per year, so that industry played an active role in absorbing labour, especially if it is measured in relative terms. This role would appear even more impressive if the indirect effect on employment in other sectors - effects which are felt to be very relevant - were calculated.

As in relation to other aspects of the process, there is a notable variety in the behaviour of the countries here as well. Except in the case already mentioned, Argentina, in the other two large countries the growth in industrial employment was very high or around 4.2% annually. In the more recently industrialized medium-sized countries such as Colombia and Venezuela, these rates were 3.4% and 5%, respectively. On the other hand, countries which industrialized early, such as Chile and Uruguay, showed low rates of 1.6% and 0.9% respectively.

The problem of urban employment in Latin America is largely explained by the high rate of expansion of the non-agricultural, economically active population, which amounted to 3.7% or 4.1% annually excluding Argentina, in the period mentioned. This phenomenon reflects the effects of rural-urban migrations, largely motivated by the incentives offered to the rural population of better living conditions in the urban sectors and the higher salaries which may frequently be obtained in these markets. Of course, industrial expansion, with its direct and indirect effects on the growth of job opportunities, has very much contributed to the generation of these incentives.

INDUSTRIALIZATION STRATEGIES AND POLICIES

Various Scenarios

It is important to recognize that an industrialization strategy is not defined solely on the basis of a series of policy instruments and prospective goals. The relative importance of the different instruments, as well as the actors involved and the social and cultural context being developed, form general scenarios which may differ markedly from one another. It is thus appropriate to make a brief reference to the types of scenarios which today contain the ideas about the process of Latin American industrialization, recognizing, of course, that the general nature of the relevant assessments prevents them from being absolutely valid for all cases and situations, especially in a region with such high degrees of heterogeneity among countries and even within them.

The discussion that has taken place in the past decade outlines at least four clearly differentiated scenarios for stimulating development in the Third World countries. One corresponds to neo-liberal ideologies which concede priority to liberalization of the market and financial and trade openness, of the kind that has been attempted in some Latin American countries, especially of the Southern Cone. The second places decided emphasis on exports of manufactures, mainly in the style of some countries of Southeast Asia. The third, fairly diverse scenario, centres on the essential needs of the population and a significant degree of severing of their external connections, frequently individualized in the form of inward or endogeneous development. Finally, the fourth scenario, recommended by the International Development Strategy,^{1/} emphasizes North-South co-operation and the establishment of a new international economic order, at the same time granting considerable importance to domestic and collective efforts among developing nations.

The basis of the neo-liberal approach is the reduction or elimination of controls and regulations, as well as indiscriminate external openness,

^{1/} The new industrial development strategy (1980s) was considered by the governments of Latin America and the Caribbean at the nineteenth session of ECLA (Montevideo, Uruguay, 4-16 May 1981). (E/CEPAL/G.1161).

both commercial and financial, the reduction in the role of the State and the public apparatus, especially in its investment and entrepreneurial function, and on the absence of sectoral priorities for development, under the assumption that the market alone should determine the comparative advantages to be exploited by the private sector.

This approach is inconsistent with and even disparages attempts at regional integration, postulating that they limit the range of comparative advantages compared with the rest of the world and furthermore tend to transfer the inefficiencies of national protection to the regional level. On the other hand, it concedes partial credit to the ideas being discussed about the new international economic order, in the belief that all growth policies tending to limit the free operation of the international market reduce efficiency.

The appraisal of this scenario should take into consideration, inter alia, that the international market hardly approximates the competitive ideal postulated in the theoretical models. It is important to keep in mind some of the central characteristics of the present international order, such as the deep technological gap between the industrial centres and the peripheral countries, which is manifested in great inequalities in productivity and capacity for saving and investment; the imperfections of the international markets increasingly due to the great importance of transnational corporations around which a large proportion of trade and scientific and technological research centres; the nationalist feeling which continues to govern trade policies, including those of the advanced industrial centres; and many more could be mentioned.

The scenario or approach which concedes a definite priority to exports of manufactures is identified in the debate with the strategy of industrial development which has been adopted in some countries of Southeast Asia, such as the Republic of Korea and Taiwan Province. Undoubtedly, in the area of exports, the respective "models" had considerable success, one of the bases of which was, at least initially, an abundant supply of cheap labour which provided comparative advantages to activities with high labour intensity,

where there occurred a rapid growth in productivity. However, the emphasis on "openness" to exports found substantial support in practice in a rapid expansion of the domestic market. Also important was a great effort at saving and investment, initially strengthened by large amounts of external capital, and a series of pragmatic policies designed to protect national production by means of tariffs and subsidies. The State also played an active role in supporting investment, the adaptation of technologies and infrastructure work, and progress towards more advanced industrial structures. (CEPAL Review 15: 1981).

In consideration of these aspects of the development policy of the countries in question, it may be said that these experiences, although some of their objectives coincide, have little to do with those of the Latin American Southern Cone illustrated by the scenario described above. (Foxley, 7: 1982).

The third scenario, centered on the satisfaction of the needs of the population, emphasizes the configuration of a structure of production which concedes priority to the creation of jobs and the access of the poorest groups to essential goods and services. Thus, it defines a guideline for restricting the proliferation of unnecessary expenditures, especially those based on the imitation of foreign formulas of consumption and lifestyles. It is unnecessary to add that this scenario assumes a definitely redistributive character and a central rationale determined by the incorporation of the traditionally excluded social sectors, such as small farmers and urban workers with few skills and little capital, etc. As a result, the external relationship postulated by this scenario is very selective and only fills the role of functionally supporting domestic development efforts, by means of providing basic consumer or capital goods, but adapted to the more autonomous technological standards that are being promoted. In addition, this scenario seeks intra-regional and interregional complementation and co-operation in development, with an emphasis on the collective efforts of the whole domestic population.

The fourth scenario, corresponding to the formulations with respect to the international development strategy, concede preeminence to the

restructuring of the international economic order, emphasizing new forms of relationship between the advanced industrial centres and the countries of the periphery. (CEPAL Review, 15: 1981).

Nevertheless, this scenario has certain characteristics relevant to the other scenarios mentioned. Thus, it is important to bear in mind that the various scenarios contain common aspects and coincide in certain areas, so that it is not possible to draw a sharp line between the universes of the respective formulations.

In the international strategy, the objective of industrialization assumes an explicit and decidedly protagonistic role, although this does not mean holding back or neglecting other sectors, especially agriculture. But it does mean making considerable progress in seeking to strengthen all those intersectoral relations which could make growth more dynamic. In particular, it is a question of improving the industrial structures with the aim of resolving their problems of relative backwardness. On the one hand it is the insufficiencies of the intermediate and capital goods producing sectors which sharply limit the dynamic effects of growth and investment. On the other hand, and related to the previous point, there is a need to participate more actively in the more dynamic commercial flows, which are found precisely in the products of the intermediate and capital goods industries. The regional markets themselves have a potential which, through reciprocal trade, could generate a new and sizeable stimulus for the development of such industries, especially with reference to the domestic market countries which have difficulty in achieving an adequate scale.

However, it should be understood that the main stimulus for industrial expansion, except in extreme cases, comes from the domestic markets. The empirical evidence shows this, even in countries characterized by an evolution towards high manufacturing export coefficients. On the one hand, the main component of the growth of demand for industrial goods is the domestic market, resulting both from population and income growth and from the incorporation of backward social sectors and the improvement of intersectoral relations. On the other hand, as this market

grows it is making industries which are more demanding in terms of scale more feasible. Development of exports fulfills an additional function, in addition to making the domestic markets more dynamic, in that it also provides scale and generates foreign currency to satisfy growing import needs which are largely due to the development of manufacturing itself. For a vigorous industrial growth is not synonymous with a decrease in the import coefficient, as shown by the experience of the advanced centres after the war. Industrialization itself imposes additional needs for imported manufactures. Balance is achieved when greater competitiveness and productive efficiency make it possible to export manufactured goods according to a pattern of intra-sectoral specialization.

Certainly such affirmations should be understood on the basis of the characteristics of each country and in the framework of the regional market, in view of the sometimes severe restrictions due to the small size of national markets. This process of structural improvement cannot be applied, then, the same way to large countries as to small countries with a more incomplete productive structure or with a more limited supply of resources. Consequently, there is a need for the corresponding strategy to be carried out in a framework of regional complementation, harmonization of investments, co-ordination of economic and trade policies, and reciprocal technical assistance.

Similarly, there is a need for international co-operation from the industrial countries, as this would allow for a rational use of the technological progress, entrepreneurial and financial capacities and markets of the latter, according to mutually beneficial systems of exchange.

Need for an industrialist strategy

It seems essential to return to the subject of the industrialization of the Latin American countries and of the periphery in general as a necessary condition of a projected long-term dynamic development.

As stated on numerous occasions, the subject of industrialization was originally brought up in a context - such as that of the post-war - in which the old system of the international division of labour between centre and periphery had lost validity as a mechanism for the growth and technical progress and increases in productivity - which produced a drop in the relative prices of raw material from the peripheral countries but an increase in the income of the productive factors employed in the manufacturing activities of the centres - led to a very unequal distribution of benefits. Moreover, there were the consequences of the Great Depression of the 1930s and the disorganization of the world economy as a result of the Second World War.

After several decades of substantive progress and change, these centre-periphery relations continued to be valid and to condition the forms of international insertion of the Latin American countries. (CEPAL Review, 15: 1981). There still exists and export structure which is highly concentrated on raw material at a time when the composition of imports usually contains a high proportion of manufactures, especially in intermediate and capital goods, in what has been called the asymmetry of trade patterns; there are also still gaps in productivity despite the advances made, and this reveals a continued technological subordination; more recently the process of external indebtedness has intensified as a result of the more liberal evolution of the international capital market following the oil crisis.

However, it cannot be ignored that these centre-periphery relations have experienced some transformations which open up new possibilities for a more autonomous development. Of course, they are the effects of a sustained industrialization over several decades, whose general tendencies were described above. Among these effects is the rise in the levels of per capita income, which has been substantial in various countries; the diversification of the structures of production and exports, allowing for a greater degree of autonomy with respect to external instability. In some countries such as Argentina, Brazil and Mexico, a systematic effort is being aimed at technological adaptation, in order to reduce the effects of extreme subordination to foreign technologies. (Katz: 1981). Significant results have been obtained

in the creation of urban employment for a labour force which has grown quickly and has become primarily urban. In brief, as a general rule, there has been an economic, productive and social change in the region which has distanced it, although certainly not completely, from the forms of subordination which characterize the classical scheme of the international division of labour. The focus of this process has been the sustained effort at industrialization.

No less important have been some changes at the international level, such as the diversification of power centres, not only among industrialized countries but also in the periphery, where centres have emerged with a strong capacity to negotiate with the former countries; and transnationalization, referred to at the beginning of this study, which has helped generate new agents and interlocutors. This is a context in which the peripheral countries find a greater number of options for establishing circuits of external relationship and international co-operation, a situation which could be taken advantage of in order to provide new stimuli to the development processes.

In view of these considerations, the objective of industrialization takes on new meaning. Understood in a broad sense, it means intensifying its social projection, so that it effectively results in the incorporation of broad social groups which are still left out of the benefits of development in the collective task of developing to the maximum the productive potentialities which are involved, inter alia, in the working population, in the skills and talents of businessmen, and in the natural resources which certainly abound in the region.

However, this does not mean that the industrial structures must be oriented exclusively towards the satisfying of basic needs, as might be implied by some formulations which emphasize this objective.

In fact, the Latin American industrial sector has reached a high enough level of development to generate an adequate supply of goods to meet the needs of the poorest groups. The problem lies not so much in the production capacity as in generating the purchasing power of these groups.

Although that aspect, which is undoubtedly the most relevant one from the point of view of the social projection of development, must not be neglected, attention must be paid to the diversification of the middle groups and the fact that to a considerable extent they are concentrated in urban areas, the new challenges presented by the intensification of inter-industrial relations, the expansion of the sector producing capital equipment and the need to make the Latin American presence in the world manufactures market more dynamic. The last aspect is especially important in a situation of indebtedness which makes it essential for external income to grow vigorously.

It is precisely in connection with these aspects that the international development strategy puts emphasis on the need to proceed to more intensive stages of industrialization and technological development, while at the same time attempting to ensure that the benefits of development can be used to incorporate those vast sectors which are still excluded owing to unemployment, underemployment and low income levels.

New Industrial Objectives

Overcoming extreme forms of technological and social heterogeneity.

Traditionally it was felt that only intensive industrialization would make it possible to overcome the traditional dualism of those economies with single export. However, the experience of those countries which have taken that route shows that new forms of heterogeneity have emerged, this time within the urban sectors and even within the industrial structures. These forms of heterogeneity include phenomena such as the sharp disparity between big and small businesses or the

division of the labour markets between, on the one hand, those strata which, thanks to technological training and apprenticeship, have access to the markets of big businesses and other segments which remain in informal markets and people who work on their own account or who are employed in small firms with very low productivity, immobilized in their low standards of living and spare technological and financial opportunities. Frequently this heterogeneity has been maintained and even strengthened by public policies which, without aiming to do so, in the last analysis benefited the most solvent strata with greater economic capacity. This is the case, for example, of traditional credit policies which made it preferable to allocate resources to those sectors which had access to the financial apparatus or of trade policies which, with the objective of providing incentives for investment, granted tariff or other exemptions to the capital goods imported by the more modern strata.

The result is the new industrial strategies, which are aimed at narrowing those gaps and reducing these forms of heterogeneity, facilitating the incorporation of those sectors which are lagging behind and giving them easier access to the material, financial and technological resources used in production on the basis of which they should be able to raise their levels of productivity and income.

In this respect it is important to draw a distinction: from the point of view of the global development strategy, the role of industry is to provide impetus for the process of modernizing technology and production so that as many people as possible from all the social groups can be incorporated. To these ends it must be socially efficient in that importance must be attached to increased employment and productivity when investments are assessed.

However, the objectives of redistribution as such, which are to avoid certain extreme forms of inequality or the permanency of certain levels of poverty, independently of the production status of the groups concerned, are another thing altogether. Here it is necessary to apply policies and instruments of another kind to surmount such

problems using criteria of equity and social betterment which emanate from the body politic. It would be counterproductive to confuse these different situations and to make industrial and production policies responsible for redistribution per se. Although it is recognized that in practice there are cases where such a distinction is ambiguous (for example when import tariffs are applied in an attempt to avoid the consumption of certain non-essential commodities in order to promote greater equality), it should be recognized as a general criterion.

In summary, it may be said that the effort to reduce structural heterogeneity is made by promoting increased employment in the modern sectors of the economy and by developing new opportunities for access to capital resources, technologies, markets and know-how. The next step is to promote all those activities with some potential in terms of the incorporation of the underprivileged social strata into production, making it easier for them to participate in the accumulation of capital, which calls for some regulation of those non-essential consumer goods which, being clearly alien to the lifestyle of the broad masses, magnify social tensions and waste resources which could be put to better use.

Enhancing the structures of production.

Partly because of some bias in protectionist policies but mostly because of technological gaps, the industrial structures of the Latin American countries are characterized by substantial diversification in the range of final consumer goods and a little vertical integration towards the production of intermediate and capital goods. There was a desire to promote real investment, and it was felt that that end was furthered by facilitating the import of inputs and equipment because of the relatively lower price which capital goods commanded. Aside from the fact that the final users were not always benefited (since the concentration of intermediaries and distributors may be such as to enable them to charge monopolistic fees and raise the domestic price), these policies have tended to prevent the manufacture of such goods and to restrict the direct and indirect propulsive effects of their production.

In connection with that question, there has been some discussion of the problem of the size of the markets, which are thought to preclude economies of scale and also of the problem inherent in the high intensity of capital and modern technology which this kind of industry would supposedly require. However, the empirical evidence does not appear to support such assumptions as a rule of thumb since it has been proved that industries manufacturing equipment are sometimes less demanding in terms of scale and are usually not so capital intensive as many industries established in Latin America for the production of goods for consumption or intermediate use. (Comercio exterior, Vol.30, 8: 1980).

There are a number of reasons why it would be a good idea for there to be more vertical integration in the capital goods industries - the opening up of new opportunities for investment; the possibility of giving impetus to a more consistent technological policy since capital goods are known to be the means by which new technologies are incorporated in the production processes thereby making it easier to develop local technological capacity; the creation of opportunities for exporting capital and engineering goods, taking into account that these categories are the most dynamic in trade in manufactures, a fact which is particularly relevant to the intensification of reciprocal trade among developing countries.

Nevertheless, the move towards the intermediate and capital goods industries calls for a different kind of effort in each country depending on local conditions. In the first place, it is not a matter of producing all kinds of goods simply because there is some demand for them. It is essential to strike a balance between the need to expand markets and investment opportunities on the one hand and the need to respect certain criteria of efficiency in production, on the other. Inefficiency always means that resources which might be put to better use are wasted, and this is a particularly serious matter in the case of intermediate and capital goods where the higher costs are passed on to the users who are also producers and will only pass them on again, to the final prices. Thus, a chain of excessively high costs is formed which is obviously

harmful not only to the final consumers but also in terms of the possibilities for improving the international competitiveness of local industry, a basic requirement for increased exports. It should also be noted that with regard to the industries with very poorly structured and monopolistic markets, the practice of setting prices on the basis of the production costs plus a margin of profit, means that in addition to there being more inefficiency in production, the amount of the profit obtained by the monopolies will be greater and the real income of the workers will be sacrificed.

Secondly, it is necessary to incorporate the new restrictions which the oil crisis and the energy problem necessitate. In evaluating the different investment options, account should be taken of energy-saving production techniques, in particular those which save on energy from sources which are expected to be weaker or more costly in the future.

Industrialization and promotion of exports

It is essential that industrial exports show dynamic growth not only because such growth may have an impact on the expansion of the final demand for manufactures but also because of the need to import. The experience of those countries with the longest history of industrial development and also that of the highly developed centres show that rapid industrial development is accompanied by intensive imports of manufactures. This happens because of the need for imports and the fact that the growth of imports of manufactures makes it possible to expand the markets and creates contacts with new technologies which are disseminated even by means of consumer goods. Thus, the new patterns of specialization in international trade occur in intra-sectoral rather than intersectoral terms. This explains the rapid growth of trade in manufactures in recent decades.

However, the enormous difficulties to the attainment of this objective must not be glossed over. They are due first to the recent trends in the international scenario and in particular to the slow economic growth predicted for the advanced countries and the additional restrictions which many of them are placing on imports from developing countries.

On the other hand, from the point of view of the developing countries, there is always a risk of intensifying protectionism indiscriminately without paying attention to its negative effects on exports in that an increase in the cost of imported inputs will affect the competitiveness of export activities.

Finally, consideration should be given to the fact that the activity in question is especially propitious for regional complementarity and the harmonization of investments in that it appears inevitable that only a very substantial increase in reciprocal trade in manufactures will make it possible to reach the export goals which are based on the need for more intensive and independent industrialization. All of this must usually be accompanied by efforts and negotiations undertaken to gain access to the big markets of the advanced countries and to the potential offered by the rest of the Third World in an attempt to achieve mutually beneficial trade patterns, has already been pointed out.

Correction of intra-regional heterogeneity.

The great variety of national situations in terms of the different degrees of development achieved, the unequal sizes of the markets, the differences in the experiences acquired, etc., make it likely that the intensification of the efforts to bring about industrialization will be reflected in wider gaps within the region. It would seem that the bigger countries with a large variety of national resources would be offered opportunities which are out of the question for the small isolated countries with little diversification, most of which are in a situation of great industrial lag. Then there is the danger of replicating centre-peripheral relations at regional scale in that the success of the national strategies of the great majority of the countries, in particular the medium and small countries, depends to a large extent on their complementarity with the strategies of other countries of the region.

Thus, the various regional co-operation arrangements, ranging from the different approaches to commercial integration to complementarity agreements, technical assistance and even the establishment of Latin American multinational enterprises, are particularly relevant. In this regard, it must be borne in mind that, in particular where the small countries are concerned, simple trade arrangements are not sufficient as the experience of the past two decades at least has shown. Nevertheless the external sector of such countries would have to play a relatively more important role than in the larger countries since international trade would make a more advanced form of industrial development possible although, of course, the bases of such development would be different and would include a higher degree of specialization.

The tremendous difficulty in achieving the objective of bringing regional interests into closer harmony should not be passed over in silence. In the political realm strong nationalistic feeling still prevail which, together with the sometimes very marked differences in ideology or styles of government, may stand in the way of the complementarity of development strategies. In the same way, the political instability which has characterized some countries more than others blocks the establishment of common long-term strategies.

In the economic sphere problems may arise which are part of a tradition and due to the fact that some narrow protectionist feelings prevail in entrepreneurial sectors. These feelings may work against regional harmonization when it entails the granting of reciprocal concessions. In the same way it is frequently the case that many business groups exhibit a favourable attitude to foreign investment or to the purchase of foreign technology without making an adequate estimate of the real contribution of these factors to long-term development. There is a tendency to see only the short-term financial benefits but not the way in which the economic structure is bound to be affected in the long term.

In addition to a certain amount of intra-regional association, efforts are needed to bring about international co-operation with other regions in the Third World and also with the industrially advanced centres.

The latter should continue to be a valuable complementary source of resources, technology and markets. However, this complementarity is one of the needs and objectives of the countries of the region themselves, within the framework of strategies drawn independently and sovereignly. In this sense, the harmonization of regional interests should be an important mechanism for strengthening the bargaining power with governments of other regions and with transnational corporations, whose assistance must be recognized as being of very positive value if it is limited to a more equitable distribution of the mutual benefits which may be acquired.

Instrumentation of the policies

General considerations.

First of all a distinction must be drawn between the different types of policies according to the regional space for which they are designed. Thus, it is possible to speak of local policies, which are designed for specific geographical areas of a country; national policies; policies directed at sub-regions or at Latin America as a whole and of more inclusive interregional and international policies. Of course the level at which decisions are most frequently taken is the national level since it is there that the State is fully in control and the instruments it can wield are handled most efficiently.

Nevertheless substantial progress has been made in international co-operation and in the reconciliation of different national interests, and this is likely to continue in the future. To what point will the recession scenario of the international economy, which is in a crisis said to be more than a temporary crisis since it threatens to turn into a fairly prolonged process, favour or prejudice the putting into practice of international co-operation mechanisms? In a scenario of extreme disjointedness, bringing such machinery into operation would probably have a negative effect. On the other hand, if the arguments advanced in the international development strategy found greater adherence among the governments, a paradox would occur in that, precisely because of the recessive and critical state of the international economy and the need to double domestic development efforts, the dialogue among the nations

would be more than ever necessary at three levels - interregional, intra-regional and between the developing and the industrially advanced countries. This is particularly true with regard to macro-economic questions which are now extremely urgent, as is the financial problem relating to the high levels of the external debt, the high interest rates and the need for long-term refinancing. But it is also true with regard to questions of critical importance with regard to the medium-term productive and industrial potential of the Latin American countries. The most relevant questions in this connection appear to be those which are related to the steps which need to be taken to expand trade in manufactures, to the problems of technological development and increases in productivity, to the role of the transnational corporations and, in general, to the efforts to achieve integration and the harmonization of interests at regional levels. These issues will necessarily continue to be observed and discussed at international level.

The second general consideration concerning the direction to be given to industrial policies is not unrelated to the one discussed above and concerns the relationship between the State and the market. This is an old question which it would seem has never been finally settled and reappears now and again in different settings.

With regard to opposing ideological aspirations, which, in their extreme manifestations call either for the absolute preeminence of the market and a subordinate State or else for total domination by the State, there is practical evidence that there is really no conflict. Far from being at opposite poles the State and the market are complementary terminals which play different roles but which need each other. This has been proven both in the reconstruction of Europe and in the vigorous expansion of the industrial countries in the 1960s. It is even truer in the case of the Latin American countries and of the developing countries in general. The world is far from being the competitive ideal assumed by orthodox economics. The opportunities available to the economic agents are extremely unequal. Information and knowledge do not flow rapidly enough, and training is required in matters which must now be learned through practice. The developing

countries are characterized by great heterogeneity in their economic and social structures which makes it utopian to think that spontaneous market action will be enough to activate development. All this suggests that the State must be active and initiative, especially when there is question of achieving medium and long-term objectives and strategies and of combating organized and concentrated powers, whether at national or international level.

Practically speaking, in the field of industrial development, the growing importance and impact of transnational corporations are becoming increasingly apparent. It does not seem feasible to try to exclude them. They control significant proportions of the world's markets, technologies and financial resources. Their diversification and presence in numerous activities, including the exploitation of natural resources; the production of consumer, intermediate and capital goods; transportation; services; communications, etc., and also their centralization in supra-national decision taking units is gradually discrediting the traditional assumptions of the theories of international trade and the optimizing theories behind the allocation of resources. In the face of this transnational power, the developing countries have no other choice but to use the bargaining power of the State. That is the way to safeguard long-term national interest without having to sacrifice the potential represented by those entities.

On the other hand, it is also apparent that there are situations in which the markets have a resource allocation function which they perform through decentralized prices. It would be inefficient and unnecessary for the State to try to be active in all aspects of economic and social life. In actual fact, production activities may be performed by private entrepreneurs using incentive and disincentive schemes established in public policies on the basis of carefully thought-out global or specific objectives and price movements.

Institutionality of industrial policy.

As experience and a theory amply show, the general orientation of economic policy and other local factors such as the coverage of the market and the supply of natural resources are of great importance to industrial output. However, industrialization is also presented as an instrument designed to achieve the most important purposes of development and not as an end in itself. From this point of view, industrialization for development is conceived as being a process which must be deliberately promoted and not as something which happens spontaneously with no inducement other than that of being subjected to outside determining factors which could cause the manufacturing sector to vegetate instead of playing the dynamic role which should be assigned to it.

Thus, general economic policy should provide for more instrumentation specifically designed to promote and support industrialization along the lines suggested above and with the equally specific objectives formulated. This obviously requires a certain amount of specialized institutionality which can respond adequately to the political will which in and of itself is of course not enough.

Entities which correspond to that idea have been and still are present in developed countries which achieved very high and advanced degrees of industrialization. They are also present in other countries which are making significant efforts in this respect. In many countries of Latin America in particular, entities of this type have been the vehicle for the most important industrial achievements and industrialization processes.

Some of the region's experience with this type of entity goes back very far but most of it dates from the 1930s. At present, it may be difficult to find exceptions although of course these entities have frequently been subject to political change which strengthens or weakens them, often as a result of the emphasis which is placed on

industrialization as a driving force behind development and the intensity of the industrialization process. It is also true that at this point another feature of the heterogeneity which exists between countries becomes apparent since in some countries the institutional paraphernalia for industrial development is more comprehensive than in others. Generally speaking, in the largest countries the institutional apparatus performs a range of functions which is considerably broader than in the smaller countries. Sometimes integration agreements have taken account of the need to associate countries in various financial, technological or programming aspects of the establishment of industrial promotion entities with a view to resolving both national shortcomings and the problems of harmonization of industrial policy.

This is a matter of considerable importance which should be taken into account in consideration of the future of intra-regional and intra-subregional co-operation and the need for developing or strengthening this kind of entity at national level.

Such entities are used in numerous fields of action, of which even a summary list shows the complexity of industrial policy. In the first place, there are the political bodies - usually executive ministries or departments or subsidiaries of them. There are the industrial planning or programming offices which may be located anywhere in the government; there are entities which perform entrepreneurial functions related to direct investment, which are separate from the public enterprises and are designed or oriented differently depending on the way in which the entrepreneurial structure is viewed or oriented by public, private or foreign agents; there are financial entities; institutions for scientific and technological research; technical assistance bodies and institutions for vocational training, export promotion, etc.

In some Latin American countries, the organizational charts in this connection are fairly comprehensive and complex, but they usually suffer from some defects. Such defects include those related to the hierarchical position of or recognition given to the highest political levels, which may or may not have links with the higher entities or objectives formulated. The inter-agency association needed to ensure

well defined objectives, the resources or skilled manpower available and the political changes which frequently determine whether the entities will be strong or weak but also whether advantage is taken of apprenticeship training and manpower experience or whether they are wasted. In each case, careful examination of these and other aspects of the question may make a decisive contribution to the materialization of political will with regard to industrialization.

Exchange policy.

Regardless of whether greater emphasis is put on development from within or development from without, there can be no doubt that trade policies are decisive instruments in the configuration of the industrial structure. Even industrialization strategies followed in domestic markets cannot, in the Latin American situation, escape being heavily influenced by foreign trade for the reasons given above.

There is a large variety of instruments which may be used to change foreign trade, but exchange and tariff policies are the most important.

Of course the exchange policy has an impact which is not confined to the industrial sector alone. Owing to its close relationship with problems of stabilization and management of the balance-of-payments, in some countries which suffer from persistent inflation it is usually determined on the basis of short-term criteria. Very frequently an attempt has been made to break the pattern of spiralling in inflation by freezing the exchange rates, which has resulted in external imbalances sustained by growing indebtedness which sooner or later makes devaluation inevitable, with the usual consequences.

From the point of view of the industrial strategies, the instability which follows devaluation is not desirable. It hinders the projection of medium and long-term trends needed for industrial investment; moreover, in the long run it has not been proved that attempts to stabilize prices by fixing exchange rates for prolonged periods of time have been more successful than those policies wherein it is recognized that the

inflationary imbalances are not caused by increases in the exchange rate. In fact the opposite usually happens. Exchange policies with programmed adjustments based on the inflationary trends and the maintenance of an adequate real exchange rate are those which yield the most satisfactory results in terms of the objectives of stabilization and the goals of industrial development and export promotion. Actually, when the government manages to convince the economic agents that the price of the currency will retain a stable real value over the long term, the incentive for or possibility of obtaining gains on short-term speculation disappear. Also those who programme the government's long-term investments are given new incentive.

The freezing of exchange rates in the presence of sharp differences between domestic and foreign interest rates makes financial intermediation based on external indebtedness a lucrative business with rates of return with which industrial projects cannot compete. Sometimes much of that indebtedness was related, directly or indirectly, to the consumption of luxury articles and speculation in real estate to the detriment of savings for real investment. Of course, this phenomenon of indiscriminate external indebtedness has also affected other countries less orthodox in the way in which they manage their monetary and exchange policy, with similar results insofar as the worsening of the external imbalance is concerned.

There is a close relationship between exchange policies and financial policies advocating openness to the exterior. A more abundant flow of external credits, which could in theory be very attractive, has expensive monetary effects domestically which usually destabilize the monetary programmes. Therefore a compensatory mechanism which appeals to those who give high priority to price stabilization and the money supply is that of freezing the exchange rate or slowing its growth; this stimulates more rapid growth of imports and avoids the monetization of credits. However, this is a short-term approach and is harmful for long-term industrial efforts. A policy in keeping with these efforts requires stability in the real, not the nominal, exchange rate and a policy of external indebtedness based on long-term investment and the need to generate a flow of foreign exchange for repaying the debts.

The tariffs and subsidies policy.

Although orthodox theory holds that there are very few reasons which justify the use of tariffs and restrictions on imports, in practice this instrument is universally used, including in the advanced industrial centres. This is justified by the existence of market distortions and defects which keep the production costs from adequately reflecting the true social costs of the resources. Tariffs are an instrument for neutralizing those distortions. In addition, it is recognized that there is a need to protect some incipient activities for which a period of technological apprenticeship is required during which it may not be possible to compete on equal terms with imported goods. Moreover, there are activities which help to generate external activities and to disseminate technical progress to other related activities (benefits which are not adequately reflected in the market prices). Finally, it should not be forgotten that there is a kind of "global inefficiency" of the peripheral economies in comparison with the central economies, which is due to shortfalls in or the absence of a number of factors outside of the enterprises, such as material infrastructure for communications, transport, repair and maintenance services, continuity of supplies, etc., all of which help to raise production costs and deteriorate industrial competitiveness. In summary, tariffs are a tool for modifying the price system to bring it more closely into line with the structure of incentives, on the basis of long-term development goals.

Of course, there is some danger of inefficiency associated with the indiscriminate use of the tariffs policy. In particular, criticism has been elicited in Latin America over the presence of redundant or excessive tariffs which in protecting some activities over and above what is necessary, strengthen monopolistic tendencies. Also, the application of tariffs over an indefinite period of time does not encourage the use of better technologies or promote productivity. Therefore, the determination of the tariff policy and the absolute levels and distribution of exchange rates is not a trivial problem. It calls for a cost-benefit analysis, which must be reviewed periodically in order to keep step with the various industries and stages of development.

Of course, the tariffs policy has certain indirect effects on the economy and on the distribution of income and tax earnings. However, one of its most problematic aspects is its impact on exports. The argument traditionally adduced in this regard is that tariffs protect activities in competition with imports (when the value added is effectively protected, which is not necessarily always the case) but usually leave industrial exports unprotected. This is due to the relative rise in imported inputs by comparison with exports of inputs. One way of counteracting this effect is to apply tariff exemptions to such imports when they are intended for export activities. However, this may have the opposite effect from the one intended in that this kind of exemption discourages the production of such goods. Thus, we speak of a "distorting compensation".

Other options include the application of direct and indirect subsidies to export trade conducted to compensate for certain cost distortions. However, their use is not free of problems either. For one thing, because they give rise to fiscal expenditure or sacrifice they are open to financial criticism and are more vulnerable to political instability. On the other hand, there are international restrictions on the use of such subsidies and even when these restrictions are not applied, there is always the possibility that aggrieved importing countries will have recourse to anti-dumping mechanisms. Nevertheless, in whatever circumstances it may find itself, Latin America should make an effort to defend its right to promote exports of manufactures in policies similar to those in which incipient industries are supported.

More generally speaking, it must be borne in mind that the final purpose of commercial policies, including those relating to exchange rates, tariffs and subsidies, is the balanced development of activities related to production and foreign trade. It means rejecting extreme measures, such as the search for self-sufficiency or the concentration of efforts on increased exports at whatever cost. It is reasonable to think that in certain situations the social costs of increasing industrial exports are excessively high by comparison with those entailed by producing more for the domestic market. Therefore the

promotion of exports cannot be considered independently of the strategy of production for the local market.

Aside from tariffs and subsidies, there is a vast range of quantitative and qualitative instruments which tend to modify commercial incentives and disincentives. Many of these are being utilized by the advanced industrial centres as a way of discouraging imports of manufactures without altering the tariffs decided upon in international negotiations. These instruments include the international agreements aimed at restricting the amounts traded or even diplomatic pressure in favour of agreements to restrict exports voluntarily.

With regard to this point, it must be borne in mind that exports of manufactures to the industrialized centres are obstructed by the tariff structures and non-tariff protectionist measures used to defend their traditional industries. Actually, although the United States, the European Economic Community and Japan have reduced the average weighted rate of their nominal tariffs since the Tokyo Round, they maintain a scale of tariffs which is applied to a number of products of importance to Latin American exporters of manufactures. In the case of processed foods, textiles and textile articles and, in general, goods produced by labour intensive industries of concern to Latin America, this scale actually affords much more protection than the nominal tariff levels. Moreover, the establishment of a large variety of non-tariff barriers which have a strong protective effect has had as great or more of an impact as the application of tariffs to imports. Many of these measures have been regulated by codes or agreements of conduct whereas others, such as quantitative restrictions and compensatory rights, have remained outside the GATT negotiations and legislation. (ECLA: 1981).

An important objective of Latin American policy should of course be the removal of such barriers. Similarly, at the level of their domestic policies, the countries can use some administrative procedures to stimulate or discourage imports or exports (licences or advance registration, determination of values used in measurement, negotiated access to preferential credit, quality controls, regulations governing the protection and security of persons, cultural or environmental wealth, etc.).

Because of their potential, policies relating to the purchase of intermediate and capital goods, military and other equipment by the State and public enterprises deserve special attention. In certain cases the volume of such purchases may be substantial and programming them over the medium-term may provide a powerful incentive on the domestic demand side for the promotion of those national industrial activities which are in competition with foreign suppliers.

International negotiations.

The position outlined above - giving a new dimension to the role of the domestic market while at the same time attaching greater importance to regional integration - is not incompatible with ambitions for an international role which will ensure that exports of manufactures to the industrialized centres are sufficiently dynamic. However, as has been pointed out, access to the markets of those countries is hampered by a growing protectionism due to situational and structural reasons. The structural reasons have to do with the relative lag in some branches of their productive sectors which, although they are of only marginal importance to the economies, are able to bring their political and social bargaining power to bear on competition from exports from the periphery.

In addition, while the industrialized countries use all their bargaining power to balance their trade flow among themselves, the combined participation of the countries of Latin America is hardly significant enough to reduce the structural imbalances which have traditionally existed in their trade relations with the centre. Thus, it is clear that there is a need to continue the efforts to put together a common platform of action proposals, both to cope with the increasing protectionism from the centres and to reduce the chronic structural imbalance which exists with respect to them.

Another important factor is the increasing significance of transnational corporations in world trade in manufactures. This has a sharply limiting effect on conventional trade policies which operate through the markets and the price system, in that these corporations and their branches take their economic and technical decisions with

an eye to maximizing their profits at world level, which does not necessarily always coincide with local interests. Thus, it is vital to develop enough bargaining power to ensure that the transnational corporations invest and operate in a manner which serves those interests over the long term.

In this connection, within the United Nations an effort has been made to establish a code of conduct for transnational corporations, some of whose main concerns should be noted briefly. With regard to trade, an effort is being made to eliminate restrictive practices and also practices related to the arbitrary setting of transfer costs, in particular between head offices and branches or between branches located in different countries. As for technology, it is felt that the host countries should have quicker access to captive technologies, and it is being recommended that the scientific and technological capacity of the developing countries be used, particularly in connection with the promotion of research activities in which full use is made of local manpower. In the same way, an effort is being made to see that transnational corporations provide information concerning their products (in particular where the preservation of the health and security of the population is concerned and in matters related to the quality of the environment), structure, operations and policies.

Since the transnational corporations control much of the market in manufactures, it is vital to formulate concrete criteria so that the negotiations with those corporations will result in making the exports of Latin American manufactures more dynamic with the highest possible value-added locally. This can be achieved, for example, in the case of corporations which have a large share in the international markets for certain industrial commodities and are willing to open those markets to products manufactured regionally.

With respect to access to technology, a global policy whose central objective is the achievement of greater independence and capacity in respect of choice is of course necessary. It is neither feasible nor desirable to postulate technological self-sufficiency since the Latin American countries can benefit greatly from the available store of technology.

There is, however, a great deal of latitude for moving ahead towards more independence with regard to long-term development objectives. It is indispensable to create a Latin American capacity for selecting and adopting technologies. However, the truth is that the supply of technologies is still controlled to a very large extent by transnational corporations from a few developed centres. These corporations have practices which do not contribute to the development of more independent capacity, such as the sale of turnkey plants or licences with restrictions which make it necessary to purchase equipment and inputs.

Technological policy.

In a very broad sense, technological policy acquires overwhelming importance, especially when viewed from the point of view of the need to overcome the asymmetry of the commercial patterns which now prevail. This is because the structural gap related to the lag in the production of intermediate and capital goods is to a large extent due to the technological gap between the developing countries and the advanced centres. As long as this commercial structure is maintained, the impediments to more dynamic industrialization will persist.

For one thing, the acceleration of industrial growth causes a rapid expansion of imports of manufactures because of the high elasticity of the demand for these goods by comparison with the needs for inputs which are generated. As long as exports of primary commodities do not expand as rapidly, there will inevitably be a structural tendency towards external imbalance. Moreover, the high imported content of the indirect demand, which originates in industrial growth, tends to cause the multiplier effects to be filtered out to the exterior, having a debilitating effect on the growth of the local markets. Thus, there is a close link between the loss of industrial dynamism and the asymmetry which is still to be found in the structure of trade. However, at bottom, the elimination of this asymmetry calls for basic changes in the level of productivity and for a radical reorientation of the trade flows.

We have already spoken of the need to expand the value of reciprocal trade in industrial goods in Latin America significantly. This is one of the conditions for the achievement of the objectives which have been

described. Another of these conditions is the adoption of a far-reaching strategy which will set in motion a process wherein the present technological gaps, which are not only very large but are continuing to grow, can be gradually closed.

Technological development means that resources must be allocated for research closely related to the goals of industrial development, but it also affects the patterns of consumption and the life styles which can be touched by it.

There is a need for a brief examination of some matters which come to mind in connection with the adoption of technological development policies. This problem has a few aspects which are not always duly recognized.

The Vienna Plan of Action formulated during the United Nations Conference on Science and Technology for Development (Vienna, August 1979) and its subsequent capacity of the developing countries and the restructuring of the present system of international scientific and technological relations as main objectives of the international community.

With regard to the latter, there can be no doubt that the adequate selection and acquisition of foreign technology is of enormous importance for the region. In this connection, it is enough to recall that nearly 95% of the world expenditure on research and development occurs in a few advanced industrial centres. It would be a mistake not to recognize this as a fact and to try to do without this flow of innovation. However, in the present phase there is already a need to examine and set policies in connection with such questions as appropriate technology; the prices paid for acquired technology; the impact of technology on patterns of consumption and styles of development and the restrictions frequently provided for in purchase contracts with dealers in technology, which usually refer to, inter alia, the obligatory acquisition of equipment and machinery, technical services, intermediate goods and other items of a similar nature customarily provided by the sellers themselves or their subsidiaries.

The international technology markets are structured very poorly; thus, the service purchased does not have a comprehensive price but rather there is a margin within which a not inconsiderable proportion are the result of oligopolistic prices set by the sellers. Thus, the prices actually paid depend to a considerable degree on the bargaining power of the contracting parties, an arrangement which of course in the majority of cases tends to favour the sellers or in other words the transnational corporations.

With respect to this phase of the problem, the main aim of the policies should be to improve the supply and demand conditions of technology. On the supply side there is a need to explore optional markets, both among the transnational corporations themselves and in institutional centres, at the governmental, private or university level, taking advantage of the proliferation of industrial poles in the international scenario of recent decades. The more options there are in the supply market, the greater will be the possibilities for more independent negotiation. In this connection, attention should be drawn to the possibilities offered by the small and medium-sized enterprises of the developed countries since some of their characteristics make many of them especially suitable for the transfer of technology to production units in the developing world. Similarly, the exchange of experience and technological innovation among developing countries and among the enterprises which they themselves support (a subject on which valuable experience has already been acquired in Latin America) may also yield big benefits.

However, there can be no doubt that the biggest responsibility in the definition of a policy for the selection and acquisition of technology is to strengthen the bargaining capacity of the peripheral countries as the origin of the demand. In this connection it is indispensable to organize an institutional framework made up of the State, the universities, those local private enterprises with enough incentive to participate in such an effort and regional co-operation and development bodies. Basically it is a matter of achieving a two-fold objective - and endogenous capacity for knowing, selecting and discriminating between

the different technological options available and a capacity for co-ordinating purchases of technologies through public or regional bodies.

The development of an organized capacity for technological know-how is fundamental for discriminating effectively in purchasing. In the last analysis, it is impossible to negotiate the transfer of knowledge and information without this minimum capacity for knowing what is available. At this point a vicious circle is set up which must be broken. In this connection the possibility of establishing multinational Latin American corporations made up of mixed, public and private bodies, which would help to acquire experience in other strategical areas, might be of interest.

The foregoing does not imply the postponement of, much less a failure to recognize, what is considered to be an essential component of technological policy, i.e., the strengthening of the endogenous capacity of the countries of the region either to generate scientific and technological know-how for application to their own development or to adapt or improve technology from the industrial countries. All this relates to the creativity which must necessarily be applied to industrial development within the framework of the peculiar characteristics and circumstances of the region and the countries in it.

In this respect, there is empirical evidence that the biggest countries in the region are making a significant effort in terms of resources allocated to technological research and development^{1/}. It has been discovered that these efforts are only partially aimed at reducing production costs, which is the most common reason for making innovations. Other relevant goals are the expansion and improvement of the installed capacity by designing plants which break bottlenecks; the introduction of improvements in the quality or design of products or their adoption to specific conditions; the use of raw materials and other local products; the adaptation of scales, etc. Experience shows

^{1/} The significance of this effort must be seen in terms of the rest of the region; but in relation with other geographical areas, Latin America is still far behind with regard to the priority assigned to the allocation of resources for technological research.

that many of these efforts are frequently made by the very corporations which import foreign technology and decide on the advisability of introducing changes using their own technical equipment. In this respect, attention should also be drawn to the activities of the technological research centres and institutes in the region.

This information shows that local technological activity, rather than replacing the importation of technology, often serves as a link between local and foreign technology, i.e., the purchase of foreign technology opens the way to or creates a potential demand for local technological activity to be used in adapting the foreign technology to local conditions. The actual response depends of course on the availability of qualified manpower, the institutions needed to set up the technical equipment, financial resources which can be allocated to develop the efforts required and, finally, the granting of priority to this objective in industrial and development policies.

This is a field which is bursting with possibilities in terms of regional co-operation and complementarity since it has not been the object of much exploration and only a few countries have made systematic efforts in connection with it, and those efforts are still scattered or still at an incipient stage. In this respect, consideration should be given to the fact that such initiatives have frequently resulted in exports of manufactures as well as of adapted plants and equipment, technical assistance services and even direct intra-regional investments by the enterprises which have made such efforts. It should be emphasized, however, that, in accordance with the objectives of regional co-operation, the activities in question should be performed in such a way as to keep centre-periphery relationships based on subordination from developing within the region between the industrially more backward countries and countries which are ahead of them in the industrialization process.

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INDUSTRIALIZATION AND INDUSTRIAL POLICIES AND STRATEGIES IN THE ECWA REGION by
the Economic Commission for Western Asia, Joint ECWA/UNIDO Industry Division
MANUFACTURING INDUSTRY IN THE ECWA REGION

The present section gives a brief account of the main features of industrial development in the countries of ECWA region in the light of the evolution of manufacturing activities during the last decade and the existing structural features of this sector.

Growth of manufacturing and its contribution to income

Growth performance of the Western Asia region as a whole during the 1970s has been well above the rate achieved in most developing countries. The combined gross domestic product of the region grew at an annual average rate of around 30% (at current prices). In real terms, it is estimated that the rate of income growth was of the order of 12% annually. This performance, however, concealed many weaknesses inherent in the economies of the region which manifested itself in acute economic imbalances, wide disparities in the level of living among the various countries and within each country, an increased dependence on the outside world, a galoping inflation and a consumption pattern increasingly geared towards imports.

The economic imbalances were further aggravated by the sudden increases in oil revenue after 1973, coupled with a poor performance of the main commodity producing sectors, namely agriculture and manufacturing. Thus, the relative contribution of manufacturing to regional GDP has in recent years dropped to half its level in the early 1970s, which was around 12%. This decline was shared by most ECWA countries. On the other hand, the relative importance of agriculture dropped to one third its level whereas mining and services had increased substantially their share in total output, particularly in the oil producing countries.

Under the circumstances, it would not be exaggerated to say that no significant progress could be achieved in eliminating the existing economic imbalances unless serious efforts are deployed to restructure the economies of the region in favour of the commodity producing sectors and in particular manufacturing.

The growth of the manufacturing sector, which at current prices, averaged 20% annually during the 1970s, has also revealed great disparities in the level of development between different country groupings (oil, semi-oil, and non-oil countries). This disparity had started early in the decade, and if allowed to continue into the 1980s, it would inevitably lead to basic changes in the regional structure and location of manufacturing activities in favour of oil economies. It would also lead to a new regional division of labour whereby the bulk of the industrialization would be centered in the less populated areas of the region. The type and nature of such pattern of industrialization would constitute a stumbling block for an integrated industrial development.

It is worth noting, in this connection, that the region has witnessed an overall economic slowdown towards the end of the decade with regional growth rates of both overall and manufacturing activities being cut by half reaching in the case of the latter an annual rate of less than 10%. This is mainly attributable to the unstable political atmosphere which started developing throughout the region early in 1976 following the unusually prosperous period of the early 1970s and which was prompted by 1973 oil prices increases. This slowdown has reduced the relative contribution of manufacturing to GDP in the region as a whole (to half its level of 1970). Furthermore, the contribution of manufacturing to the increase in total income did not exceed 5% during the decade.

The components of these developments, differ from one country groupings to another. In oil economies, where oil activities generally set the pace for overall economic performance, the slowdown was relatively mild. In the non-oil economies, however, the slowdown took the shape of a grave recession. Thus, the non-oil economies' manufacturing income contribution to GDP dropped from around 15% early in the 1970s to less than 10% in recent years. Lebanon and Syria, which both accounted initially for approximately 30% of regional manufacturing income were mainly responsible for the downward trend.

In Iraq, manufacturing activity has accelerated its pace of development by increasing its growth rates to 26.2% during the second half of the decade compared to 16.8% during the whole period of the 1970s. This performance is achieved inspite of the slowdown witnessed by the economy in general during the latter half of the decade and was the result of earlier large investment in the sector that began to mature after 1974 and started to exert its impact. Nevertheless, this good performance has only slightly improved the relative importance of the sector representing less than 9% of GDP towards the end of the decade. This was mainly due to the exceptional performance of the construction sector during the period, as a result of the intensive efforts being directed towards the improvement of the infrastructure of the economy in recent years.

It is worth noting, that the non-oil countries, which represent approximately half of the population of the region, and most of the countries of which (Jordan, Lebanon and Syria) are traditionally known to be relatively more advanced in manufacturing among ECWA countries, have been witnessing continued decline in their relative importance in terms of regional manufacturing output which has averaged in recent years only 21%. On the other hand, oil economies which barely represent one quarter of the region's population, have seen their share in terms of manufacturing income, increasing to 58% as against 45% early in the decade. It is important to note here that these developments were made possible because of carbohydrate-based industries which accounted alone for some 80% of manufacturing income.

In terms of per capita manufacturing income, it is observed that the relative contribution of the manufacturing sector to the increase in urban per capita has increased at an annual rate of less than 1% during the decade as against an annual urban population growth rate of more than 5%. This fact is of particular significance since demand for manufactured goods in most of these countries is largely conditioned by urban consumption patterns. In other words, manufacturing activity accounts for only a small part in generating urban income increases

whereas the non-commodity sectors mainly services play the major role in determining urban consumption levels. To illustrate further, information relating to the supply of manufactured products and available for a number of ECWA countries indicates that the combined contribution of domestic manufacturing output to the increase in the availability of manufactured goods did not exceed 35% throughout the decade. This percentage would have undoubtedly been much lower if the output of oil based industries (oil refining and products) were excluded.

On the other hand and despite the increases achieved in the combined industrial output of these countries which grew at an annual rate of more than 20%, the ability of the manufacturing sector to satisfy domestic needs did not exceed 42% in recent years, compared to 57% in 1970.

This situation is an outcome of the fact that manufacturing activity other than oil based industries, has been originally established as a substitute for imports in most ECWA countries, its development, therefore, has been dependent on the consumption pattern of the domestic market. The sudden increase in income after 1973 in the oil economies has found its way to the rest of the region through direct government donations and remittances of workers. The effect of this new source of income, which did not originate mainly in the commodity producing sectors, has affected the consumers taste to the advantage of imported manufactured products. Domestic industry was thus faced on the one hand by a more sophisticated pattern of consumption which it could hardly satisfy; and on the other hand with rising production costs due to the openness of the region to world inflation and the high cost structure of factors of production induced by the sudden increase in income after the 1973 oil boom.

Structure of manufacturing output

A review of the structure of manufacturing output in the region reveals its predominant orientation towards the production of consumer goods (mainly food, beverages, and tobacco, and textiles and wearing apparels), and intermediate goods (mainly petrochemical industries, non-metallic mineral products and to some extent basic metal industries). The picture that emerged consisted of a large variety of scattered

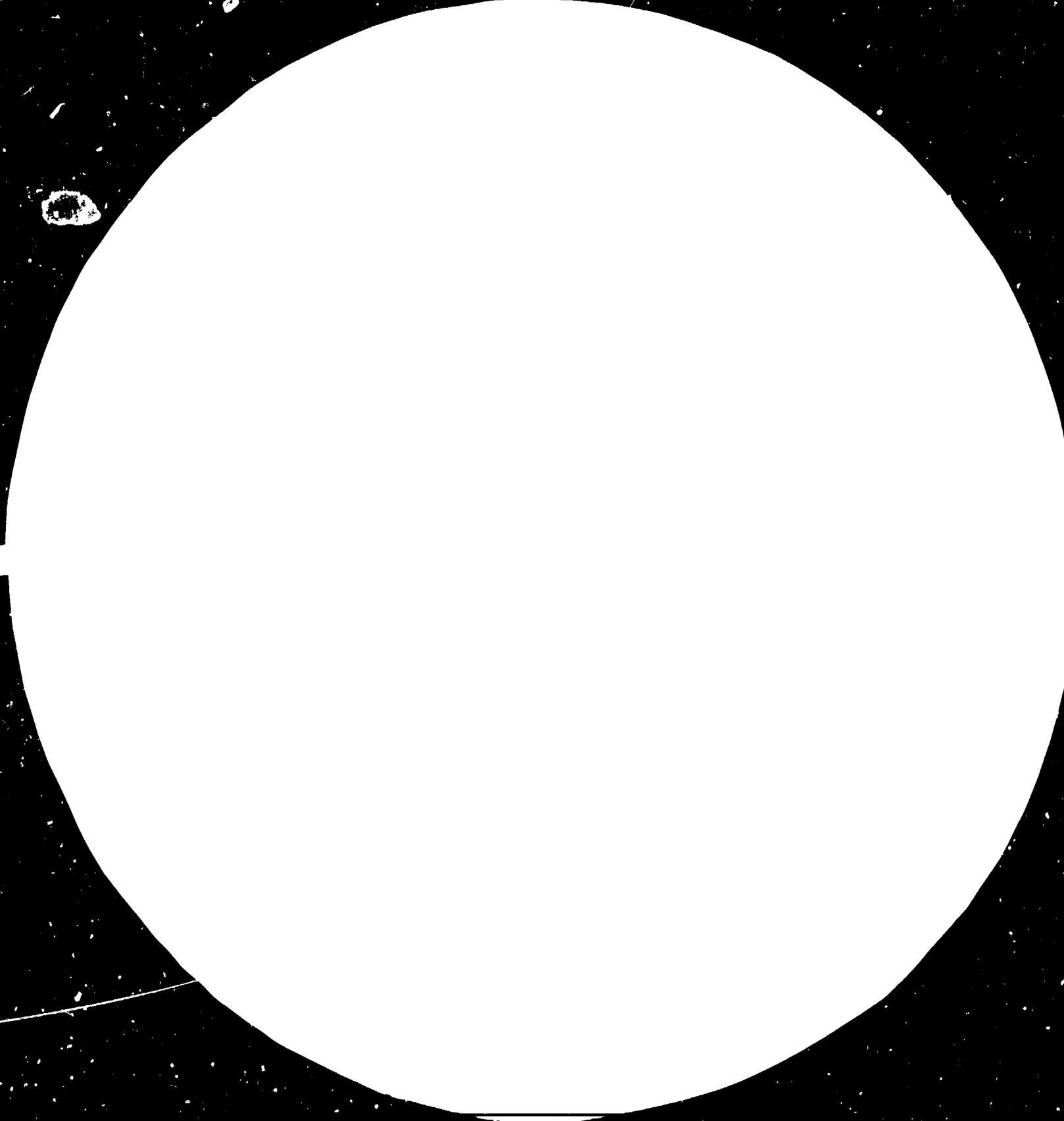
enterprises with no linkages between them and very little complementarity in their production. More complexed and integrated industrial activities in the field of capital goods and engineering industries have not been given due attention. While the lack of resources and the limitation of the market at the country level may have prevented the establishment of such industries, the absence of a regional outlook to the problem of industrialization has certainly been a major factor for their absence. As a matter of fact, the countries of the region have not drawn yet clear outlines for an integrated industrial strategy, based on an overall general development strategy for the region. The approach to industrialization has so far been a piece-meal one with very little or no co-ordination between the production plans of the various countries.

Available statistics on structures of manufacturing sectors of countries of the region reflected wide variations among countries depending on their level of development. To a large extent, countries belonging to the same groupings share similar structures. Thus, in the non-oil economies, food, beverages and tobacco; clothing and textiles industries, together occupy major positions, and have been gaining more importance since early in the decade reaching around 75% of total manufacturing income in recent years as compared to 54% in 1970.

Chemical industries, on the other hand, including petroleum refining and petrochemical products constituted the main activity in most oil economies representing, on the average, 80% of value added in manufacturing over the decade. This was due to the impact of higher oil prices after 1973 on the value of refined oil which constituted the main activity in the manufacturing sector in those countries.

Non-metallic mineral products, composed mainly of cement and building materials, have on the average, increased their contribution to manufacturing income to all countries except in the case of Iraq and Saudi Arabia. This increase came in fact as a result of a surge for the development of this branch to cope with the vast increase in demand for construction due to the intensive efforts directed towards the development of the infrastructure of the economy. Nevertheless, this branch of activity continued at the regional level to represent less than 7% of manufacturing value added over the decade.

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As for basic metal industries and engineering industries, including manufacturing of machines, tools, and equipment, the relative contribution of these activities to MVA has widely fluctuated ranging however at the regional level between 2% and 4%. It should be noted that this activity includes aluminium smelting and extrusion, the production of which is mainly for export markets, (e.g. Bahrain). Generally speaking, the engineering industries in the region are still at their initial production level and consist mainly of engineering services and repairs and metal manufacturing, catering primarily for the building and construction sector.

The limited production basis and the fragmented nature of the industrial set-up combined with the lack of complementarity in production has reflected itself on the pattern of imports and exports of manufactured goods. Thus a high proportion of the goods required for production are being supplied by imports mainly from developed markets. Available data indicate that despite fluctuations, the relative share of imports of manufactured intermediate products to total manufacturing imports is gaining increasing importance approaching a percentage contribution of 50% at the regional level. When compared with the level of manufacturing output, information available on selected ECWA countries indicates that intermediate imports of manufactured goods has recently accounted for 76% of total manufacturing output in the countries concerned collectively, compared to 41% in 1971. This increasing dependence on external markets for industrial inputs becomes more critical if other imported inputs such as unprocessed materials and machinery and equipment for industrial use are included.

It is worth noting in this respect that the value of imports of manufactured intermediate products (excluding machinery and equipment) for the whole region has, over the decade, increased more than 12 times that of 1971. Thus, manufacturing activity in the ECWA region is characterized by a low degree of processing which on the one hand limits the value added generated internally and increases, on the other hand, the production costs. In other words, the larger part of the benefits from the industrialization process is not accruing to the region.

As for the exports of manufactured products, they have recently constituted around 9% of the region's total exports as compared with 14% earlier in the decade and they continued to be concentrated mainly in chemicals and petroleum products which accounted for more than half the total. It should be noted in this connection that there are strong indications of the inclusion of a large volume of re-exports statistics of manufactured products of some countries. Should it be possible to separate these data from the export figures, the percentage of the region's manufactured exports to total exports would certainly be lower than 9%.

Hence it may be an exaggeration to assert that in its present state, it is becoming increasingly difficult for ECWA manufacturing industry to penetrate markets outside the region, even those of other developing countries which can be considered the natural markets for many of its products. Even more alarming is the fact that manufacturing exports have lost their traditional markets within the ECWA region itself due to competition from countries in Southeast Asia, where a substantial part of the output is produced under trademarks of multinational corporations. Future prospects in this respect are no more encouraging, especially as ECWA manufacturing, which is basically oriented to domestic needs, is, as mentioned earlier, no longer capable of keeping up with modern patterns of consumption with their strong orientation towards imported goods. If this phenomenon is examined more closely, one finds that it amounts to constant outflow of the benefits of domestic production and a growing increase in expenditure that could have been instrumental, if properly channelled in restructuring output and hence, accelerate manufacturing development.

INDUSTRIAL POLICY AND ITS MAIN INSTRUMENTS

The present characteristics of industry in the ECWA region as well as its development over the last two decades has been conditioned by a number of factors which affected its rate and pattern of growth. Prominent among these factors is the influence which the increase in oil revenues has had on the pattern of investment consumption and the structure of prices and cost of factors of production. However, it is

obvious that industrial development has also been considerably influenced by various actions taken by public bodies, either as a consequence of provisions and measures deliberately adopted to stimulate and direct the industrialization process, or by steps taken as part of the economic policy as a whole, the effect of which has also been felt by the manufacturing sector. Thus, it is not easy to always identify, among the multiplicity of measures taken, those that may be considered as constituting an industrial policy, properly speaking, which can be used as a yardstick to measure in quantitative terms its effectiveness on the pace of industrial development.

Generally speaking, one can define the elements of industrial policy in the ECWA region as those measures and steps taken by public authorities and aiming at either protecting domestic industry from foreign competition or controlling and encouraging the pace and pattern of industrial development, including direct state promotion. The above definition leaves out of account important elements of general economic policy falling within the purview of state action and which may have exerted a strong influence on industrial development. This applies, for example, to government action aiming at improving infrastructure and basic social capital.

Protection of industry and its main instruments

It is generally recognized that manufacturing activity in the ECWA region has developed originally, as an import substituting activity, in an atmosphere of protection.

Generally speaking, tariff protection as a whole, has constituted the mainstay of protectionism in countries of the ECWA region. Therefore, it would not be exaggerated to say that over the last two decades and for at least two countries namely, Iraq and Syria, the pattern of domestic activity in manufacturing was largely determined by the import policy. Quantitative restrictions have also constituted an important instrument of this policy. Through direct controls of imports, protection was extended to those branches of manufacturing which were falling within the

countries' development objectives. In many instances, total protection was given by placing a complete ban on importation of competing goods. By eliminating market forces, such high levels of protection had paved the way to monopolistic practices, inefficiencies and misallocations of resources. It is worth noting in this connection, that the real degree of protection is not determined by the General Tariff level, but also by the differences in the rates applied to particular products and those applying to intermediate imported inputs needed for the production process. It is in fact the tariff structure that allows the tariff instrument not only to act as a general stimulus, but also to affect the direction taken by industrial development.

It should be noted that the nominal tariff do not alone reflect the protection afforded to industry as in most of ECWA countries other protection measures are actually practiced. These measures include quantitative and administrative import control that ranged from a complete ban on import to import quotas - a practice widely used in Iraq and Syria, and to a lesser extent in Jordan. In comparison, Lebanon has used import control on a limited scale.

Tariff rates are generally the highest on consumer goods while much lower rates are applied on capital and intermediate goods as well as raw materials. This structure of tariff is mainly a reflection of the importance attached to import substitution as an immediate requirement of industrialization although, as was the case in many instances, with considerable sacrifice of productive efficiency, costs, prices and a rational industrial base. The result was an extensive rather than intensive type of industrial growth. In other words, the tariff structure has been favouring production lines related to the demand for final consumer goods, even though only the finally processing stages were covered. This is obvious since a tariff on a certain commodity tends to protect the domestic industry producing that commodity, but in doing so it acts against the industries producing the whole range of intermediate inputs and machinery. Furthermore, by drawing resources into protected industries, they have had a negative effect on other industries receiving less protection. Moreover, the fact that such protectionist policy has most of the time maintained an absolute level of protection on a large scale, without any

pressure on the industrial branches already established to effect a steady improvement in their productivity and efficiency, has had adverse consequences for costs and prices of manufactured goods in the countries of the region.

In summary, the tariff policy is characterized by: a tariff structure which has been dealt with on a case-by-case basis reflecting historical incidents with apparently no coherent industrialization policy; the tariff structure by and large has been geared primarily towards tax revenue objectives and only secondarily to protection. Protected industry has been granted an average nominal tariff ranging from 18% (Lebanon) to 23% (Syria) which is by no means a protective level structure for a developing country, especially when it is not combined with other effective protection measures. This is particularly true in the case of Lebanon; granting protection has not been linked to clearly defined industrialization objectives.

This approach to protectionism has created conditions which made it difficult to combine import substitution with the introduction and expansion of exports of manufactures at any substantial scale. Industry in each country as mentioned earlier, has witnessed an extensive type of growth covering practically a large range of manufactures in a given category, and in most cases without specialization in particular lines within a given category based on the country's endowments and comparative advantage. The absence of such specialization has deprived the region taken as a whole from laying the foundation of a more self-supporting type of industrialization and has hampered the industrial integration of ECWA countries.

The foregoing review of the main characteristics of the protectionist system that has been applied in the countries of the ECWA region underlines the need to make it a flexible instrument of protection. Thus, tariff rates must be based on practical criteria with a view to acting as an effective stimulus to industrialization without entailing unfortunate consequences.

In brief, what might be regarded as protectionist policy is really the result of a mixture of measures and instruments which has varied according to the country and to the period in question. These measures were governed both by strictly protectionist aim and by the need in a number of countries to obtain more revenues or to improve the balance of payments. In any case, whatever the real influence of the protectionist aim may have been, the general climate created resulted in a high degree of protection for domestic industry.

General measures of industrial promotion

Instruments of general economic policy, relating to taxation as well as certain features of monetary and credit policy have also been used, in varying degrees, as indirect incentives for industrial promotion. In some countries, namely, Iraq, Jordan, Lebanon, Kuwait, Saudi Arabia and Syria, this has taken the form of an industrial development legislation. In most countries, however, there has been a collection of miscellaneous provision, either of a general nature such as income tax exemption, tax rebates, credit incentives, etc., or relating to measures, aiming at regulating and encouraging investment in industry.

How far these provisions and measures have been effective in stimulating industrial development in the ECWA region can best be appreciated in the light of three objectives. The first, to favour industry over other sectors in such a way as to encourage the channelling of resources into manufacturing. Secondly, to influence certain lines of production within the industrial sector. Thirdly, to encourage a certain type of behaviour on the part of existing enterprises facilitating expansion and raising efficiency and productivity.

On examining the various instruments of industrial policy used, it is not difficult to infer that except for some measures designed to facilitate credit operations of the industrial sector; all other instruments do not, as a rule, imply preferential treatment for the industrial sector as a whole vis-à-vis other sectors of economic activity. As far as taxation is concerned, the fact that in most countries

of the region, a very high proportion of government revenues accrue either from oil royalties or from foreign trade duties and charges and from other indirect taxes means that the incidence of taxation on the profits of industrial enterprises is rather light than otherwise. Available figures indicate that for the period 1968-1977, taxes on income and profit have ranged between 10 and 12% of total government revenues, on the average for Lebanon, Syria, Jordan, and Iraq, (oil revenues being excluded for the latter.) This ratio is much lower in the case of the other oil producing countries in the region. This situation limits the effect of incentives that would be provided through taxation.

With respect to incentives aiming at influencing certain branches of industry, this objective has been largely overlooked. While there is no doubt about the intention to use selective incentives in order to stimulate particular industries, the criteria determining which industry is to benefit from such incentives was never spelt out in detail. Thus, broad definitions, such as "in line with the country's development objectives"; "not competing with the public sector"; "using domestic raw materials"; "substituting for imports"; or "have a potential for export", were the guidelines on the basis of which industries qualified for the provisions of industrial policy.

The application of the principle of selectiveness could have undoubtedly exerted a significant influence on the orientation and structure of industrial development, if the type of activities eligible for the benefits of the incentives were defined with precision instead of being formulated in general terms. The same thing can be said with respect to the efficiency of these incentives in influencing the geographical distribution of industrial activities. Most countries of the region have set up "industrial decentralization" as a new desirable objective. The measures taken to favour specific location considered of differential interest rates policy on industrial loans and extended period of customs duties exemptions in the case of Iraq and additional tax incentives in the case of Lebanon. The other countries reviewed resorted to the provision of industrial estates facility as an encouragement measure.

As far as raising the efficiency and productivity of enterprises is concerned, the instruments under discussion were merely geared towards new developments rather than existing industries. They have helped widening the range of manufacturing activity either through stimulating expansion or encouraging new developments. Very little attention was devoted in the various legislations to the problem of efficiency. This, in spite of the fact that most countries have set as an objective to raise productivity levels in their existing industries.

Lastly, it must be pointed out that in view of the dispersed sources from which the various instruments and measures of industrial policy adopted in this study, were obtained, it was not possible to depict clearly one of the unfavourable features characterizing this policy in many of the countries under review, namely, the lack of continuity caused by frequent changes in the nature and scope of the provisions established. The result is an atmosphere of uncertainty which quite often has weakened the anticipated effects of the incentives offered.

Direct State promotion

In addition to the general incentives deriving from protectionist policy and from other measures designed to stimulate and encourage industry, direct State promotion emerges as a basic instrument of industrial policy in the majority of ECWA countries.

In the following paragraphs, a brief review is given in broad outlines for the activities carried out in this field in some countries of the region, more for illustrative purposes, than with any intention of presenting a complete and systematic picture.

The most important public bodies and instruments concerned with the direct promotion of industry in ECWA countries have varied considerably. In some instances, it takes the form of guidance given by the State agency concerned, with overall economic and technical research (i.e. Planning Board, Ministry of Planning, Ministry of Industry). This guidance ranges from the outlining of a national development programme to the recommendation of establishing specific industries. In other cases, the bodies concerned operate mainly by channelling credit resources to finance expansion and installation of industries (i.e. Industrial

Development Banks). The same ends have often been served by means of direct contribution of public capital, resulting in the establishment of enterprises in which both the State and private interests participate in varying degrees. Lastly, the work of these bodies has frequently taken the form of setting up State enterprises, with a public character (General Organization of Public Sectors Projects).

Industrial public enterprises constitute the most important form of direct State promotion in most countries of the region. An in-depth analysis of the public industrial sector is hampered from the outset by the scarcity of data and the incompatibility of the data that exist. The information available makes it clear, that as a general rule, State effort has been channelled in the direction of basic industrial activities, calling for relatively substantial investment and entailing greater risks. This is particularly true in the case of most oil producing countries and in Jordan and in Yemen where the role of State enterprises has not been to compete with private capital, but rather to meet the growth requirements of industrial activities which the private enterprise was not in a position to serve. On the other hand, in countries where the economic system is more oriented towards controlled economic activities, such as Iraq and Syria, the role of the public industrial enterprises gained importance following the nationalization of the main industrial establishments early in the 1960s. As an exception to the above two positions with respect to public enterprises, in Democratic Yemen where the economic system is centrally planned, the position of the Government regarding the role of State enterprises is based more on philosophical grounds advocating State ownership of all means of production.

FINANCING INDUSTRY

Specialized Institutions for Industrial Financing

The need for a specialized institutional framework to supply the enormous requirements of long-term capital for the implementation of vigorous industrialization policies has been felt all along by countries in the region. Specialized institutions now exist, or are being established in practically all countries under review. The sponsorships, organizations,

procedure and scope of these institutions differ from country to country. In Iraq, Syria and Kuwait, they are entirely Government owned, while in Jordan, Lebanon and Saudi Arabia, they are Government sponsored and jointly controlled with other institutional and private share holders. In practically all the institutions in question, the majority shares are held by local institutional and private investors.

Whatever the character of the existing specialized institutions, none of them, so far, have acquired a decisive importance in the process of industrial financing. Their performance is still too restricted to have any great impact on the industrial development of the countries concerned.

The Role of Central Banks in the Financing of Industry

The specialized institutions in Lebanon and Syria have received substantial support in the form of loans from their respective Central Banks. In addition, the Central Bank of Syria gives preferential treatment, in discounting for papers originating in industry. This has taken two forms. One form consists of imposing a lower discount rate on industrial notes and bills. Another form consists in permitting industrial papers to have a longer maturity for rediscount. Thus, the maturity of these notes is 300 days as against 120 for commercial notes.

In the other countries of the region, the role of the Central Bank in financing industry has been very limited.

The Direct Role of Governments in Industrial Financing

In most of the countries reviewed, Governments have provided direct financial assistance to industry, in addition to the indirect promotional measures.

One of the principal ways of direct government financing is direct investment by Ministries, State Organizations and other autonomous public authorities. Instances of such direct investments are found mainly in Iraq and Syria, where the largest part of the industrial sector is in the public hands. Financial allocations for these investments are normally provided for in the annual budgets.

Direct investments could also take place through a Government company, such as for example, the Saudi General Organization for Petroleum and Minerals (Petromin), and SABIC. Established in 1962, Petromin is a public autonomous body, especially vested with the responsibility of promoting oil and mineral-based industries, either with Government finance or as a joint venture with private, domestic, or foreign capital. Through Petromin and SABIC, the Saudi Government has embarked on the promotion and establishment of a considerable number of large enterprises in the field of petrochemicals and minerals.

Participation in the equity capital of industrial enterprises is the most common form of Government direct investments in Kuwait and, to a lesser extent, in Jordan.

As elaborated above, one of the most common forms of Government assistance to industry is participation in the establishment of specialized institutions. Among the five principal specialized institutions in the region, three are fully owned by Governments, namely the Industrial Banks of Iraq and Syria, and the Credit and Savings Bank of Kuwait. The other two are mixed enterprises, with Government ownership amounting to 40% in the case of Lebanon, and slightly over 50% in the case of Jordan.

Other Instruments of Industrial Policy

The foregoing review of general industrial development measures and direct State promotional activities suggest, that a very substantial proportion of the efforts made has been directed towards encouraging the installation of new manufacturing activities. While this has been a basic objective, it is worth referring to some other types of responsibility assumed by public bodies and whose primary aims have been to improve the performance and efficiency of existing enterprises. These include technical assistance in the form of technical advice, training of skilled personnel, technological research and similar activities.

By and large, supporting activities of the type mentioned above are totally inadequate in the region. Thus, technical advice is given to entrepreneurs mainly through some of the specialized credit institutions established in the various countries of the region. This type of assistance

rendered, however, has remained limited in scope, and its impact on industrial efficiency is not easy to evaluate. As far as the available supply of skilled labour is concerned, it has tended to lag behind the real requirements of industrial development. While a number of technical and vocational schools exist in most of the countries in the region, none of them, however, have sufficed to produce a large enough supply of workers trained in up-to-date production techniques.

Generally speaking, in most countries of the region, the supply of technicians has been undertaken mainly by State enterprises themselves through training their workers in specific branches of industry.

With a view to systematizing these efforts, some countries, namely Iraq and Saudi Arabia, have undertaken studies on human resources at the national level as a ground work for future programmes relating to the training of technical and scientific personnel.

The shortage and inadequacy of supporting activities is most marked in the field of technological research. An indirect indication to this inadequacy in the extent to which industrial enterprises in the region are increasingly resorting to the use of foreign patents and licences as a means of obtaining readier access to technical progress. In essence the assimilation of technology has been a passive process, consisting mainly in training in the operation of new production equipment but not affording sufficient mastery to provide a basis for creative activities that might have been reflected at least in the adaptation of technical progress at the world level to the special conditions of ECWA region.

In addition to the afore-mentioned instruments, mention should also be made of the public sector purchasing policy which in at least four countries of the region provide a preferential treatment to domestic industry.

INDUSTRIAL DEVELOPMENT POLICIES - A NEW ORIENTATION

Introduction

The foregoing review bring out the following salient features of industrial trends and industrial policy in the ECWA regions:

- In practically all countries of the region, the industrialization process is either at its very early stages or has not been accompanied as is the case in the relatively more industrialized countries such as Iraq and Syria, by sufficiently radical changes in the structure of society or in the economic structure of other sectors, to which, on the contrary, industrial growth patterns have had to be adapted. This is partly because in many instances the industrialization process was determined less by internal factors than by the impact of external events.
- Industrialization has not succeeded in enlarging popular participation in consumption. The market for several categories of manufactured goods has been constituted by relatively small sectors of the region's population, while other groups, especially in the rural areas, take little or no share in the consumption of industrial products. The possibilities opened up by mass production and the opportunities for rapid industrial expansion, have thus been seriously limited.
- Industry in the region remains to be characterized by a narrow range of products manufactured and a low-level of specialization. Furthermore, complementarity in production is limited and reliance on extra-regional markets for the importation of manufactured goods and for the exportation of primary commodities continue to dominate the composition of the region's trade.
- Production units in the industrial field has by and large shown relatively low level of productivity. Factors leading to this

varied and resulted from the lack and/or level of skills, the suitability of technology as well as organizational and other institutional factors inhibiting productivity. Excess capacity is known to exist in many of the industries in the ECWA region, mainly as a result of insufficient demand, inadequate maintenance and production bottlenecks.

- The pumping of oil money after 1973 into the economies of oil producing countries and its indirect effect on non-oil producing countries has resulted in introducing structural imbalances in the cost of the factors of production and prices structure. This has been adversely reflected on the competitiveness of manufactured products especially in oil producing countries.

- Little progress has been made in the creation, adaptation and transfer of technology. The countries of the region are almost completely dependent on imported technology for their industrial development. Related to this is the development of human resources which are the pre-requisite for industrial development in the ECWA region. This calls for the transformation of the social and institutional environment in such a way as to make possible the formation and expansion on a sustained basis of a managerial and skilled elite and labour force that can assimilate, adopt, modify, innovate and apply modern science and technology.

The Responsibilities of Industrial Policy

The conclusion to be drawn from all that has been said so far is that industry in the ECWA region is facing increasing development requirements as well as an urgent need for reorientation and structural changes. Such requirements imply new and greater responsibilities in the definition and efficient application of the set of measures and instruments which constitute industrial policy.

The expression "industrial policy" in the context of development planning efforts summons up a picture of a series of properly co-ordinated measures and instruments used in pursuit of certain clearly defined aims. Perhaps it should be recognized that this has not been the case in the ECWA region.

Industrial policy in the countries of the region has consisted in a number of insufficiently related measures rather than a consistent overall line of action. Furthermore, this policy has not been expressed in terms of clear-cut objectives, nor has it been given the necessary continuity. It has also lacked selective criteria and has not carried much weight in shaping sectoral structure. Lastly, industrial policy has not always seemed to be sufficiently integrated with overall economic policy to provide a more dynamic impetus to industrialization. Thus, the characteristics of consistency, continuity and selectivity combined with proper integration with general economic policy, appear to be the essential requisite of any future industrial policy. Proper planning should have made it easier to meet these requirements. This, however, did not materialize in most countries reviewed since the various instruments of industrial policy have not taken shape within the framework of long-term guidelines of any industrialization strategy.

In the light of these considerations, it becomes important to define the elements of an industrialization strategy for the ECWA region and then attempt to formulate a set of guidelines for an effective industrialization policy.

Elements of an Industrial Strategy

There are growing indications that import substitution may no longer play a leading role in the industrialization process for a number of countries of the region, despite the fact that the size of the national markets can often be expanded through internal policy measures, such as the introduction of better and more equitable distribution of income and more intensified geographical diversification of industries within each country. In fact, excess industrial capacity is already present in most of these countries, reaching in many cases 60 to 70%. Import substitution has been concentrating on producing mainly consumer goods additional to construction materials product that are increasingly dependent on imported input. The countries are posed for entry into what is sometimes referred to as the Second Phase import substitution calling for establishment of intermediate products for supplying the existing industries as well as the development of engineering industries including capital goods industries.

These industries are usually characterized by a relatively higher technology, higher level of manpower skills, including management, and greater economies of scale.

Furthermore, some countries, namely the oil producing ones, have geared their industrialization towards the processing of raw materials and exporting them to the advanced economies. The growth of the chemical and petrochemical industries is a case in point. For their development, these industries, have drawn largely on the technological and productive resources available in advanced economies, whether capital or intermediate goods. Therefore, the technological skill that has developed only applied to a fraction of the industries; its industrial dependence and inter-relations have remained largely with a more sophisticated economy abroad. Industrial investments in such situation could not transmit their benefits to various sections of the economy by deepening and extending the input and output relationships in industry and accordingly have failed in creating the cumulative process of growth characteristics of industry. It is worth noting, in this connection, that the oil rich countries, where substantial investments are being planned in resource based export oriented industries account for more than 90% of total planned investment in manufacturing for the whole region. At the same time, those countries are the most dependent on expatriate labour for the implementation of their development programmes. This situation would undoubtedly increase the present process of intra-regional migration of skilled labour from the non-oil countries to the oil rich countries in the region, which would complicate further the existing imbalances in the region.

Another consideration relates to how far the present trend towards "extensive" growth of industry will persist as against a calculated effort on the part of the policy maker to reorient it towards a more "intensive" growth, i.e., a greater internal structural integration of the major industries.

Turning to the regional dimension, the first issue of concern to an industrial strategy is how far industrialization efforts will continue to be directed towards the individual domestic markets, as compared with regional integration and the world market for manufacturing. Bearing in

mind the conclusion reached earlier with regard to the necessity of re-orienting the process of industrial development in the region, an increasing measure of regional integration seems imperative, not only as an objective but also as a basic instrument towards a self-sustained economic growth.

Thus with respect to the location of industry, the question is how far a deliberate attempt will be made to modify the noticeable trends towards a marked concentration of industry in certain areas of the ECWA region. This problem may be considered from two separate angles: first, how far should industry contribute to the internal integration of the individual economies, which are often faced with serious disequilibrium in the development of their distinct component areas; second. how far will the location of industry be gradually adapted to conditions of progressive regional integration.

Lastly, urgent consideration should also be given to the issue of manpower absorption, which is no doubt one of the most serious problems which industry in the region is encountering. While the problem can hardly be solved through action in any one sector of the economy, it is necessary to deal with the issue on a priority basis and define a comprehensive long-term employment and manpower policy, which, in turn, would influence the industrialization strategy.

Broad Objectives of Industrial Policy

A strategy for industrial development formulated on the basis of the aforementioned broad guidelines would help define some broad objectives of an industrial policy for the ECWA region. Clearly, however, the definition of specific policy measures cannot be divorced from the special conditions of each country, its natural resource endowment, and, above all, its level of development. In the oil producing countries for instance, where capital resources are abundant, the approach to industrialization is bound to be different from that in countries with sizeable labour surplus. Again the industrialization policy which is valid for countries at a very early stage of development is not likely to be so for countries with a relatively long industrialization history behind them. The implication is that each country in the region, has to define for itself the appropriate

strategy and hence policy for industrial development. However, there are certain priority objectives which are sufficiently common to most countries in the region although not in the same order of priority to warrant special consideration, and justify common action. These are:

- the development of integrated and balanced industrial sectors;
- the development of an efficient and competitive industrial sector capable of supplying an increasing share of the local markets as well as exporting manufactured goods;
- The development and efficient use of advanced technology and the associated manpower skills development;
- greater equality in income distribution; and
- the promotion of an integrated regional co-operation in the field of industry.

Technology

The assimilation of technology cannot continue to be restricted to the super-imposing of mere advanced phases of technical progress on a basically unaltered traditional structure. The phenomenon of "technological duality" witnessed in the countries of the region is incompatible with the objective of creating a more integrated industrial structure. Thus, training with a view to using scientific progress for acquiring a fuller knowledge of regional resources and their use, and to adapting production techniques to the specific conditions of the region, is another important aim of industrial policy in its broadest sense.

Costs of Manufactures

A basic objective which should guide industrial policy will be the elimination or mitigation of factors determining the high costs and prices of manufactured products in the region. Failing to attain this objective would jeopardise other important goals such as the expansion of domestic markets in addition to regional integration.

Productivity

The manufacturing sector has been suffering in most countries of the region from low level of productivity. Effective policy measures and action needs to be devised to promote improvement and induce higher levels of productivity.

Income Distribution

It is important that one of the aims of industrial policy should be to secure the manufacturing sector's contribution to a more progressive distribution of income within the individual countries and within the region. The urgency of this task would certainly be more understood when the economic imbalances which exist in the region and the wide disparities in levels of living among various countries are considered. Thus the region combines low income countries such as Democratic Yemen where per capita income is estimated at less than US \$ 200 and oil rich countries where the per capita income exceeds US \$ 12,000. Furthermore, some five oil-producing countries have each a population of less than one million and in some of these countries the population is as small as 200 thousand or less.

Furthermore, the information available for some countries show that salaries and wages paid in industry absorb a far lower proportion of the total value added than in the more advanced economies which suggests the importance too, of working towards a change in the distribution of income between the factors of production of industry itself.

Regional Prospectives

The foregoing review of the industrial policies highlights the fact that, in the absence of any regional co-ordination of national development plans, each country has been pursuing an independent national development policy. A series of factors, ranging from lack of technical "know-how", shortage of financial resources, insufficient specialization to the limited size of domestic markets, have prevented the dynamic growth of the industrial sector in most of the countries in the region.

As has been repeatedly asserted, the domestic markets of individual countries are too small to attract heavy industrial investment or even to encourage a suitable division of labour and the application of modern manufacturing techniques.

During the recent years, promotion at the national level has produced some encouraging results in several countries. The new industries that have been comparatively successful are mainly in the field of consumer, where the economies of scale are somewhat flexible. However, in other fields, the limitation and fragmentation of markets have already had some noticeable undesirable results.

Furthermore, the adoption of independent national development policies and the resultant creation of a number of watertight compartments constituted by small individual markets offering identical and narrow ranges of manufactured products has led to the creation of competing production structures instead of complementary ones.

The long-term consequences of such a pattern of development on the economic growth of countries of the region, could be summarized as follows:

- the limitation and fragmentation of markets would make virtually impossible the development of various capital goods industries;
- without facilities for manufacturing some of the basic capital goods, countries of the region would have to continue depending on advanced countries for their supplies and hence, for their production of consumer goods;
- under the present pattern of industrial production, the prospects for intra-regional expansion are far from bright, since the countries in the region would be exporting more or less the same commodities;
- the narrow inward-looking approach to industrialization has reduced investment opportunities in industry which promoted heavy investment in industries that cater essentially for markets outside

the region (e.g., petrochemicals). This sort of enclave-type of industrial development is contributing further towards the region's dependence on the outside world, most particularly the advanced industrialized countries, the main users of the products of such industries; and

- the combination of the above factors is creating conditions which would make it extremely difficult, if not impossible, for the countries of the region to achieve a breakthrough in sustained economic growth.

If this situation is to be rectified, countries of the region would need to take concerted action through formulating and adopting sound and consistent national and regional industrialization strategies and policies. The feasibility and necessity of co-ordinating the industrial programme of countries on a regional basis, and creating dynamic complementarities of industrial growth within the region, or within groups of countries in the region, has been the subject of much discussion by inter-governmental organizations affiliated to the league of Arab States and does not need detailed elaboration. A programme of regional co-ordination would contain the elements of a division of industrial activity in the region, whereby individual countries undertake large scale production of particular commodities for a regional market. Such a specialization of industrial production need neither interfere with existing capacities, nor militate against the development of an industrial structure with an all sided technological capacity within the countries. The programme would be conceived in sufficiently flexible terms; it could be composed of separate segments for sub-regional groups (i.e., certain petrochemicals in the Gulf region, agro-industries in the Northern areas, marine industries in the shore lines of the Peninsula, etc.). It could be restricted to the expansion of the market up to a given limit, after which, individual countries could develop their own plants if necessary for the growing domestic demand. On the other hand, one need not think of regional co-ordination in terms of "specialization" in the strict sense, or of countrywise monopolies of industry. "Regional" plants for a particular industry could be located in more than one country according to expanding market needs. Specialization, however, would be an important aspect of the

programme. For example, the capital goods industry in the region could be more speedily developed on the basis of deliberate specialization. It could in certain instances take the form of joint ventures with capital participation by member countries. The programmes themselves to be effectively regional in character would have to provide the conditions for the dispersal of industrialization over the whole region. This would mean that comparative cost must not be the sole criterion in the distribution of industries for development on a regional market. For each member country to receive proportionate benefits, there would have to be a reasonable distribution of regional industries. In other words, co-ordinating investment decisions at the regional level, will have to be conceived in terms of a "package of projects" properly identified and in which all the interrelations in industry and trade are explicit, and the position of individual countries within the framework is clear.

In conclusion, it may be said that for each country of the region, it is increasingly important to introduce in its national industrial policy a regional outlook. In the years ahead, the rate of industrial growth in the region may well hinge on the extent to which the countries concerned can adopt the necessary measures to quicken the pace of co-ordinating the development programmes and efforts among themselves.

Specific Instruments of Industrial Policy

In the light of the information contained in the previous section relating to the instruments of industrial policy presently applied in the various ECWA countries and their efficacy, the operation of some of these instruments will have to be thoroughly reconsidered and revised with a view to adapting them to the guidelines and objectives of the industrial policy enunciated above. More specifically, the following instruments ought to be given a fresh look.

Protection Mechanisms

Protectionism is one of the aspects of industrial policy calling for careful revision and rationalization. In practice the protective measures

so far followed by most countries of the region have completely sheltered industry from foreign competition in a manner which became detrimental to efficiency and productivity and has led in some instances to monopolistic situations. The very aim of reorienting industrial growth towards a more integrated structure would be jeopardized if such characteristics of the protectionist policy were to persist. The same thing would happen as regards reconciling the need for import substitution with the efforts to encourage a significant flow of industrial exports.

Taxation

The taxation system should be devised in such a manner as to provide incentives for channelling financial resources from other economic sectors into manufacturing industry; help to reinforce the internal sources of funds earmarked for the expansion of enterprises; exercise some influence in increasing the use of available production capacity; help to direct new industrial investment into such sections or branches of industry which meet industrial development needs as a whole. An important aspect of taxation policy which calls for a careful re-evaluation relates to the temporary tax exemption measures. How far exemptions are justified? What effect they have on enterprise efficiency? How much discrimination is exercised with respect to other existing industrial enterprises? These are all matters that require examination.

Industrial Credit

Besides constituting the major source of external funds for financing the expansion of industry, industrial credit can play a vitally important part in guiding industrial activities towards particular goals.

Various studies have already indicated that in a number of countries the shortage of financial resources has increasingly become a bottleneck to expansion in the activities of specialized lending institutions, namely the industrial banks.

The Government will have to provide appropriate incentives such as guaranteed minimum dividends, or tax free dividends etc., in order to mobilize resources to such institutions. In certain cases, Government could also apply various forms of pressure on the existing financial institutions to buy the shares of bonds of an industrial bank.

With few exceptions (the Industrial Bank of Jordan), all specialized institutions place too much emphasis on security and too little on the profitability and earning potential of the enterprise. It is worth mentioning in this context that "industrial plant and equipment" are considered poor security in most countries, because it may be difficult to realize their value even in good times, let alone bad times.

A shift of concern from too much pre-occupation with security, to interest in the potential earning of the enterprises will naturally lead to a corresponding interest in equity investment. In new enterprises, equity participation is probably the most appropriate form of assistance. In most countries of the region such participation is limited by the availability of funds rather than by the statutory powers of the specialized institutions.

Besides increasing the resources of specialized institutions, a substantive reform could be introduced in the traditional operation of the commercial banking system. Thus it would appear necessary to examine how far influence can be brought to bear through the monetary authorities to earmark resources for industry in preference to other goals and even to introduce selective criteria for determining the priority to be granted to different manufacturing activities.

Public Instruments for Promoting Industry

The promotion of State-owned enterprises and the activities of other bodies responsible for promoting new industrial projects has proved as shown earlier, to be particularly efficacious in developing productive lines which could hardly have emerged had they been left to private initiative. It is important therefore to strengthen and expand public enterprises.

Besides these directly promotional activities, there are other activities no less important, that deserve reconsideration and immediate attention. These activities exercise only an indirect influence on industrial development and relate mainly to the human and technological infrastructure requirement for industrial development.

Most important among these activities are those concerned with the problem of training of manpower and technical personnel in view of their impact on productivity levels.

Productivity could certainly be raised by improving management at the top and supervisory levels and industrial relations. There is an immediate need in the ECWA region to establish management development and productivity promotion organizations in countries where they do not yet exist, and to strengthen those existing already. The possibility of intra-regional training schemes should be explored. It would be useful also if the curricula of colleges and universities were expanded to include subjects pertinent to the development of management skills and industrial relations.

The same consideration might apply to the responsibility borne by various public agencies for carrying out technological research with a view to facilitating the adaptation and transfer of technology.

Little progress has been made in the creation, adaptation and transfer of technology. The countries of the region are almost completely dependent on imported technology for their industrial development. If the countries of the region are to select efficiently the appropriate technology and also to adapt it and gradually develop it so as to take into account climatic conditions, availability of labour skills, water, raw materials and the other scarce resources, it is vital that their own technological capabilities should be extensively developed, both at the national and regional level.

Adequate amounts of financial and human resources should be invested in research and development (R and D), meaning mainly research in and development of new techniques, processes and products. For a country to evolve a mature industrial economy, with the ability to match and compete

with other industrially advanced countries, it should be able itself to create and innovate new processes and products. This can only take place by means of basic and applied research in the various physical and social sciences. A notable feature of the industrial scene in most countries of the region is the low level of priority given to R and D. While in some countries, industrial research institutes have been established, few Governments have, so far, followed a policy of encouraging the industrial enterprises themselves, especially the larger among them, to initiate their own programme of research and product development.

Existing research and design institutes should be strengthened and expanded and new ones created. Scientific and technological research should contribute towards the solution of specific problems facing industry. The process of industrialization should not be looked upon only from the point of view of increasing capacity and output but also from the broader aspect of the need to introduce radical changes in the structure of the society, particularly in its methods of education and of scientific and applied research. Because of the scarcity of scientific and technical manpower and facilities, there may be a good case for closer regional co-operation in this field, perhaps in the form of effective support of, and participation in, regional research, training and design institutes for industries which are strategically important for industrial development.

Attention might be drawn also to the felt need of advisory assistance from the State to private investors in connection with production processes, norms and specifications, agreements and contracts in respect of licences as well as the preparation and evaluation of industrial projects. Such advisory services should be intensified whenever they exist and established if non-existent. Not only could this result in greater efficiency, but could also help orienting industrial development within the framework of an integrated structure at the national and regional levels as well.

SUMMARY AND CONCLUSIONS

Over the last two decades most countries of the region have been making a strenuous effort to accelerate their industrial development. Despite these efforts, the pattern of industrialization has not been basically altered in the region. Manufacturing, as a whole, remains to be characterized by a narrow range of products manufactured and a low level of specialization. Complementarity in production is limited and reliance on extra-regional markets for the importation of manufactured goods and for the exportation of primary commodities, namely, crude petroleum and primary agricultural products, continue to dominate the composition of the region's trade. Artificial restrictions hindering the flow of intra-regional trade is still widely applied in the region, while little has been done to improve efficiency which is a pre-requisite for the development of exports and for the creation of an integrated industrial structure. The industrial infrastructure, especially regional infrastructure, remains grossly inadequate and there is scarcely any co-ordination between national development policies and plans.

In the last decade, this was further aggravated because of the high increase in income after 1973 in the oil economies which found its way to the rest of the region through direct government donations and remittances of workers. This has introduced a new and unprecedented dimension thus affecting dramatically the tempo of industrial and economic development additional to introducing structural imbalances. The effect of this new source of income, which did not originate in the commodity producing sector, inter alia has been on consumer tastes to the advantage of imported manufactured products. Domestic industry was thus faced on the one hand by a more sophisticated pattern of consumption which it could hardly satisfy; and on the other hand with rising production costs due to the openness of the region to world inflation and the high cost structure of factors of production induced by the sudden increase in oil income.

If this situation is to be rectified, countries of the region would need to formulate and adopt sound and consistent national and regional industrialization strategies and policies with a decidedly new-orientation. The urgency of this task may perhaps be better appreciated when the experience and impact of the industrialization process as well as the industrial policies which contributed to shaping its pattern are considered.

The ability of the region as a whole, to achieve high rates of industrial growth over the last decade was mainly due to the fact that an important substitution, at the national level, was playing a leading role in the industrialization process. The investment decision, however, has not been systematically co-ordinated to build industrial capacity in inter-related fields. Thus, the structure that emerged consisted of a large number of assorted industries, largely light consumer ones requiring simple technologies and having very little complementarity among themselves and by and large with the rest of the economy. Furthermore, the contribution of manufacturing to domestic product in most countries was smaller than expected and did not exceed 10% in general over the period under consideration.

In terms of per capita income, the relative contribution of the manufacturing sector to the increase in urban per capita income has increased during the period reviewed at an annual rate of less than 1% during the decade as against an annual urban population growth rate of more than 5%. This fact is of particular significance since demand for manufactured goods in most of these countries is largely conditioned by urban consumption pattern. In other words, manufacturing activity accounts for only a small part in generating urban income increases whereas the non-commodity sectors mainly play the major role in determining urban consumption levels. To illustrate further, information relating to the supply of manufactured products, and available for a number of ECWA countries, indicates that the combined contribution

of domestic manufacturing output to the increase in the availability of manufactured goods did not exceed 35% throughout the decade. This percentage would have undoubtedly been much lower if the output of oil-based industries (oil refining and products) were excluded.

On the other hand, and despite the increases in the combined industrial output of seven ECWA countries which grew at an annual rate of more than 23%, the ability of the manufacturing sector to satisfy domestic needs did not exceed 42% in recent years, compared to 57% in 1970.

The limited production basis and the fragmented nature of the industrial set-up combined with the lack of complementarity in production has reflected itself on the pattern of imports and exports of manufactured goods. Thus, a high proportion of the goods required for production are being supplied by imports mainly from developed markets. Available data indicate that despite fluctuations, the relative share of imports of manufactured intermediate products to total manufacturing imports is gaining increasing importance approaching a percentage contribution of 50% at the regional level. When compared with the level of manufacturing output, information on selected ECWA countries shows that intermediate imports of manufactured goods has recently accounted for 76% of total manufacturing output in the countries concerned collectively, compared to 41% in 1971. This increasing dependence on external markets for industrial inputs such as unprocessed materials and machinery and equipment for industrial use are included.

As for the exports of manufactured products, they have recently constituted about 9% of the region's total exports as compared to 14% in 1971, and it has continued to be concentrated mainly in chemicals and petroleum products which accounted for more than half the total.

In the absence of a co-ordinated approach to industrial development, the fragmentation and weakness of the industrialization process is bound to continue in the future and would inevitably lead to the full integration of the region's industry with the outside world and eventually its total dependence on exogenous forces.

The region's pattern of industrial development has been considerably influenced by various actions taken by public bodies, as a consequence of provisions and measures deliberately adopted to protect, encourage and facilitate the industrialization process, including direct State promotion. These provisions and measures constituted what might be termed industrial policy.

Generally speaking, tariff protection combined, in some cases (e.g., Iraq and Syria) with administrative and quantitative restrictions has constituted the mainstay of protectionism in most countries of the region. As far as tariff policy is concerned, information available for selected countries revealed that tariff rates are highest on consumer goods while much lower rates are applied on capital and intermediate goods as well as raw materials. This structure of tariff is mainly a reflection of the importance attached to import substitution as an immediate requirement of industrialization, although, as was the case in many instances, with considerable sacrifice of productive efficiency, costs, prices and a rational industrial base. The result was an extensive rather than intensive type of industrial growth. In other words, the tariff structure has been favouring production lines related to the demand for final consumer goods, even though only the finally processing stages were covered. Furthermore, by drawing resources into protected industries, they have had a negative effect on other industries receiving less protection. Moreover, the fact that such protectionist policy has most of the time maintained an absolute level of protection on a large scale, without any pressure on the industrial branches already established to effect a steady improvement in their productivity and efficiency, has had adverse consequences for costs and prices of manufactured goods in the countries of the region.

This approach to protectionism has created conditions which made it difficult to combine import substitution with the introduction and expansion of exports of manufactures at any substantial scale.

Instruments of general economic policy, relating to taxation as well as certain features of monetary and credit policy have also been used in varying degrees, as indirect incentives for industrial promotion.

In some countries, namely, Iraq, Jordan, Lebanon, Kuwait, Saudi Arabia and Syria, this has taken the form of an industrial development legislation. In most countries, however, there has been a collection of miscellaneous provisions, either of a general nature, such as income tax exemption, tax rebates, credit incentives, etc., or relating to measures, aiming at regulating and encouraging investment in industry.

The effectiveness of these provisions and measures in stimulating industrial development in the ECWA region in terms of favouring the channelling of resources into manufacturing, influencing certain lines of production, facilitating expansion and raising efficiency and productivity, has been very limited.

In addition to the general incentives deriving from protectionist policy and from other measures designed to stimulate and encourage industry, direct State promotion emerges as a basic instrument of industrial policy in the majority of ECWA countries.

Industrial public enterprises constitute the most important form of direct state promotion. As a general rule, State effort has been channelled in the direction of basic industrial activities, calling for relatively substantial investment and entailing greater risks. This is particularly true in the case of most oil producing countries and in Jordan, and in Yemen where the role of State enterprises has not been to compete with private capital, but rather to meet the growth requirements of industrial activities which the private enterprises were not in a position to serve. On the other hand, in countries where the economic system is more oriented towards controlled economic activities, such as Iraq and Syria, the role of the public industrial enterprises gained importance following the nationalization of the main industrial establishments early in the 1960s. As an exception to the above two positions with respect to public enterprises, in Democratic Yemen where the economic system is centrally planned, the position of the Government regarding the role of State enterprises is based on philosophical grounds advocating ownership of all means of production.

The increasing importance of the role played by public enterprises in industrial development is evident from the share that these enterprises have been occupying in total planned investments.

Qualitatively, however, the contribution of direct State promotion has been of a different order, in as much as it has paved the way for the development of new basic industries. Thus, generally speaking, and aside from its "entrepreneurial" role the promotional activities of the State has helped introducing more favourable conditions for the development of manufacturing industry in countries of the region.

Promotion through public enterprises has been supplemented by activities aiming at prevailing industrial establishments with its financial requirements of long-term and short-term capital. In many instances, the State has provided direct financial assistance to industry. In other instances, it has helped in the establishment of specialized institutions for the purpose.

The general industrial development measures and direct State promotional activities suggest that a very substantial proportion of the efforts made have been directed towards encouraging the installation of new manufacturing activities. While this has been a basic objective, it is worth referring to some other types of responsibility assumed by public bodies and whose primary aims have been to improve the performance and efficiency of existing enterprises. These include technical assistance in the form of technical advice, training of skilled personnel, technological research and similar activities. By and large such supporting activities are inadequate and limited in scope in the region. This inadequacy, however, is most remarked in the field of technological research.

Generally speaking, industrial policy in the countries of the region has consisted in a number of insufficiently related measures rather than a generally consistent overall line of action. Furthermore, this policy has not been expressed in terms of clear-cut objectives, nor has it been given the necessary continuity. It has also lacked selective criteria

and has not carried much weight in shaping sectoral structure. Lastly, industrial policy has not always seemed to be sufficiently integrated with overall economic policy to provide a more dynamic impetus to industrialization. Thus, the characteristics of consistency, continuity and selectivity combined with proper integration with general economic policy, appear to be the essential requisite of any future industrial policy. Proper planning should have made it easier to meet these requirements. This, however, did not materialize in most countries reviewed since the various instruments of industrial policy have not taken shape within the framework of long-term guidelines of any industrialization strategy.

In practically all countries of the region, the various policy measures and instruments for the implementation of industrial plans and programmes are not spelt out in detail, and in most cases are discussed in rather general terms. The success of these plans and programmes will depend largely on the continuing efforts of the Governments to improve the development of their administrative machinery which is responsible for the co-ordination of various policy measures as well as between the various departments concerned with the promotional aspects of the programme.

Industrialization in the region needs to go through a process of re-orientation and restructuring where exports of manufactures to the international and regional market, and where appropriate, widening of the national import substitution process would form the basis for a new industrialization strategy.

In formulating an industrialization strategy for the ECWA region, the following aspects will have to be considered both at the national as well as at the regional levels:

- the creation of a balanced industrial structure through the development of a wide range of productive capacities in capital, intermediate and consumer goods, and technological capacities in engineering, chemical and electrical industries;

- the planning of "import substitution" within the larger framework of an adequate industrial structure;
- the development of an efficient and competitive industrial sector capable of supplying an increasing share of the local markets as well as exporting manufactured goods; and
- the development and efficient use of advanced technology and the associated manpower skills development.

In considering the possibility of formulating an integrated and balanced industrial programme at the national level, it would appear that no single country in the ECWA region possesses adequate resources or has an economic structure which contains the elements for its realization. This consideration points to the urgent need to promote co-operation and co-ordination among countries in the region, in their development efforts. It also implies new and greater responsibilities in the definition and efficient application of the set of measures and instruments which constitute industrial policy.

It is therefore, important that countries of the region introduce in their national policy a regional outlook which so far has been lacking. It would not be exaggerated to say that in the years ahead, the rate and pattern of industrial growth in the region may well hinge on the extent to which the countries concerned can adopt the necessary measures to quicken the pace of co-ordinating the development programmes and policies among themselves.

INDUSTRIAL RESTRUCTURING AND ADJUSTMENT: AN NGO VIEWPOINT ON CONSIDERATIONS FOR NORTH AND SOUTH by the International Coalition for Development Action (ICDA)

INTRODUCTION

The international division of labour is a result of a dynamic process of change and stagnation. In periods of economic growth the countries of the North are in a continuous process of restructuring their economies. Production in the developed market economies tends to become more capital and skill intensive. Developing countries can take their chances on international markets by specializing in exports of primary products and manufactured goods that are produced in a relatively labour-intensive, low-skill fashion. However, continuous productivity increases and intensive competition among (groups of) companies have caused the Western markets to become saturated. Over investment, under-use of capital, growing stocks, increasing unemployment and diminishing outlets were among the first signs of economic crisis in the North. For developing countries the effects of this were quick and dramatic. In general, demand for, and therefore prices of, their exports fell dramatically. In 1981, the terms of trade for most developing countries deteriorated by 6% on the average.

Trapped into production of primary commodities - which account for over half of developing countries' exports (fuel excluded) - they soon felt the effects of the weak and dependent character of their export growth. The volume of exports of primary products to developed market economies at the end of the 1970s did not rise any longer.

The negative effects of decreased demand for primary products in the North (caused by import substitution in tobacco and so called "temperate zone foods" and continued substitution of synthetics for natural materials) were heavily aggravated by the occurrence of recession and decline in economic growth. Especially in the OECD countries demand for industrial materials fell considerably. This can mainly be attributed to stagnation in production.

Special attention should again be given to the Third World exporters of manufactures. Developing countries have a certain advantage in the production of some types of manufactured goods. Low wages, a relaxed tax system, location near sources of minerals and/or fuel, absence of environmental regulations, etc., give rise to a certain type of industrialization. Output of manufactured goods in developing countries as a percentage of this output in the developed market economies rose from 11% in 1963 to 15% in 1980.

Export volumes also continued to expand. But, in recent years, both output and exports of manufactured products grew less rapidly because of the recession in their major markets.

Mainly because of Western policy decisions, developing countries are forced to operate in a hostile economic environment. Especially monetary and trade policies in the North are hampering the developing countries in their efforts to further development or, at least, manage the crisis as it affects them.

To finance their growth, it was especially the industrializing developing countries who could easily obtain foreign currencies on the international capital markets in the 1970s. Because of the deterioration in their terms of trade and stagnation in export volumes, though, they proved unable to pay the money back. Big and growing deficits on balance of payments accounts (for deficit countries as a group, \$76 billion in 1980 and \$92 billion in 1981) forced developing countries to seek even more credits.

Meanwhile, in the United States the Reagan Administration decided that the battle against inflation was among the most important. The tightening of monetary policy had an immediate effect upon interest rates all over the world. The main rate in the Euro-currency market, for example, rose from 8.7% in 1978 to 16.5% in 1981. "This increase meant that interest payments on medium- and long-term debt in 1981 were about \$11.5 billion higher than they would have been at the levels prevailing in 1978". (UNCTAD Trade and Development Report, 1982: 18). Also, in multilateral lending institutions the credits had to become more expensive. This only worsened the problems for the countries that are more or less dependent on the financial support of these institutions.

As a result, the net investment income of developing countries (major oil producers excluded) has become strongly negative in recent years. Profit remittances and interest payments in 1981 rose by 25% to \$44 billion. In 1983, when total debt for this group is expected to reach as high as \$600 billion, the net investment income will have a negative figure of \$45 billion which is about one half of their aggregate current account deficits.

Growing balance of payments deficits and rising debts will, if monetary policies in the North keep interest rates as high as they are now, be a heavy burden on every opportunity for new growth. Only if OECD policy makers decide to relax their attitude towards the money supply, will developing countries have new chances. Only when interest rates go down and, in the long run even more important, when demand on Western markets (where interest rates also hinder new investment) is restored will it be possible for developing countries to pay for their imports (and debts) through greater exports.

Western policies

In this context trade policies in the developed market economies are of vital interest. Trade, in the ideologies of Western governments, is an important engine of economic growth. Free trade is seen as a situation in which all participants can receive their optimal material benefits. However, close political and economic cooperation among countries and the possibilities to restructure one's economy efficiently, according to the principles of the international division of labour, are conditions to be fulfilled before this free trade situation will lead to an optimum. In practice, national interest or interests of certain groups of countries, like the EEC, prevail over and above the general interest of all participants in trade. Also, in practice, within free enterprise economies an effective restructuring policy is non-existent. Private interests of capital owners are not really challenged by government planning seeking a solution in the interest of all involved (provided such a solution exists in theory).

Because of this gap between ideology and practice, actual policies in the North are, in fact, dominated by two targets: promotion of exports and protection against foreign imports. Export promotion is seen by most Western governments as one of the more prominent policy options to fight internal economic problems. Exports are stimulated by measures which provide management with information on foreign markets, by export credits and, much more important, by general measures that reduce production costs to make competition on foreign markets easier. Exporters are supported not only by withdrawal of regulations on, for example, environmental standards but also, and mainly, by curtailment of trade union freedoms to negotiate for higher wages.

This policy of austerity is threatening for developing countries in at least two ways. When real wages are depressed in the North, this has a negative effect on purchasing power and, thus, on demand for consumption goods produced in developing countries. At the same time, exporting countries of the Third World, in markets where they have gained some strength, immediately feel the new competition of Western products at lowering costs.

So, wage cuts not only affect the purchasing power of Western workers but also hinder the export performances of the Third World. This negative effect is aggravated by a general policy against import penetration, notably from the Third World.

In the postwar period, import tariffs went down in general. Still, in sectors that are threatened by imports from developing countries, tariffs are relatively high. Besides this, there is a growing tendency to fight import penetration by means of non-tariff measures. Quota, quality demands, anti-dumping measures and so-called "voluntary" export restraints are among these. A classic example in this context is the set of regulations on textiles, negotiated in the Multi-Fibre Arrangement. For developing countries as a group this arrangement covers almost one third of their exports of manufactured goods.

These protective measures reflect unwillingness in the developed market economies to undertake a planned adjustment action towards investment decisions of capital owners and/or management. But it also reflects a desire to pass the costs of this unwillingness on to foreign countries. The countries of the North, very much dependent on each other's economies, respect free trade among themselves. But their weaker partners, i.e. the developing countries of the South, have to pay the bill.

Third World policies

Does this mean that we are in favour of a return to the ideology of free trade? Not necessarily. For a number of reasons it is doubtful if, in a better international climate, exports are a good solution to the problems

facing the Third World. Almost half of world trade at this moment takes place within the structure of transnational corporations. These companies set the prices and own the technology. In the international private banking system they control the money supply, at least to a crucial extent. In such a situation the value of policy options chosen by governments should not be over estimated.

But there are other reasons why the positive effects for developing countries derived from international trade and exports should not be seen as too positive.

- Export growth in developing countries can lead to new employment, but mainly because of low wage levels, the development of an internal market tends to be quite slow. Demand in the international markets, and not the national necessities remains the guiding principle for investment.
- Exporting developing countries are in a heavy competition to offer foreign capital a favourable climate for investment. To keep labour costs at a competitive level, wages must be low, working days as long as possible, trade unions are often forbidden or curtailed and political rights are often minimized.
- Export-led growth tends to deepen dependence on the outside world. Private capital is necessary to start investment and often direct foreign investment is the only way to get an export sector off the ground. When production is started, a great deal of imports are necessary to get the factories running. Because of this, positive net results of trade are far from certain.

Developments in the international division of labour, as described above, can lead to at least three important conclusions: 1) For developing countries, benefits from trade have strongly diminished; 2) Economic policies in the North are more and more responsible for an increasingly hostile economic environment in which developing countries have to perform; and 3) For all kinds of internal reasons, too, export led growth is not automatically the solution to stagnation in the developing world.

General Framework for Policy Changes

Policy measures based on the above three-fold considerations should be dealt with in the context of the following elements.

Exports can make an important contribution to growth and development as they provide the foreign exchange required to finance imports. This applies especially to small developing countries that are highly dependent on imports. Many developing countries are small and therefore the topic of the gains from trade is highly relevant. Exports are often a necessity but never a sufficient condition for the alleviation of poverty. The gains from trade made by developing countries should not just be for the benefit of a limited elite but should be linked to a development policy directed toward a people-oriented and self-reliant development.

What is at stake is the question of how the gains from trade can be increased for developing countries in a way that is acceptable for both North and South.

Manufactured export production as such is of great importance to the export position of only a few resource-poor countries at this moment and it is expected to become of greater importance to many more countries, notwithstanding the slowing down and reallocation tendencies in certain sectors due to recent technological changes.

It is of only limited use to talk of manufactured exports in general. A differentiation should be made between different kinds of manufactures, that differ in employment, income and foreign exchange effects, and in spread effects on the rest of the economy.

We can distinguish three kinds of manufactured exports: a) resource-based manufactures; b) exports from industries that are linked to the rest of the economy and produce both for the domestic and for the foreign markets, and c) footloose export production, often concentrated in the Export Processing Zones (EPZs).

Linkage and spread effects are considered to be of particular importance. Linkages are not only of importance because of their impact on product, income, employment and foreign exchange, but also because of the potential increase of bargaining power of labour organizations and governments. In terms of the above, EPZs offer the least positive option.

In discussing trade and restructuring policies one should discuss problems in North and South simultaneously. In that context it is of great importance to take good notice of the fact that trade and restructuring problems of the North are not caused primarily by the South. The impact of manufactured imports from the South on employment and income in the North is still marginal: about 7.5% of total manufactured imports of OECD countries and 2% of total manufactured production. The net employment and income effects of North-South trade are positive for the North, which is another way of saying that more jobs are created by exports to the South than are lost by imports from the South. However, in some sectors such as textiles, clothing, leather, shoes, wood processing and certain parts of the electronics sector, import penetration from the South into the North is much higher than average.

The structure of trade barriers in developed countries, however, tends to discriminate against particular production areas in which developing countries have concentrated their export efforts. This bias can be explained by the weak position of developing countries in the world trade system, the lack of countervailing power and of retaliation possibilities of developing countries.

The exaggerated emphasis given to the imports from developing countries as a source of job displacement in the North diverts attention from the other sources, such as changes in demand, technological change and competition among the North, which have proved to be of far greater importance.

Tendencies towards increasing protectionism in the North can only be reduced when alternatives are created by governments for jobless people.

Policies in developed countries that interlink employment and industrialization programmes in a direct and traditional way are not useful any more. Industry cannot provide sufficient jobs in the future. This traditional approach in which industry is a major employment-creating sector is a

serious obstacle to export prospects for developing countries. A complete revision of trade, industrialization and employment policies in developed countries is called for. These should take into account the considerable changes that have taken place in world industrial production and are likely to take place in the future and that result in decreasing job opportunities in industry in developed countries.

Conclusions

In conclusion, the following more specific recommendations are suggested:

Protectionism should be reduced by a restructuring process that does not focus on growth alone but on growth that is accompanied by redistribution of income and job creation outside the manufacturing sector. Domestic recovery programmes in developed countries will be judged on their employment and income effects.

More insight into the complete but partially invisible protectionist system is clearly needed. This implies that the whole system of subsidies, quotas, tariffs, voluntary export restrictions, has to be made more transparent. This indeed may have great consequences as it deepens into who stands to gain and to lose from protectionism. It is a way of revealing and assessing existing power structures in developed countries, in particular the role of the TNCs.

It would be welcomed if sources of information - like UNIDO's technology information exchange system (UNCTC) - would be available not only to governments, but also to Non-governmental Organizations.

Although developing countries are not the major cause of trade and restructuring problems in the North, the protectionist system shifts part of the burden of these problems to the South. This is because of the lack of countervailing power and retaliation possibilities. Developing countries can side-step this lack of power by increasing barter trade and a system of preferential tariffs among developing countries. These

could be indirect means to force developed countries to reduce protectionism.

Institutional facilities to increase Economic Cooperation among Developing Countries (ECDC) should be encouraged by means of aid from multilateral institutions to build up an adequate framework and infrastructure that can stimulate ECDC.

Gains from trade have to be increased by means of upgrading exports into more advanced sectors and by a better integration into the domestic economies of developing countries.

EPZs are the least desirable form of export production. There is a severe lack of local linkages, a low contribution to the transfer of technology and in EPZs production is based on severe exploitation of the, often mainly female, working force.

It is important that provisions should be made to ensure that EPZs cannot be used to circumvent or weaken existing labour standards or regulations on freedom of association. By way of well defined social clauses in trade, the application of ILO labour standards should be pressed for.

THE RESEARCH INSTITUTE FOR ECONOMIC RECOVERY IN DEVELOPING COUNTRIES by
Dietrich Keeschull*

INTRODUCTION

Economic Interdependence between North and South

During the past decades a number of arguments and theories have been mentioned for the justification and intensification of economic cooperation between the industrial and developing countries. According to the political and social background, foreign policy, economic or also humanitarian aspects attained priority in this context.

In the western industrialized countries the economic dimension has traditionally dominated. Particularly during the reconstruction phase after World War II an optimistic attitude has been assumed relying firmly on the strength of one's own economic resources. Above all the strongly export-oriented Western European states believed themselves to be able to create important additional markets for their export products by the transfer of capital and know-how to the Third World. The transfer of resources was considered to be necessary and sufficient for realising a widely spread growth process with increased investments and additional employment. Import demand, growing due to increasing incomes, would effect additional exports from the industrial states and thus secure employment in those countries and stabilize and steady the desired courses of growth.

This simple interpretation of world economic interdependence and concepts of growth on the basis of investment multiplier and accelerator models found its supplementation in a relatively unreflected optimism regarding the structural adjustment ability over the course of time. At the top of the wave of technical progress one proceeded from the fact that industries and enterprises weak in growth - with an under-average productivity - could be shut down or evacuated to other countries without problems for the national economy. Discharged labour should take over more sophisticated activities in growth branches and through this restructuring effect further progress and growth. The securing of full employment did not appear to be a problem. Together with the control of technical progress and structural change only short frictional situations of unemployment would have to be mastered. The brief experience of the 1950s and early 1960s lead generally to the reliance on the steady setting-in and utilization of technical progress in consequence of systematically continued research and development activities with rising income.

Developing countries and international organizations seem to regard the advantage of this theory with even more sympathy the more the industrial nations doubt the conclusiveness of this argumentation. Above all they are interested in the increase of capital transfer to their countries. In order to sell this idea to the industrial nations again and again stress is laid on the exports necessarily growing via the relationships of interdependence.

While the industrial states consider the development of markets in the Third World as only one opportunity among others for the securing of their national economies' growth, the developing countries go so far as to recommend the strengthening of the interdependence relationships even as a panacea for the world economy. Thus for instance it is frequently remarked that the persistent worldwide recession could be overcome by an increasing transfer of resources to the Third World. Those who ascribe the stagnation to the saturation of demand in industrial states, partly suggest that this saturation could be evaded by satisfying fully the still not covered demand in the developing countries.

Of course the experiences with North-South cooperation show clearly that the hope for, and the reliance on, the effectiveness of economic interdependence are not justified. The theoretically supposed connections between transfer of resources and growth in donor and recipient countries are as little compelling as the structural adjustment processes in the involved countries. Doubts seem to be opportune mainly with regard to:

- the productive utilization of capital, since the inflow of resources is frequently being used for consumption purposes or also only for covering current debt service liabilities;
- the necessity of complementary factors for capital only could not be a guarantee for growth;
- the time required for effects to take place and their impact on the whole economy; and

- the connection between (not at all secured) growth and the additional exports from industrial countries induced by that. The volume of these deliveries depends strongly on the economic conception followed by the developing countries. The more they tend towards the covering of basic needs or to cooperation between developing countries, the lower the exports of industrial manufactures will become, with which the industrial states would have their comparative competitive advantages. Besides, it is not certain that the capital exporting countries will actually profit from higher exports to the extent of their capital transfers plus certain multiplier effects. It is entirely possible that the developing countries' additional demand is directed towards industrial states which are more competitive or have traditional ties to certain regions that favour their exports. In order to avoid this the capital exporting countries could turn to increasing tied aid. Such ties would also delay or even obstruct the necessary structural change. The adjustments would be dammed up. Thus also the tendency towards following protectionist measures will also be increased, with which unavoidable adjustment processes will be artificially delayed. That this would be to the disadvantage of the developing countries need not be especially underlined.

In spite of its doubtfulness the conception of the economic interdependence between North and South plays a major role now as before. It is time and again cited as a basic element particularly in connection with the discussion of opportunities of mastering the worldwide recession and stagnation tendencies.

The main proposals for a stimulation of the world economy - and thus also for the promotion of the developing countries - are to be considered in the following. To begin with, the plans for a massive transfer of resources in discretionary or automatic form are considered. They are contrasted with the more extensive immediate programme of the Brandt Commission that shows distinct parallels to the proposals of the non-aligned nations and the UNCTAD Secretariat. In conclusion, a look is taken at the recommendations of the former chancellor of the Federal Republic of Germany, H. Schmidt, highly appreciated in the industrial

countries, proposing a stability and growth pact of the most important industrial nations, and which should be of importance for the approaching summit conference at Williamsburg.

Massive Non-automatic Transfer of Resources

Marshall Plans

The recent proposals for an increased transfer of resources proceed at least implicitly from the assumption that the decisive cause of underdevelopment and of the too slow speed of growth is to be found in the lack of capital. Regarding all mechanisms or instruments the main problem is an as simple as possible raising and providing of extensive and additional amounts of capital.

Numerous recommendations favour therefore the idea of a Marshall Plan Aid for developing countries. Above all the positive experiences of the Europeans with the American economic aid programme for the Europe's recovery (European Recovery Programme) after World War II are to be copied. The USA provided 2.5% of its GNP in the form of goods deliveries (foodstuffs, raw materials and capital goods) for a period of five years.

The 100% return flow of the funds made available was guaranteed. European states or enterprises could order or buy goods in the USA. Payment to the American exporters was made in US \$ through the US Administration. The equivalent of the imported goods had to be paid by the importers into a counterpart fund which served the financing of further reconstruction programmes.

The great success of the Marshall Plan in the West European states causes the Development Assistance Committee (DAC) of the OECD to recommend such a programme to their members, for which additional funds amounting to US \$ 10 billion annually would have to be provided. According to the calculations of the DAC this sum would not only provide a contribution to the financing of economic growth in the developing countries, but would also lead to additional demand in the industrialized countries to the sum of US \$ 20 billion.

In spite of extensive discussions no serious attempt came about as yet to realise these plans. Numerous shortcomings and obstructions in industrial and developing countries have probably been causal for this, letting the transfer to this concept, so successful in Europe, come to naught.

The major reason for the demand for a Marshall Plan is the diagnosis of capital shortage. Little attention is, however, paid to the central question as to how the additional capital for the Third World should be raised. The past shows that demands for an increase of public development aid have frequently been unsuccessful. This plan could be attractive mainly because of the prospects held out of a return flow of the raising of the funds, in a number of states much smaller return flow quotas will possibly come about - depending on their international competitiveness. This might cause them to stop their further participation in this initiative. The possible fixing of the return flow quota using the instrument of tied aid is indiscussable in connection with the intended assistance.

In addition the Western industrial countries, owing to differing targets, so far do not undertake a uniform development policy. So it has to be anticipated that for the carrying through of a common programme such as the Marshall Plan, to begin with the establishment of a new institution will be required. Alone the expenditure for its establishment and maintenance reduces considerably, as shown by experience, the value of the funds to be distributed and thus also limits the desired stimulating effects in the developing and industrial countries.

The possibly most important shortcoming of the whole concept is indeed to be found in the equation of Europe's situation after World War II with the developing countries' present situation and the similarity of instruments that are to be utilized for the mastering of the economic problems. Decisive for the erroneous estimation is the over estimating of the factor of capital in the development process and the insufficient consideration of complementary factors relevant for development. But precisely the complementary factors play a major role for the ability to absorb capital and for the level of efficiency. The experiences made in this field during 30 years of development policy did obviously not enter into the new Marshall Plan concept.

Which Third World countries shall mainly profit from Marshall Plan funds is also not clear. The favouring of newly industrializing countries whose demand growth can be assessed as high, but which at the same time might be able to substitute with Marshall Plan funds a part of the demand that would have evolved anyway hardly corresponds to the development policy guidelines of most European states. The special support of the least developed countries within the framework of this concept might be impeded by the fact that their main requirements do not harmonise with the supply structure of the highly developed states.

Already the difficulties - as indicated here - make it appear improbable that such a plan can be realized during the next few years, above all the effects on developing countries and industrial states will probably not be as favourable by far as one might think at first sight.

Large-scale Projects of Industrial States

The funds for the financing of infrastructure projects show certain similarities to the Marshall Plans. The most concrete plan of this kind originates from Nakajima who in his world economic situation analysis arrives at the result that the worldwide stagnation and recession cannot be overcome without major impulses from the western nations. Therefore gigantic investment projects are considered necessary. Nakajima recommends the foundation of a special fund to finance multinational public investments within the framework of the industrial nations' development policy - investments that are made for several developing countries simultaneously and to be utilized in common. Positive effects on the developing countries' economy are to follow the stimulation of private economic activities in the industrial states. For instance the utilization of deserts, the construction of high dams and tidal power plants, canals and tunnels as connections between continents belong to the 12 multinational 'super projects' already foreseen.

The financing of this special fund is mainly to be taken over by the USA, Japan, the Federal Republic of Germany and the OPEC states.

The establishment of a new organization independent of the UN is being recommended for guaranteeing an efficient carrying through of the projects.

The proposal of the global infrastructure fund also believes - like the Marshall Plans - the stimulation of the world economy to be possible through the utilization of the relationships of interdependence to the advantage of the industrial and developing countries. But the assumptions on which this proposal is based are not necessarily fulfilled in reality.

The level of the demand in the industrial countries made additionally possible by the realization of these large-scale projects depends firstly on whether the industrial countries really raise these funds additionally or whether they finance the infrastructure fund by a reduction of their other ODA contributions. The consequence of the latter would be a reduction of the expected additional demand by the otherwise usual return flow effect. In the case of an additional provision of the funds the deprivation effect must be balanced nationally against the return flow effect to be expected. To what extent the developing countries actually utilize firms and deliveries from industrial countries for the implementation of projects depends both on their ability to deliver and on the economic policy of the developing countries.

It is also not clear in connection with these proposed large-scale projects if in the developing countries a demand for these measures exists and if they are able to profit genuinely in the long run from these multinational projects. Generally there exists a risk of the formation of enclaves in the case of large-scale projects of this kind - enclaves without integration into the overall economy, with little effect on employment and training and providing a negligible extension of the supply of goods for the mass of the population.

Industrialization Funds

While Marshall Plans and infrastructure measures mostly start with a single big push, others plead for a massive increase of the transfer of resources over a longer period. This is the case for example, for

the Global Fund as recommended by UNIDO with an annual lending volume of US \$ 15 billion to give industrialization credits to the developing countries. The equity capital - between US \$ 75 and US \$ 100 - is to be composed of official contributions of the member states. The Western industrial nations and the OPEC members with capital surpluses are mentioned as donors. Differing from the World Bank and the IMF, in the Global Fund the developing countries are to hold the majority in the management and decision making bodies.

The proposal of UNIDO can only be regarded in connection with the numerous demands of different UN organizations for the creation of the New International Economic Order (NIEO). The Global Fund meets without doubt the criterion of a massive transfer, but its dimension will make the raising of capital most problematical. Since funds of such a volume would hardly be provided additionally by the industrial countries, it is to be feared that the utilization of official development assistance (ODA) would be fixed for years.

The deliberations of Jayawardenas form a mixture between the proposals of non-automatic and automatic transfers of resources. Public development aid of European Community countries (EC) should be used to direct the OPEC countries' capital surpluses into the oil importing developing countries. For this purpose a fund is to be established under the administration of the European Investment Bank, which is to issue SDR nominated bonds to the OPEC states. Should the annual oil price increase surpass a certain interest rate, the supply of bonds or the real interest rate will be reduced. Attractive real interest payments on these bonds as well as protection against inflation and exchange rate risks are to be guaranteed by the EC countries. The funds are to be granted as long-term credits and all developing countries with an annual per capita income of under US \$ 1,000 to be subsidized. The cost of the subsidies is to be provided by the EC countries without burdening their budgets, by means of the creation of additional SDRs.

Even if the surpluses of OPEC were secured against inflation and exchange rate risks it remains questionable whether the EC would be willing and able to undertake these guarantees. Although the EC would thus be able

to secure its mineral oil imports at moderate price increases and could profit from the developing countries' additional demand, the protection against inflation and currency risks appears to be illusory in view of the strong fluctuations of the individual currencies vis-à-vis the dollar and SDR and the differing inflation rates. The costs arising would probably burden the budgets and thus reduce public aid correspondingly rather than increasing it. The covering of costs by new SDR of the EC countries as mentioned in the proposal, would bring in the link between ODA and SDR by the back door, which hitherto the EC countries have unanimously rejected.

Massive and Automatic Transfer

Link between ODA and SDR

Apart from the discussions concerning the increase of the transfer of resources, proposals are being made which as far as possible regulate the investment funds automatically, independent of individual decisions, as is usual for ODA. Starting points for such an automatism could be the linking of development aid to the creation of additional liquidity within the scope of the international monetary system or the introduction of development aid taxes whose yields would flow to the Third World countries.

Since the introduction of SDR (1967) and the reform efforts of the International Monetary System the developing countries are insisting that the industrial nations, when new SDRs are created, make part of their SDRs directly or indirectly available to the developing countries, over and above their quotas. If the industrial nations were to follow this proposition, the creation of ever-new SDRs would actually lead to a quasi-automatic direction of funds to the developing countries - provided that the world economy's demand for liquidity extended permanently.

The realization of this wish for a link failed so far due simply to the fact that the extensive creation of SDRs in accordance with the developing countries' wishes cannot be guaranteed without a fundamental revision of quotas in the IMF. Should the developing countries receive SDR funds from the industrial states, the latter could easily substitute

these SDRs for a part of their ODA and thereby establish as quasi-automatism without increasing their contributions. In addition, frequent and major creations of SDR would increase the risk of an accelerated worldwide inflation with negative effects on industrial and developing countries. The experiences with gold and the reserve currencies have shown that the susceptibility of a monetary system is increased if reserve media have a double function - here as SDRs and development capital.

In spite of the doubts hinted at, there are recurring attempts to connect the idea of a Marshall Plan with the Link. The best known proposal by Küng suggests that additional SDR are either granted for developing countries (DCs) only - excluding industrial nations - or are allocated in accordance with IMF quotas - the industrial states, however, placing their SDRs at the disposal of the DCs free of charge repayment obligations. Since these proposals so far appear simply to be flights of fancy rather than development concepts, the discussion of a massive automatic transfer has unambiguously shifted away from the IMF towards development taxes.

Development taxes

Recently, taxes as an instrument for the raising of additional funds are increasingly demanded in order to make external inflows in the form of ODA independent of annual political decisions by donors and to achieve a better distribution for the developing countries. As an example for a direct tax, a surcharge on the general national income tax has been considered; as an indirect tax, the taxation of international trade.

Generally speaking the economic policy value of these taxes depends to begin with mainly on the extent to which they comply with the target of steadying and increasing the transfer of resources and whether this then actually promotes growth in industrial and developing countries. Moreover, international taxes must also comply with the standards of efficient tax systems, for instance: a just distribution of the tax burden, no impediment of fluctuating markets and a simple low-cost administration.

The presently available investigations into the subject of international taxes show distinctly that the contractive effects for the world economy would be considerable. Besides, there exist so many possibilities of passing on the burdens, that particularly the gain for the poorest countries of the Third World would be highly doubtful. Instead of international taxes, distorting price relations and additionally creating major administrative impediments, the alternative of taxes and tax systems in developing countries might be discussed more extensively.

Summary:

Few Chances of a Massive Transfer

Summarizing the proposals so far considered for a massive transfer of resources with regard to their possible realization and chances of success, it will be seen clearly that their effectiveness depends on the cooperation of numerous factors. But the initiators do not mention this explicitly and possibly underestimate its importance.

Above all the question as to whether the funds are raised additionally has not been satisfactorily answered. They should, namely, in order to show the greatest possible positive economic effect, be additional not only for the DCs, but they should also not cause withdrawal effects compared to other consumptive or investive utilization within the industrial countries themselves. The industrial nations' experiences with development aid during three decades show that the additionality would be relatively improbable. There, an unambiguous tendency exists - because of the shortage of funds for the ODA, conditioned by budget problems - to pay for new tasks out of the corresponding budget items. Thus shifts between the task will probably occur rather than an increase of the capital transfer.

There is not much to support the hypothesis that the application of the funds in the DCs stimulate the donor countries' economy more strongly than a direct utilization at home. This is based firstly on the fact that part of the funds will not be invested effectively regarding growth. In addition there is the competition of DCs and other states for possible orders. This alone advocates a utilization of the capital, in

short supply also in the industrial countries, in their own economic area. Besides, it has to be taken into consideration that the structural effects can thus more easily be controlled than with the detour via the DCs or a possible involvement of multilateral institutions.

Apart from the already mentioned institutional and administrative questions and not satisfactorily solved distribution of funds between the DCs, all proposals and plans moreover show the disadvantage, that they allow no statements on the following:

- whether the planned set of instruments is quantitatively sufficient for effecting a lasting stimulation of the world economy;
- over which period the funds would have to be provided regularly in order to guarantee a success of the massive transfer of resources.

The amount of the required capital seems to be more or less arbitrarily fixed in all cases under consideration. The plans do not comply with a critical capital requirement calculation and the development policy principle of 'Aid for Self-aid'. Almost all prognoses up to the year 2000 agree that the DCs register a permanently growing demand for foreign capital, including also official aid contributions. The Marshall Plan and fund contributions, but omit to make statements as to whether the DCs' long-term capital requirements will be reduced owing to the application of these funds or whether they will increasingly become boarders of the industrial nations.

Recovery Programme of the Brandt Commission

We shall deal here, as an example of an increased transfer of resources with new forms, with the second report of the North-South Commission, which shows numerous parallels to the proposals of international organizations and of the non-aligned states. This report is intended to be an immediate programme whose measures are to be part of the agenda of approaching international conferences. It comments inter alia problems such as e.g. the world food situation, energy, trade and negotiation processes. The proposals for financing procedures are particularly relevant in this context.

IMF and World Bank

The report proceeds from the belief that the present problems can primarily be solved by additional financing instruments, that the IMF plays a key role in the mastering of the DC's financial problems. Therefore what is demanded is an expansive policy by increasing the available funds of the IMF by the raising of quotas, new allotments of SDR, acquisition of funds on the capital market and from central banks and by easier conditions regarding IMF credits.

All proposals have the common objective of enabling economic growth through monetary and financial expansion - indeed explicitly regardless of the inflationary effects implicated by such a procedure.

Regarding this - not new - approach, firstly it is to be noted that the abolition of the clear division of tasks between IMF and development institutions implicated by it would be utterly doubtful. The IMF has monetary objectives. Its funds are meant to balance short-term balance of payments problems. Therefore its transactions do not belong to the field of development aid. Gratis grants of SDR would water down this principle, confuse the monetary system and further worldwide inflation and destabilization. Owing to the misallocation of fund often occurring during the recent debt crises, a softening of the conditions of the IMF does not seem to be desirable.

Similar to the situation in the case of the IMF, the proposals for development financing via World Bank and the International Development Association (IDA) can be brought to a common denominator: more money on more generous conditions. The immediate programme envisages the increasing of real IDA funds, the rejection of the graduation of countries, the increase in the share of structural adjustment credits, increased financing of current costs by IDA. Regarding the World Bank, the catalogue of demands is concentrated on those for techniques for the mobilization of additional resources.

Behind these proposals for development financing via the World Bank/IDA the demand for imposing on the North a kind of 'tribute' vis-à-vis the

South with the World Bank serving as instrument, cannot be overheard. This is made clear by the question as to the conditions to be linked with the credits of both institutions. Here it is being stated that the countries of the South must control their economic situation themselves and the World Bank should duly restrain itself regarding conditions.

ODA and Private Capital

In the sphere of ODA an increase and an improved efficiency is vigorously demanded. This comprises the general realization of the 0.7% target (for LDCs and expansion to 0.15%) and a concentration on the poor countries. A realization as quickly as possible of the 0.7% target should not require further comments. After the manifold promises in the past it appears indispensable, if only for reasons of the credibility of the policy of economic cooperation. Although it remains to be taken into consideration that a rational provision of more ODA is no guarantee for the start or acceleration of the development process, a per cent target does not exist. The effect of an additional capital input depends to a decisive extent on the general economic conditions in the different countries. Here economic policy plays a decisive role. Help from outside can always have only a moderate impact and a flanking function.

In the opinion of the Brandt Commission, the activities of the private sector, especially in the form of direct investments, can play an essential role in mastering underdevelopment. Measures for the mobilization of such capital, the conclusion of a behaviour codex for investors, the introduction of a multilateral guarantee facility, the increasing of international financial cooperation (IFC) funds for the promotion of the utilization of private risk capital and the extension of co-financing facilities are recommended for the immediate programme.

A considerable raising of direct investments would hardly be induced this way. Not international codices of behaviour, but regulations and laws of the country in which investment takes place are decisive for the integration of foreign enterprises. Multilateral measures and incentives

cannot achieve anything if the economic policy of individual countries is impeding investments. As private capital from industrial countries is certainly available, everything depends on the DC's economic policies, if they want to attract this capital.

Trade, ECDC and New Funds

In the sector of international trade the Brandt Commission gives high priority to the prevention of a further curbing of world trade by additional protectionist measures. This seems to be justified. The main problem of a liberalization in industrial countries is to be traced back to the fact that the creation of competitive jobs has so far been neglected and this has contributed to the present high unemployment level. Since trade liberalization plays the role of an engine regarding structural change, the industrial nations can take the lead and reduce their protection in the trade sector. The decisive obstruction, being able to assert themselves in international competition, must be overcome by the developing countries themselves. For a period of transition, tariffs and quantitative trade restrictions could be reduced gradually in order to mitigate occurring adjustment problems.

These measures appear to be reasonable. But the industrial nations can contribute to the South-South cooperation to a very limited extent only. The programme proposals for an intensification of the DCs' South-South cooperation refer mainly to a simplification of payments and clearing agreements, extension of financing facilities of the DCs by a Third World Bank, the expansion of the OPEC fund or the stronger participation in regional development banks as well as guarantee programmes for export credits.

They are, however, challenged in connection with the North-South Commission's proposals for a renewed discussion of a World Development Fund. This fund is to be realized as fast as possible within the scope of global UN negotiations. Apart from the problems of global negotiations, to begin with its area of application and its efficiency for the development process should be proved before its consultation and establishment.

In particular it should be fixed more accurately which relationship would exist between the new fund and the planned superfunds of UNCTAD (Common Fund) and of the UNIDO (Global Fund). As long as the danger exists that such institutions would degenerate into self-service stores for uncontrolled programme financing with a permanent obligation to pay on the part of the industrial countries they are to be rejected because of the waste of resources unavoidably connected with this. Underdevelopment cannot be removed by additional funds and more generous credit conditions for the true problem is not lack of capital, but rather capital utilization.

Summary:

No New Leverage

One of the most positive aspects of the Brandt report is to be seen in the drastic description of the intolerable economic situation of more than 500 million people in the Third World. It is also praiseworthy that the authors at the same time emphasise the waste of resources for unproductive and useless armament expenditure. It is not difficult to agree on some of the proposals, in particular the reduction and removal of protectionist measures in the industrialized countries, the necessary increase of ODA funds and private capital transfers, and the intensification of economic and technical cooperation among developing countries.

On the other hand the purport of the report is assistance from outside. The possibilities and the necessity of a change in the economic policies of the developing countries by mobilization of their own resources seem to be underaccentuated. The danger of ongoing destabilization of the world economy by increasing international inflation is underestimated, optimism regarding the efficiency of (new) international organizations and funds exaggerated. Therefore, it seems to be justified to have reservations vis-à-vis the proposed emergency programme as a leverage for the overcoming of the world crisis.

Helmut Schmidt's Prescription

Contrary to the afore-mentioned proposals and concepts, the former Chancellor of the Federal Republic of Germany, Helmut Schmidt, sees the solution of the present economic problems not in a massive transfer of resources but in a joint action of the Western industrialized nations to stabilize and reorganize their economic policies. In his opinion, the reasons for the disaster are mainly the collapse of the Bretton Woods system and the worldwide inflation following the oil price shocks, which was accompanied by a trend towards growing protectionism.

Instead of patent remedies, a coordinated economic policy among industrialized countries with similar objectives is proposed. The list of countries to be involved includes the USA, Canada, Japan, Great Britain, France, Italy, the Federal Republic of Germany, the Netherlands, Norway, Austria and Switzerland.

The most important requirements are:

- to get real interest rates down;
- to avoid excessive creation of international liquidity;
- to ease the adjustment process of national economies to structural changes in the world economy; and
- to strengthen the world's financial system, which also includes the improvement of the opportunities of the IMF and World Bank for surveillance of and influence on the economic policies of debtor countries and creditors.

The increase of ODA in real terms is also mentioned, but it is emphasized that not aid but recovery in the industrial countries is the essential prerequisite for improvement in the Third World.

An expansive policy is suggested for Great Britain, Japan, the Federal Republic of Germany, the Netherlands, Norway, Austria and Switzerland, while the USA, Canada, France and Italy should concentrate more on consolidation and the fight against inflation. The coordinated action of these countries should safeguard a stable world monetary system. Credit restriction should be avoided and trade barriers abolished. Protectionism is identified by Schmidt as "escape into suicide".

The whole prescription shows clearly that important representatives of the industrialized countries do not believe in the massive transfer of resources as a strategy to overcome the world crisis. They do not deny interdependent relations between North and South, but they see the main starting point in their own countries. In so far as this approach is similar to the old locomotive strategy, in which the industrialized countries are responsible for economic recovery and have the task of pulling the developing countries from poverty to economic growth.

The advantage of the proposal is its comprehensive character. It is not concentrated on one measure as a panacea, but on the whole bunch of economic tools. Therefore it seems to be likely that a concept like this can play an important role at the summit of Williamsburg and that it will get support by the majority of Western countries.

This must not burden the North-South Dialogue, but it may put other accents on the measures and steps envisaged for the negotiations. It can be expected that industrialized nations will insist more on:

- the need for their own economies to recover first;
- measures and mechanisms, which not only support the Third World and in no case impede the recovery of the North; and
- stronger economic conditions for ODA and private transfers because the benefits of capital allocation in developing countries will always be compared with the utilization of these means at home.

Outlook

An efficient and long-lasting recovery seems only to be possible if the industrialized countries make every effort to stabilize and to revive their economies. The requirements for a new world-wide growth process are a free international trade and financing system as well as efficient economic policies in developing and developed countries. The experience of the past shows, however, that the realization of these prerequisites is a very difficult task. There is a considerable - nearly insurmountable - difference between theory and practice and between lip service in conferences

and real political action.

To improve the basis for a new worldwide upswing to prosperity a lot of negotiations and moral suasion on all sides will be necessary - otherwise recession and stagnation will continue.

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STRATEGIES AND POLICIES FOR INDUSTRIAL DEVELOPMENT: SOME OBSERVATIONS ON THE INDIAN EXPERIENCE by S.S. Marathe*

In recent years rapid industrialization has been accepted as a major objective by most developing countries. At the UNIDO Conference held in Lima, Peru, in 1975 it was accepted that the goal should be to raise the share of developing countries in the world manufacturing output from about 7% in 1973 to at least 25% by the turn of the century. Industrialization has been accepted by all countries in the Third World as an important instrument for the structural transformation of these countries, for providing inputs for the growth of modern and scientific agriculture and for higher productivity and reduced technological dependence.

Since 1950 Indian industrial production has increased at an annual average rate of around 6%. The industrial base has been greatly diversified and there has been considerable growth in the scientific, technical and managerial skills. The country is by now more or less self-sufficient in meeting its requirements of industrial consumer goods and also has a fairly large diversified capital goods industry. It is generally accepted that India has now the capacity to plan, design, set up and commission new plants for a wide range of industries including sugar, cement, paper, steel, heavy electricals, machine tools and drugs and pharmaceuticals.

Although India's achievements in the field of industry in the last three decades are by no means insignificant, there have also been some important shortcomings and failures. The rates of growth of industry in India have been significantly lower than in some other developing countries including large economies such as China and Brazil, and also countries like the Republic of Korea. Some of the traditional industries which still have a major place in the industrial structure such as textiles have languished and become outdated resulting in a decline in their competitiveness in the world markets. In many cases the newer industries particularly in the field of chemicals operate on the basis of uneconomical size plants and consequently are high cost producers. Indian industry has tended to operate for too long in a highly sheltered domestic market in which because of high tariffs and internal licensing procedures, normal competitive pressures for cost reduction and improvement of quality have been relatively weak. Most importantly, the modern industrial sector in

* Mr. S.S. Marathe, Former Secretary, Government of India, Ministry of Industry.

India has not grown fast enough to make any significant impact in terms of new employment opportunities.

The fragmentation of industrial capacities, the strong pull of the protected domestic market and the absence of competitive pressures for reduction in costs and improvement in quality have been major impediments to the growth of exports. It is not without significance that countries such as the Republic of Korea which started industries like shipbuilding, heavy engineering and electronics around the same time or in some cases even later than India have emerged as major exporters. In the field of science and technology, although India has an impressive infrastructure of research institutions and a large reservoir of personnel, the pace of technical progress and increases in productivity in Indian industry have not generally been rapid enough. The linkages between institutions and agencies involved in R and D and users of technology have been weak and with a few exceptions, industrial units have not placed sufficient emphasis on evolving, adapting and upgrading technologies. In consequence, technological obsolescence is now fairly common in several important sectors of modern industry in India.

These are major weaknesses which reflect, in retrospect, the limitations or failures of the strategies and policies for industrial development pursued over the last thirty years or so. It is useful and necessary to examine the more important areas of failure (or inadequate success) of policies, notwithstanding the fact that India's achievements in the industrial field during the period are indeed very significant.

A critical review of the Indian experience could have some lessons for other developing countries although, it has to be recognized, that India is in many ways a very special case which has no exact parallel among the developing countries. A poor country but with better resource endowments, including human resources and infrastructural base, India had the advantage of starting after independence at a level which was not common amongst the newly independent countries. For instance, even before independence India had a nucleus of an industrial base (e.g. steel, coal, textiles and some engineering and fabrication capacity) and an infrastructure of railways, roads, ports, as well as the institutional structure needed for industrial development (including commercial banks and stock exchanges).

In many parts of India, there was also a fairly dynamic entrepreneurial class and also a Western educated middle class of professionals like doctors, lawyers, chartered accountants. It had a well established and highly competent senior Civil Service which was largely Indian. There was also some tradition of Parliamentary Democracy with strong parties and leaders with a mass base.

Not many countries could claim these advantages, but curiously, some of these strengths themselves have perhaps become sources of weakness over the last thirty years. For instance, in India where bureaucracy was traditionally dominated by the generalist administration, any expert knowledge of problems of modern industry was not often available in administrative positions which were involved in decision making pertaining to industry. Similarly, the inevitable march of democratic progress in poor and predominantly rural economy also meant that political power increasingly passed into the hands of people who had little familiarity with the complex issues involved in modern industrial development. The cultural values inherited by the educated middle class did not place any emphasis on entrepreneurship or inventiveness and there has been in many parts of the country an undue stress on security, with the result that amongst the educated classes there are far more employment seekers than persons who are willing and able to get into activities which will generate employment.

The Indian experience in respect of industrial development can particularly be divided into two parts: the period up to 1965-1966 and the period since then. The earlier period was one of fairly rapid and sustained increase in industrial output, accompanied by diversification of industrial activity and strengthening of the institutional framework needed for industrial development. This period saw the creation of new financial institutions to support new industry, establishment of a number of centers for research and for training of technologists and managers. The second period witnessed some further deepening of the industrial structure and some further strengthening of the infrastructure, particularly in terms of development of human resources and financial institutions. But the period also saw a slowing down of the rate of growth of industrial output. Value added in the industrial sector - which averaged 7.6% during

1959-1960 to 1965-1966 - declined to 5.6% per annum during the period 1966-1967 to 1978-1979.

A recent study by the Center for Monitoring Indian Economy, Bombay, estimates that during the eleven year period between 1970 and 1981, capacity in the manufacturing industries expanded by about 95%, i.e. an average rate of 6.3% p.a.; but during the same period the production of manufacturing industry increased by 83% i.e. an average of 5.3% p.a. In the result the rate of utilization of capacity declined from about 85% in 1970 to 76% in 1981. While calculations of capacity are fraught with conceptual and statistical difficulties, it is generally accepted that, for various reasons, Indian industry in the late 1970s suffered a setback in terms of utilization of productive capacity.

Several explanations have been offered for this in the course of the extensive debate on the causes of this deceleration. Among the reasons suggested by a number of economists, mention may be made of the slower growth of agriculture, diminishing scope for import substitution, changes in terms of trade in favour of agriculture and to the detriment of industry, and the general deterioration in both the efficiency of the infrastructure such as railways, electricity generation and distribution, ports, etc., and in the work ethic in the economy.

While this is a complex issue, a recent unpublished study suggests that by far the most significant reason for the deceleration in industrial growth was the slow down in the growth of public investment. This slow down led to a weakening of the demand stimulus not only directly but also indirectly in terms of deceleration of private investment as well. A further consequence of the inadequate public investment was to create supply shortages especially on account of the slower growth of infrastructure.

While there exists statistical evidence to support this argument, there have also been other factors mentioned earlier which have contributed to the flattening out of the industrial growth. Altogether it does appear plausible that while India's domestic savings rate of about 22% of Gross Domestic Product is fairly impressive, for several reasons it will be

necessary to increase the rate of domestic savings if higher rates of investment in industry are to be sustained.

An important consideration is that the change in relative prices of capital goods since the early 1970s tends to exaggerate the extent of increase in investment, in real terms, which can be financed with current savings rates.

The deterioration in India's terms of trade consequent upon the oil price increases in the 1970s has also had the same consequence. It has also to be recognised that higher energy costs and consequent change in relative prices of inputs tend to render obsolescent some of the processes and industrial capital stock, necessitating additional investment. Yet another reason why a higher rate of savings is a precondition for industrial growth is that in a country like India the agricultural strategy itself is fairly capital intensive requiring large investments in the irrigation, power, fertilizers, etc. Given the inescapable priority for agriculture, unless saving rates are further increased, there will have to be some cut-back in the investments in the industrial sector.

Similarly, India will need to make up some of the lags in social overhead capital such as supply of safe drinking water in rural and urban areas, schools, hospitals and minimum standards of infrastructure in urban communities. These requirements of social overheads in terms of capital investments cannot be ignored indefinitely except at the risk of social and political instability, but investments in social overheads would lead to a diminution of resources available for investment in industry unless there is a step up in the overall rate of savings. It is in this broader context of a higher rate of savings and investment that one must look at some of the lessons of experience in the management of industrial change during the last three decades.

In a country like India with a democracy based on adult franchise, policies of any elected government will inevitably have to be left of centre - and this in turn means that the historical role of accumulation of capital performed by the private sector in a free enterprise system

will have to be circumscribed. In order to ensure an adequate rate of growth, the building up of a strong and efficient public sector is seen as a precondition for growth and modernization of the economy. The commanding heights of the economy have therefore been assigned to the public sector and massive resources invested. However, any objective assessment of the performance of the public sector would suggest that all is not well with the public sector. At the commanding heights of the economy, coal, steel, mines, electric power, railway transport, tele-communications, banking and insurance are all in public sector, and if they are all inefficient in varying degrees the rest of the economy - which must rely on the inputs they provide - will necessarily suffer.

It has also been argued that the expansion of the public sector into fields which have no relevance to the commanding heights of the economy - which was the original intention of policy - has been a major hindrance to growth of the economy. The Central Government, to a small extent, but the State Governments to a very large extent, have entered fields of economic activity which have little justification in terms of the State controlling the commanding heights of the economy. In a recent address Governor R.K. Nehru, a distinguished civil servant and presently the Governor of Jammu and Kashmir, stated that:

"The public sector now is engaged in an incredible variety of industrial and commercial enterprises such as scooters, rubber goods, glass, bread, footwear, tea, textiles, hotels and beverages - both alcoholic and other. The reason for this extension has been neither the conversion of our politicians to the philosophy of socialism nor their desire to enhance the revenues of the State. It is simply that it has become common practice for public sector enterprises, particularly in the States, to be made into mechanisms to provide powerful politicians, who cannot be accommodated as Ministers, with salaries, perquisites, patronage and opportunities to make money through corruption."

A major area of concern and action in the coming years in India has to be the management of public enterprises and particularly the need to

ensure proper accountability without inhibiting initiative. Unless the public sector can function in an atmosphere of greater autonomy and also an environment in which success can be rewarded and slackness punished, the large volume of nation's resources invested in these enterprises will not yield a reasonable return. If the returns on past investments are inadequate the public sector cannot perform its role as accumulator of capital.

Another area which has more recently become a major source of concern is industrial relations. The problems here are complex because in a poor country with chronic and pervasive unemployment and underemployment, employment in the modern sector of industry, banking, and other services will always remain a preferred employment. The differential between wage rates in the rest of the economy and in the organized modern sector, however, can become so large that it becomes a source of social tensions and also creates pressures for employment of excess manpower in organized industry and allied activities.

The growth of trade unionism, which over the years has been supported through legislation and otherwise, is no doubt a desirable and also unavoidable feature in the process of modernization of the economy. But perhaps a stage has come when to have a close look at the structure and legislative framework for trade unionism. One of the undesirable features of the present day trade unionism is permeation by political parties of trade unions so that industrial unrest is often caused not because labour had genuine grievances but because political parties or individual political leaders create this unrest for purposes totally unconnected with the welfare of labour. The culture of trade unionism in India tends to concentrate on demands for higher wage earnings without accepting any kind of nexus between productivity and wage levels. In fact it is not uncommon to see trade unions and their leaders flatly refusing to accept any such nexus.

A disturbing consequence of this is that the absorption of the labour force in modern industry is not increasing. Thus over a period of twenty years since 1961 the total factory employment rose from 3.9 million to

only 6.7 million. While it is recognized that the labour absorption potential of the modern segmented industry is necessarily limited in comparison with the traditional or household sector, there is an increasing evidence that the management's fear or reluctance to manage large work forces often leads to excessive or premature mechanization of various industrial processes.

It also discourages active interest in devising labour-intensive technologies which would be more in consonance with the basic factor endowments in a country with a large and growing population. In the long run a viable industrial structure will need a reorientation of attitudes in regard to necessary or appropriate wage differentials between the large mass of unorganized or inadequately organized labour force in the traditional sectors including agriculture and the privileged minority of organized labour in the modern sector of industry and tertiary activities.

Another area where the experience of the last two or three decades suggests some rethinking is necessary is in the field of the application of science and technology in order to sustain an adequate rate of growth of productivity. India has by now an impressive infrastructure of science and technology. But there are certain disturbing signs which are already evident. Although the country has statistically the third largest reservoir of technically qualified manpower in the world, there is no widespread acceptance of the scientific culture.

The quality of technical or technological competence varies greatly between average level prevailing in most colleges and universities, and the calibre and quality of the training provided in leading institutions or centers of excellence. Indeed, there is some ground to believe that the quality of the training provided in these centers of excellence is somewhat out of alignment with the country's current needs. The result is that in recent years, there has been a fairly sizeable exodus of such trained manpower mostly to developed countries where opportunities for employing their training and skills are greater.

A major drawback in Indian approach to science and technology has been its lack of focus towards meeting, through the use of scientific knowledge and modern technology, the urgent needs of the community. The Technology Policy Statement issued by the Department of Science and Technology states:

"Technology must suit local needs and to make an impact on the lives of ordinary citizens, must give constant thoughts to even small improvements which could give better and more cost-effective use of existing materials and methods of work."

But, except to a very limited extent, this has not so far happened.

The essential problem here is that the emphasis on scientific research has been greater than on technology and its adaptation to Indian conditions. The links between know-how generating sectors and the know-how consuming sectors have been rather weak; and in years to come greater emphasis and attention will have to be given to establish closer links between R and D facilities in the country and the end-users including the modern industrial sector.

Earlier in this paper, emphasis has been placed on the need to have a higher rate of savings and investment. But equally necessary or perhaps even more crucial is the question of efficient use of the resources both in the public and in the private sector. It is regretable but true that over the last thirty years the investment rate in India has increased but the trend rate of growth of the economy has shown no significant change. While the gross investment rate has more than doubled from around 10-11% in the 1950s, the trend rate of growth of output has remained stable around 3 and 1/2% per annum. The country has had the singular distinction of having an investment rate which is more akin to that of a middle-income developing country like Brazil, and yet have a growth rate low, even by the standards of many low-income countries.

To some extent the worsening of the capital output ratio is attributable to the stage of development of the economy. When large amounts have to be invested in irrigation, power and railways and this

is virtually unavoidable in the earlier phases of development strategy and there is bound to be an increase in the capital output ratio. At the same time, however, at least a part of the rise in capital output ratios in particular sectors is clearly attributable to deterioration in efficiency. Detailed studies conducted by internal and external agencies show that there is considerable scope for improving the returns to investment in major areas such as power, coal, railways and the working of irrigation systems. As investments in these sectors constitute about a quarter of the total investment in the country, the efficiency with which these investments are handled will have a significant impact on the efficiency of the economic system and the growth rate of the industrial sector.

The problem of raising the general productivity of the system is, of course, a large and complex one. It is not, as is often made out, simply a question of large and inefficient government. No doubt, the very large and pervasive role that governments—central, state and local and quasi-governmental agencies have in a society like in India casts a special responsibility on them to manage effectively and efficiently. In particular, in a fast changing environment, national and international, it is of crucial importance that governmental organizational structures and procedures are suited for the tasks they are required to perform. There is as much need for modern management techniques in government as anywhere else. An effective management information system and also organizational and procedural changes which will substantially reduce response time in terms of formulation and implementation of policies is also an area which needs careful consideration.

But the general productivity of a system does not depend only on the state apparatus and how it works; nor, indeed, should productivity or efficiency be the sole criterion for judging a system. As Lewis Mumford pointed out long ago, "The final test of an economic system is not the tonnes of iron and steel, the tanks of oil or the miles of textiles it produces. The final test lies in the ultimate products - the sort of men and women it nurtures and the order, beauty and sanity of their communities".

PAST AND FUTURE STRATEGIES AND POLICIES FOR DEVELOPING COUNTRIES' INDUSTRIALIZATION
AND THE CURRENT INTERNATIONAL TRENDS AND THEIR IMPLICATIONS by Shozo Morita*

DEEPENING OF ECONOMIC DIFFICULTIES IN THE DEVELOPING COUNTRIES

Amidst the difficult circumstances of the prolonged stagnation of the world economy, the developing economies suffered from a marked slowdown in growth of their gross national product (GNP), which fell from 5% in 1980 to 2.2% in 1981. (The average growth rate from 1980 to 1970 and from 1970 to 1980 is 5.8% and 5.6% respectively).

International trade also remained sluggish for these countries with total exports decreasing by 1.2% in value from the previous year and total imports increasing by 9.3%, a substantial drop in growth rate, compared with 1980. Such a slump in export, combined with the burden of increased interest payments on their loans due to high interest rate, upset even further the current balances of the developing countries, in particular of the non-oil producers.

MEASURES TO BE CONSIDERED FOR THE IMPROVEMENT OF THE SITUATION

There is clear correlation between the growth performance of the developed and developing economies. Economies of developing countries progress when the developed countries economies are prospering. They stop growing when the developed countries stagnate, and vice versa. Since the developing economies are susceptible to fluctuations in the industrial world, the importance of the revitalization of the industrial world should be recognized.

On the other hand, decline of income in the developing countries means decline of demand for exports from developed countries. Economic assistance, which plays an important role in economic development, should be strengthened considering the aspect of its having an effect for new demand growth.

* Mr. Shozo Morita, Research Adviser, International Development Center of Japan

ECONOMIC DEVELOPMENT IN THE DEVELOPING COUNTRIES SINCE 1960s

Development and Industrialization

Under the increasing polarization of the developing economies into three groups - oil-producing, non-oil producing, newly industrializing countries (NICs) - industrialization has played a crucial role among those countries which achieved rapid growth throughout the 1960s and 1970s.

The reasons are as follows:

- Industrial production in a particular field has broad effect in the related fields and leads ultimately to greater employment opportunities;
- Industrial products generally enjoy a high income elasticity of demand, enabling rapid expansion of the market;
- Productivity in the manufacturing sector is higher than in other sectors; and
- Policies for the education and training of the workers indispensable for industrialization contribute to human resource development and improvement in the society.

Substructure Sustaining Industrialization

Main factors that provide the driving force for industrialization in the developing countries are:

- Securing a number of trained manpower who can maintain industrialization;
- Construction of effective infrastructures and utilities for the industries; and
- Steady expansion of agriculture.

FUTURE ECONOMIC AND SOCIAL DEVELOPMENT IN THE DEVELOPING COUNTRIES
AND ECONOMIC COOPERATION

Bearing in mind the above analysis and past experience of development in the industrialized countries, following points should be taken into consideration for the economic and social developments.

Establishment of a comprehensive and scientific study for the
economic and social development

In promoting economic and social development, an ambitious yet realistic plan should be formulated with due consideration given to the pace of development and balance between the various sectors and regions. Developed countries should contribute to the transfer of their experience and know-how through the collaboration for scientific data-collecting, its processing and economic planning, which is fundamental for development.

Extensive manpower training

In order to lay the groundwork for the formation of the human resources that are critical for economic growth, it is essential that an appropriate educational system should be established throughout the country and high rates of attendance attained; and that relevant technologies be imported and adapted to local needs. Furthermore, for the continuous economic growth of the developing countries, it is necessary for them to educate scientists and engineers so that they can ultimately develop their own technologies suitable to the local conditions. In this respect, developed countries should enlarge their cooperation in the area of human resources development in the developing countries and make further efforts for research cooperation.

Construction of infrastructure

Infrastructure, which is an indispensable physical foundation for economic and social advancement of the developing countries, should be

built in accordance with plans for industrial development - keeping in mind that infrastructure is in itself only profitable and can bring it true value only when it is effectively combined with industrial development. It should be also stressed that these developments be consistent with the general economic and social development plan.

Development of agriculture

The encouragement of the growth of agriculture, which constitutes a significant sector in a majority of developing countries, brings increased food production and additional increases of domestic demand for industrial products. It also plays an important role in the smooth transfer of the work force to the industrial sector. The stabilization of food prices, the procurement of foreign currency by exporting agro-products, and the cancellation of the gap in living standards between urban and rural communities. The importance of agro-business for the industrial development must also be recognized by the developing countries.

With the introduction of a variety of high-yield crops (Green Revolution) and irrigation and drainage systems, agriculture in developing countries, in particular of the Southeast Asia, has made remarkable progress. However, a great number of problems remain unresolved, toward which the industrial nations can extend constructive assistance: the development of agriculture technology for the improvement of yield; the comprehensive development of agriculture production base and rural communities, with emphasis on providing an integrated irrigation and drainage system; the supply of electricity; the development of distribution facilities for agro-products; the increase in food production for higher self-sufficiency; and the conversion to the crops which enjoy higher prices and demand worldwide.

Development of alternative energy and conservation

It is expected that future industrialization in the developing countries will generate rapid increases in energy consumption. In order

to avoid being trapped in the pit of a worsening balance of payment position, attention must be paid to the solution of energy problems. In this regard, conservation technology and new energy developments must be pursued strenuously for those countries.

Balanced industrial development

It should be noted that industrialization takes a long time and brings with it changes in the social structure. Excessively rapid development might cause social and political disturbances. Industrialization must be consistent with each country's particular condition and needs. It seems important that due consideration should be given to the following points:

- Balance between large-scale and small and medium-scale industries. Industrialization should be promoted in such a manner as to utilize most effectively the different advantages of the large-scale and small- and medium-scale industries. Leaning towards either one in economic planning might retard the efficient distribution of resources and the healthy development of the economy. Therefore, the developed countries should see that their assistance promotes an appropriate balance between the large-scale and small- and medium-scale industries;
- Introduction of industries consistent with development stage. In the process of pushing forward with industrialization, the development stage achieved in those countries should be taken into account: size of domestic market, capital formation and technology level;
- From light industry to heavy and/or technology intensive industry;
- From import substitution to export-oriented industries; and
- Introduction of new industries should be in accordance with the current development level in the country concerned.

These are not new, novel ideas, but it is appropriate that light should be thrown on these traditional ideas for the steady and certain progress.

Importance of renovation and improvement of existing industrial plants and infrastructures

The importance of overcoming bottlenecks in management, maintenance and repair of physical facilities should be also stressed in order to obtain optimal use of existing industrial plants and infrastructures. Particularly, considering the current international economic environment, this type of renovation and improvement project aimed at existing facilities is quite timely since it is expected to yield maximum benefits with minimal capital inputs.

Free trade

Countries at the initial stages of industrialization may be justified in providing assistance for the infant industries. But it must be kept in mind that free trade is the source of world prosperity.

THE DEEPENING CONFLICT: NORTH-SOUTH TRADE AND INVESTMENT RELATIONS by
Richard Newfarmer*

INTRODUCTION

The 1970s and 1980s have ushered in an era of world-wide "structural adjustment." An important element of these changes is the expansion of exports from developing countries, auguring a new division of labour in international trade. Growth in world trade, following the pattern set in the 1950s, averaged a healthy 5.8% in the 1970-80 period. However, with the world-wide recession at the close of the decade, growth in the volume of trade slowed to 2.3% in 1980, and was -1.0% in 1981, the first shrinkage in trade since 1945 (UNCTAD, 1982: 218).

The developing countries increased their share of world exports from 20.4% in 1963 to 27.2% in 1981 (Table 1). Most of the increase was accounted for by the doubling of the export share of oil-exporting countries (from 7.3% in 1973 to 13.7% in 1981). But the non-oil developing countries also gained; their share rose from 11.9% in 1973 to 13.5% in 1981. In other words, developing countries as a group outperformed the quite respectable world-wide average growth in the international export market during the 1970s.

Their performance was doubly important because it marked an increase in the sectoral diversification of exports. The developing country share of manufactured exports rose from 6.7% in 1973 to 8.7% in 1980; this implied that manufactures as a share of the commodity composition of their exports rose from 33.0% to 38.8% during the same period (Table 2). Concomitantly, the share of primary products in the exports of developing countries fell.

Many of the gains of developing countries were in industries traditionally associated with developed countries: iron and steel, chemicals, engineering products, and consumer goods (see UNCTAD, 1982: 72, 73) as well as in more traditional labour-intensive goods. In fact, the contribution of "mature" industries (those requiring a large number of unskilled workers) and "standardized" industries (those with a low rate of product development) to the growth of exports of manufactures was quite large - over one-third in the case of all

* Mr. Richard Newfarmer, Senior Fellow, Director of Trade and Industrial Policy, Overseas Development Council, Washington, D.C., U.S.A.

Table 1

| Production, Commodity, and Regional Composition of World Trade, 1963 and 1973-81 | | | | | | | | | | | |
|---|---|------|------|------|------|-------|-------|-------|-------|-------------------|-----|
| <i>(In billions of U.S. dollars and per cent)</i> | | | | | | | | | | | |
| | 1963 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 ¹ | |
| Growth of world output (in per cent) | 5.4 | 8.7 | 2.8 | -1.1 | 7.1 | 4.6 | 4.4 | 3.7 | 1.0 | 1.0 | |
| World exports (in billions of U.S. dollars) | 154 | 574 | 836 | 873 | 991 | 1,125 | 1,303 | 1,638 | 2,000 | 1,970 | |
| | <i>(Percentage share in world exports)</i> | | | | | | | | | | |
| Agricultural products | 29.0 | 21.0 | 18.0 | 17.0 | 17.0 | 16.0 | 16.0 | 16.0 | 15.0 | ... | |
| Nonfuel minerals | } | 6.0 | 6.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | ... | |
| Fuels | | 11.0 | 20.0 | 19.0 | 20.0 | 19.0 | 17.0 | 20.0 | 24.0 | ... | |
| Manufactures | | 53.0 | 61.0 | 55.0 | 57.0 | 57.0 | 58.0 | 60.0 | 58.0 | 55.0 | |
| Growth of volume of world exports | 7.1 | 11.1 | 3.5 | -2.9 | 11.2 | 4.3 | 5.6 | 5.6 | 1.0 | — | |
| Regional composition of world trade² | <i>(Percentage share in total world export and imports)</i> | | | | | | | | | | |
| Industrial countries | | | | | | | | | | | |
| Exports | 64.1 | 68.0 | 63.0 | 63.8 | 62.7 | 62.6 | 64.9 | 63.2 | 61.7 | 61.7 | |
| Imports | 64.2 | 69.6 | 69.0 | 64.7 | 66.5 | 65.8 | 65.3 | 66.9 | 67.6 | 64.8 | |
| Oil exporting developing countries | | | | | | | | | | | |
| Exports | } | 7.3 | 13.0 | 12.9 | 13.6 | 13.2 | 11.2 | 13.0 | 14.8 | 13.7 | |
| Imports | | 20.4 | 3.6 | 4.5 | 6.6 | 6.6 | 7.4 | 7.6 | 6.1 | 6.6 | 7.6 |
| | | 20.9 | | | | | | | | | |
| Non-oil exporting developing countries | | | | | | | | | | | |
| Exports | } | 11.9 | 12.0 | 11.3 | 12.0 | 12.6 | 12.2 | 12.6 | 12.5 | 13.5 | |
| Imports | | 14.5 | 16.0 | 15.8 | 14.9 | 15.3 | 15.5 | 16.2 | 15.1 | 16.3 | |
| Eastern trading countries | | | | | | | | | | | |
| Exports | 12.2 | 10.0 | 9.0 | 9.8 | 9.5 | 9.6 | 9.7 | 9.3 | 8.8 | 9.1 | |
| Imports | 11.7 | 9.9 | 9.0 | 10.5 | 9.7 | 9.4 | 9.7 | 9.0 | 8.5 | 8.8 | |

Sources: GATT, *International Trade, 1969, 1977-78, and 1980/81*, and GATT, Press Release, March 23, 1982.

¹Estimates

²For regional classifications, see Appendix II.

Source: Anjaria, et al., 1982.

Table 2

Non-Oil Exporting Developing Countries: Composition of Trade and Share

in World Trade, 1973-80

(In per cent and billions of U.S. dollars)

| Products | Exports | | | | | | | | | | Imports | | | | | | | | | |
|--|-------------|--------------|-------------|--------------|--------------|--------------|--------------|-------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|--|--|--|--|
| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 ¹ | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 ¹ | | | | |
| Commodity composition | | | | | | | | | | | | | | | | | | | | |
| Primary products | 64.8 | 68.3 | 67.2 | 63.6 | 62.1 | 58.5 | 58.2 | 60.8 | 35.3 | 41.5 | 41.1 | 40.9 | 39.3 | 36.5 | 38.8 | 41.7 | | | | |
| Food | 32.3 | 29.6 | 31.6 | 29.8 | 31.0 | 29.1 | 26.3 | | 15.7 | 14.3 | 14.4 | 12.7 | 11.9 | 12.3 | 11.9 | | | | | |
| Raw materials | 11.3 | 9.1 | 7.7 | 7.7 | 7.4 | 7.2 | 7.7 | | 5.3 | 3.9 | 3.3 | 3.8 | 3.9 | 3.9 | 3.8 | | | | | |
| Other | 21.2 | 29.6 | 28.4 | 26.1 | 23.7 | 22.2 | 24.2 | 18.8 | 14.3 | 23.3 | 23.4 | 24.4 | 23.5 | 20.1 | 23.1 | | | | | |
| Manufactured products | 33.9 | 30.4 | 31.6 | 35.4 | 35.1 | 39.8 | 39.7 | | 60.4 | 55.5 | 56.5 | 55.1 | 55.5 | 60.0 | 58.0 | 55.6 | | | | |
| Semimanufactures | 9.0 | 8.1 | 8.0 | 8.2 | 8.3 | 9.8 | 9.9 | | 19.3 | 20.1 | 18.0 | 16.5 | 16.3 | 18.2 | 18.1 | | | | | |
| Engineering products | 8.7 | 8.5 | 9.5 | 10.5 | 11.1 | 12.8 | 11.2 | | 32.6 | 28.8 | 32.2 | 32.1 | 32.1 | 34.4 | 32.8 | | | | | |
| Textiles | 5.9 | 4.9 | 4.5 | 5.0 | 4.4 | 4.8 | 4.8 | | 4.7 | 3.7 | 3.2 | 3.4 | 3.5 | 3.6 | 3.4 | | | | | |
| Clothing | 5.6 | 4.8 | 5.4 | 6.7 | 6.2 | 6.6 | 6.1 | | 1.1 | 0.8 | 0.8 | 0.8 | 0.9 | 1.0 | 0.9 | | | | | |
| Other consumer goods | 4.7 | 3.9 | 4.2 | 5.1 | 5.2 | 5.9 | 5.6 | | 2.7 | 2.1 | 2.2 | 2.3 | 2.6 | 2.9 | 2.8 | | | | | |
| Other | 1.3 | 1.3 | 1.2 | 0.9 | 2.8 | 1.7 | 2.1 | 0.4 | 4.3 | 3.0 | 2.4 | 4.0 | 5.2 | 3.5 | 3.2 | 2.7 | | | | |
| Total (in billions of U.S. dollars) | 68.3 | 100.3 | 98.8 | 119.1 | 141.8 | 158.7 | 205.7 | 245.0 | 82.9 | 131.8 | 136.3 | 148.2 | 172.4 | 201.8 | 265.4 | 335.0 | | | | |
| Share in world trade | | | | | | | | | | | | | | | | | | | | |
| Primary products | 20.4 | 18.8 | 18.5 | 18.7 | 19.4 | 18.9 | 18.1 | 17.4 | 13.5 | 15.1 | 15.7 | 15.2 | 14.9 | 15.0 | 15.5 | 16.3 | | | | |
| Food | 25.5 | 27.5 | 27.3 | 28.8 | 31.2 | 28.4 | 27.7 | | 15.1 | 17.4 | 17.4 | 15.9 | 14.5 | 15.3 | 16.1 | | | | | |
| Raw materials | 22.2 | 22.7 | 20.6 | 21.5 | 22.4 | 21.9 | 21.1 | | 12.7 | 12.9 | 13.7 | 13.3 | 14.4 | 15.0 | 14.7 | | | | | |
| Other | 15.2 | 18.8 | 18.2 | 18.0 | 12.2 | 12.8 | 12.5 | 8.7 | 12.4 | 14.3 | 15.0 | 15.1 | 15.2 | 14.8 | 15.3 | | | | | |
| Manufactured products | 6.7 | 6.6 | 6.3 | 7.4 | 7.7 | 8.0 | 8.6 | | 14.4 | 16.0 | 15.6 | 14.4 | 14.8 | 15.4 | 16.3 | 17.1 | | | | |
| Semimanufactures | 6.2 | 5.6 | 5.4 | 6.1 | 6.5 | 7.0 | 7.2 | | 16.1 | 17.8 | 17.0 | 15.1 | 15.6 | 16.4 | 17.0 | | | | | |
| Engineering products | 17.3 | 17.6 | 16.9 | 19.2 | 18.5 | 18.8 | 19.9 | | 14.4 | 16.1 | 15.9 | 15.0 | 15.2 | 15.8 | 17.1 | | | | | |
| Textiles | 30.3 | 31.9 | 31.1 | 38.8 | 37.1 | 36.9 | 36.4 | | 16.8 | 17.2 | 16.9 | 16.8 | 17.8 | 17.9 | 18.2 | | | | | |
| Clothing | 13.1 | 13.0 | 13.4 | 15.8 | 15.8 | 16.2 | 16.3 | | 7.1 | 7.2 | 6.2 | 5.6 | 6.6 | 6.9 | 7.1 | | | | | |
| Other consumer goods | | | | | | | | | 9.1 | 9.6 | 10.0 | 9.9 | 9.7 | 10.1 | 10.5 | | | | | |

Source: I.A.T.T. International Trade, 1977/78, 1978/79, 1979/80, and 1980/81
¹Provisional figures.

Source: Anjaria, et al., 1982.

developing countries and nearly one-half in the newly industrializing countries. Much of the gain within these industries was based in the labour-intensive branches as the theory of comparative advantage would indicate; however, developing countries in these categories rose from less than 1% in 1963 to over 8% in 1980 (UNCTAD, 1982: 83).

The best performers in the non-traditional export categories, including the export of manufactures, were the newly industrializing countries. The expansion of exports from these countries was dramatic (Table 3). Taiwan Province increased its exports nearly fourfold between 1973 and 1977, the Republic of Korea fivefold, and Brazil nearly that rapidly. By 1975, a significant share of the output of these countries' manufactured exports was in capital goods and consumer engineering goods (Table 4).

The Specter of Protectionism

Despite the impressive accomplishments of developing countries in the expansion of their world market shares, several important problems continue to plague poor regions. First, the progress in the export of manufactures has been confined to a relatively small handful of countries; a great majority of nations remain dependent on traditional primary exports. Second, many of these countries are insufficiently diversified and dependent upon only one or two major commodity exports. Finally, the price of non-oil primary commodities continues to fluctuate dramatically. For example, in the nine-year period after 1972 the prices experienced annual percentage changes ranging from positive 53.2% to negative 18.2% (IMF Annual Report, 1982: 15).

These problems are difficult enough, but new ominous clouds have begun to appear on the trading horizon. Trade volumes have fluctuated markedly and around a trend line significantly below the previous period. From 1963 to 1973, trade increased by 8.5% annually. This rate was cut in half for the 1974-80 period. Then in 1981 and 1982, growth in world trade fell to below zero. The global economic stagnation after 1979 has contributed

Table 3

NIC Manufactured Exports, 1973-9 (billion US\$)

| Country | 1973 \$ | 1979 \$ | 1979+1973 |
|-------------------|------------------|-------------------------|-----------|
| Taiwan Province | 3.8 | 14.1 | 3.7 |
| Republic of Korea | 2.7 | 13.4 | 5.0 |
| Hong Kong | 3.6 ^a | 13.2 | 3.7 |
| Singapore | 1.6 | 6.4 | 4.0 |
| Brazil | 1.2 | 5.6 | 4.7 |
| Mexico | 1.5 | 3.2 ^b (1977) | |
| Argentina | 0.7 | 1.6 (1978) | |
| India | 1.6 | 3.4 (1977) | |
| Global total | 17.8 | | |

a/ Excludes re-exports (Hong Kong).

b/ Exports SITC 5 to 8 (minus 68) for 1977 for Mexico are \$1.2 billion. These tables exclude imports into free zones in Mexico and exports from bonded factories, mostly to the USA. The value of this export trade was over US \$2 billion in 1977 (UN, 1980, country notes for Mexico, p.24)

Sources:

1973: Keesing, 1979a, annex B. Data are based on UN Year-book of International Trade Statistics, SITC, 5 to 8 (minus 68) and are consistent with 1979 data.

1979 (except Taiwan Province): UN, 1980

Taiwan Province, 1979: Taiwan Province is no longer included in UN statistics. See: Taiwan Province, Council for Economic Planning and Development, 1980, p. 188. Export figures for 'industrial products' are exactly 3.1 per cent greater than Keesing's figures for each year, 1973-7. Therefore, the 1979 export figure is deflated by 0.97 to arrive at a consistent estimate.

Source: Bradford, 1982.

Table 4

Percentage Composition of Manufactures Exported from
Selected NICs and 'Next Tier' LDCs in 1975^a

| | Capital goods and consumer Engineering goods | Clothing, footwear and other consumer goods | Textiles, inter- mediate goods, miscellaneous |
|-------------------|--|---|---|
| NICs | | | |
| Hong Kong | 14.1 | 65.4 | 20.4 |
| Republic of Korea | 12.2 | 44.7 | 43.1 |
| Taiwan Province | 19.3 | 42.7 | 38.0 |
| Argentina | 25.8 | 7.1 | 67.1 |
| Brazil | 31.5 | 17.2 | 51.3 |
| Next tier | | | |
| Colombia | 7.9 | 23.5 | 68.5 |
| Malaysia | 15.9 | 11.9 | 72.1 |
| Pakistan | 2.0 | 13.6 | 84.4 |
| Philippines | 0.4 | 39.6 | 60.0 |
| Thailand | 3.8 | 23.6 | 72.6 |

a/ No data for Singapore or Mexico.

Source: Chenery and Keesing, 1979, p.31., Bradford 1982.

to the trade declines. It also induced a dramatic increase in domestic unemployment, reaching post-Depression highs within the OECD. The hardship of unemployment understandably produced a new upsurge in protectionist measures.

Ironically, new protectionist measures grew up at the same time that GATT could claim some of its greatest success in lowering tariffs in the Tokyo Round from 1973-79. These measures included most notably export subsidies, quotas, increased applications of the safeguards clause, increased recourse to voluntary export restraint, orderly marketing agreements, and subsidies contained in industrial policies. A recent study estimated the proportion of OECD imports of manufactures covered by the new protectionist measures had more than quadrupled between 1974 and 1980, from 4% to 17%. More recent talk of bilateral "reciprocity" in trade or "negotiated market access" revive anachronistic mercantilist principles of protectionism.

Trends toward increasing protection also reduce the export earnings of developing countries. Almost all OECD countries have taken actions that restrict the flow of developing countries' exports into their countries. This, together with the fall of commodity prices due to recession and the slowing of the demand growth for developing countries' exports, have combined to undercut the strong trends toward expanding their international market. Their export volume was cut from a growth rate of 3.8% in 1975-80 to below zero for both 1981 and 1982 (Table 5). Somewhat fortunately, most of this was attributable to declines in oil-exporting volume as all countries moved to conserve energy and cut their oil purchases. But the growth rates of exports from oil-importing countries and even exporters of manufactures were notably below their 1974-80 levels. These protectionist measures aggravate the problem of global economic downturn. They threaten to unleash a self-feeding cycle of escalating restrictions, more unemployment, and further contractions in income. The world is probably closer to a breakdown in the international rules that govern trade than at any time since the 1930s.

Table 5

Developing Countries' Trade Summary:
Annual Rates of Change in Volumes and Prices
1970-1983

(percentages)

| Region | Period | | | | Forecast | |
|------------------------------------|-----------|-----------|-------|-------|----------|------|
| | 1970-1980 | 1975-1980 | 1980 | 1981* | 1982 | 1983 |
| <i>Developing countries</i> | | | | | | |
| Export volume | 1.7 | 3.8 | -5.4 | -0.6 | -5.1 | 4.0 |
| Purchasing power of exports | 9.2 | 7.3 | 8.0 | -4.3 | -9.4 | 3.5 |
| Import volume | 6.8 | 5.2 | 4.2 | 3.7 | 3.5 | 3.6 |
| <i>Major oil exporters</i> | | | | | | |
| Export volume | -0.1 | -0.5 | -13.7 | -16.5 | -14.7 | 3.9 |
| Purchasing power of exports | 17.0 | 9.9 | 23.1 | -6.0 | -19.4 | 3.2 |
| Import volume | 14.0 | 8.3 | 12.6 | 12.0 | 5.7 | 4.8 |
| <i>Other oil exporters</i> | | | | | | |
| Export volume | 7.5 | 14.9 | 14.5 | 1.1 | 9.6 | 3.6 |
| Purchasing power of exports | 7.3 | 14.5 | 15.3 | 5.1 | 3.5 | 3.7 |
| Import volume | 7.5 | 4.8 | 16.7 | 15.1 | -1.7 | 3.2 |
| <i>Net oil-importing countries</i> | | | | | | |
| Export volume | 7.0 | 9.4 | 6.6 | 7.8 | 7.5 | 5.6 |
| Purchasing power of exports | 2.8 | 3.8 | -7.8 | 1.5 | 2.6 | 5.2 |
| Import volume | 3.7 | 3.0 | -4.6 | -1.2 | 5.0 | 4.0 |
| <i>Exporters of manufactures</i> | | | | | | |
| Export volume | 11.5 | 14.1 | 12.7 | 15.6 | 7.1 | 7.2 |
| Purchasing power of exports | 6.3 | 7.3 | -8.0 | 9.7 | 4.8 | 6.5 |
| Import volume | 5.7 | 4.7 | -7.1 | 2.1 | 6.2 | 5.0 |
| <i>Least developed countries</i> | | | | | | |
| Export volume | -0.8 | 3.4 | 2.7 | 4.4 | 6.7 | 3.8 |
| Purchasing power of exports | -2.5 | 2.1 | -5.3 | -7.8 | 2.7 | 6.7 |
| Import volume | 2.4 | 4.0 | 2.3 | -2.3 | 2.7 | 2.1 |

Note: The terms-of-trade calculations for groups of developing countries and territories have been made by the UNCTAD secretariat using a methodology briefly described in the UNCTAD *Handbook of International Trade and Development Statistics, Supplement 1991* (United Nations publication, Sales No. E/F.82.II.D.11), p. 454.

* For definition of country groupings and description of forecasting techniques see notes to annex table A.1, UNCTAD, 1982.

* Estimate

Source: Adapted from UNCTAD, 1982: 128-129.

The new conflicts: structural, not cyclical

These tensions will probably not go away even if economic recovery exhibits an unanticipated resilience. The reason is that governments are becoming increasingly involved with the promotion of their domestic enterprises. While this has always been the case, the new aspects of this intervention concern the international dimension and scope of such policies. On the one hand, government subsidies in technological development and capital formation appear to be increasing. (Tables 6a and 6b). On the other hand, world trade integration now implies that these policies will directly spill over into international markets. The next sections present some overall trends in the purpose and use of industrial policies and then discuss the conflicts they produce.

In broad strokes, several long-term patterns in the trends and purpose of industrial policies are vaguely apparent. First, within the OECD countries, industrial policies seem to have moved beyond the "preservationist" policies of protecting weak industries toward "accelerationist" policies of more aggressively creating and promoting high-technology industries. Spending for research and development increased as a share of GNP between 1962 and 1978 and industrial "targeting" has increased (Table 7).

Second, industrial policy within the OECD seems to converge in the same industries. Nearly all the OECD countries have strong public policies to defend their auto, steel, shipbuilding, and aircraft industries. Those countries with accelerationist policies toward high-technology industries have tended to overlap in the same industries: computers, semi-conductors, robotics, and office equipment. This convergence indicates that governments may begin to compete with each other in offering subsidies, tax incentives, incentives to technological development, and the like to promote specific industries.

Third, concomitant to the transition in industrial policy in the North has come a marked transition in the newly industrializing countries of the South: the transition from the import-substitution industrialization strategies of the early 1960s to the export promotion programmes that blossomed during

Table 6a

National Account Subsidies as a Percentage of GDP: Industrialized Countries

| | <u>Canada</u> | <u>France</u> | <u>Germany</u> | <u>Italy</u> | <u>Japan</u> | <u>United Kingdom</u> | <u>United States</u> | <u>Average OECD^{d/}</u> |
|--------------------|---------------|---------------|----------------|--------------|--------------|-----------------------|----------------------|----------------------------------|
| 1955 ^{a/} | 0.34 | 1.75 | 0.23 | 1.24 | 0.13 | 2.08 | <u>e/</u> | 0.96 |
| 1960 | 0.81 | 1.62 | 0.83 | 1.46 | 0.34 | 1.93 | 0.25 | 1.03 |
| 1965 | 0.82 | 2.17 | 1.28 | 1.37 | 0.71 | 1.61 | 0.45 | 1.20 |
| 1970 | 0.87 | 1.97 | 1.43 | 1.49 | 1.10 | 1.74 | 0.50 | 1.30 |
| 1972 | 0.83 | 1.99 | 1.48 | 2.29 | 1.15 | 1.82 | 0.59 | 1.45 |
| 1976 | 1.73 | 2.68 | 1.49 | 2.60 | 1.32 | 2.80 | 0.34 | 1.85 |
| 1978 | 1.42 | 2.64 | 1.86 | 2.92 | 1.34 | 2.20 | 0.45 | 1.83 |
| 1980 ^{b/} | 2.34 | 2.51 | 1.59 | 3.01 | 1.32 | 2.32 | 0.43 | 1.93 |

SOURCE: UN, Yearbook of National Accounts Statistics, Vol. I 1980, (Data from Table 1.3).

^{a/}Data for 1955: UN, Yearbook National Accounts Statistics, Vol. I 1966, (Data from Tables 2 and 8).

^{b/}Data for 1980: OECD, National Accounts 1951-1980, Vol. 1, Main Aggregates, 1982.

^{c/}Data for 1979, the last year available.

^{d/}Unweighted average for the OECD and NIC countries shown.

^{e/}Negligible.

NOTE: National account subsidies are current subsidies as shown in national accounts and presumably reflect net losses on state enterprise, subsidies to research and development, direct export subsidies, direct agricultural price support programs and the like. They do not reflect, however, implicit subsidies effectuated through loan guarantees, tax and other fiscal incentives, and indirect subsidies, such as below-market prices of final products or interest on loan capital.

Table 6b

Subsidies as a Percentage of Gross Domestic Product: Selected NICs

| | <u>Brazil</u> | <u>Republic of Korea</u> | <u>India</u> | <u>Average NICs^{d/}</u> |
|--------------------|--------------------|------------------------------|--------------------|--------------------------------------|
| 1955 ^{a/} | N/A | 0.70 | N/A | 0.70 |
| 1960 | 0.87 | 0.12 | 0.62 | 0.53 |
| 1965 | 1.40 | 0.01 | 0.79 | 0.73 |
| 1970 | 0.55 | 0.19 | 0.84 | 0.53 |
| 1972 | 0.56 | 0.30 | 1.15 | 0.67 |
| 1976 | 0.69 | 1.29 | 1.73 | 1.24 |
| 1978 | 0.86 | 1.34 | 2.28 | 1.49 |
| 1980 ^{b/} | 0.60 ^{c/} | 1.16 ^{c/} | 2.36 ^{c/} | 1.37 |

SOURCE: UN, Yearbook of National Accounts Statistics, Vol.I, 1980.

^{a/}Data for 1955: UN, Yearbook of National Accounts Statistics, Vol.I, 1966.

^{b/}Data for 1980: OECD, National Account 1951-1980, Vol.I, Main Aggregates, 1982.

^{c/}Data for 1979, last year available.

^{d/}Unweighted average for the OECD and NIC countries shown.

NOTE: National account subsidies are current subsidies as shown in national accounts and presumably reflect net losses on state enterprise, subsidies to research and development, direct export subsidies, direct agricultural price support programs and the like. They do not reflect, however, implicit subsidies effectuated through loan guarantees, tax and other fiscal incentives, and indirect subsidies, such as below-market prices of final products or interest on loan capital.

Table 7

Appendix table 1-3. National expenditures for performance of R & D as a percent of gross national product (GNP) by country: 1961-81

| Year | France | West Germany | Japan | United Kingdom | United States | U S S R. |
|--|--------|--------------|-------|----------------|---------------|----------|
| Ratio of R & D expenditures to Gross National Product ¹ | | | | | | |
| 1961 | 1.38 | NA | 1.39 | 2.46 | 2.73 | NA |
| 1962 | 1.46 | 1.25 | 1.47 | NA | 2.73 | 2.64 |
| 1963 | 1.55 | 1.41 | 1.44 | NA | 2.87 | 2.80 |
| 1964 | 1.81 | 1.57 | 1.48 | 2.29 | 2.86 | 2.87 |
| 1965 | 2.01 | 1.73 | 1.54 | NA | 2.89 | 2.85 |
| 1966 | 2.06 | 1.81 | 1.48 | 2.32 | 2.88 | 2.88 |
| 1967 | 2.13 | 1.97 | 1.53 | 2.30 | 2.89 | 2.91 |
| 1968 | 2.08 | 1.97 | 1.61 | 2.27 | 2.82 | NA |
| 1969 | 1.94 | 2.05 | 1.65 | 2.22 | 2.71 | 3.03 |
| 1970 | 1.91 | 2.18 | 1.79 | NA | 2.63 | 3.23 |
| 1971 | 1.90 | 2.38 | 1.84 | NA | 2.48 | 3.29 |
| 1972 | 1.86 | 2.33 | 1.85 | 2.06 | 2.40 | 3.58 |
| 1973 | 1.76 | 2.22 | 1.89 | NA | 2.32 | 3.68 |
| 1974 | 1.79 | 2.26 | 1.95 | NA | 2.29 | 3.64 |
| 1975 | 1.80 | 2.38 | 1.94 | 2.05 | 2.27 | 3.59 |
| 1976 | 1.77 | 2.29 | 1.83 | NA | 2.26 | 3.55 |
| 1977 | 1.76 | 2.32 | 1.82 | NA | 2.24 | 3.46 |
| 1978 | 1.76 | 2.37 | 1.83 | 2.11 | 2.23 | 3.47 |
| 1979 (prelim.) | NA | 2.36 | NA | NA | 2.25 | 3.44 |
| 1980 (est.) | NA | NA | NA | NA | 2.33 | 3.47 |
| 1981 (est.) | NA | NA | NA | NA | 2.37 | NA |

SOURCE: National Science Board, 1982: 210

the 1970s. Government policies typically have tried to convert an industrial base built upon import substitution to an internationally competitive, outward-oriented industry. This has required various instruments: state enterprises, performance requirements, aggressive bargaining with multinationals, and export incentives. The industrial targets tend to be mature industries in the developed countries, but also some high-technology industries.

The industrial policies of developing countries are quite different than those of developed countries because the NICs confront different barriers to entry. These countries confront sale and international marketing barriers (often in addition to technology barriers) and they do so with the handicap of a much smaller private sector. This suggests that state participation will be more direct and more targeted since industrial gaps are more obvious in countries with small industrial bases, and it may take the form of bargaining with foreign multinationals since the latter frequently control marketing channels and technology.

By their very nature, these policies are more likely to have direct spill-over effects on trade than are the indirect policies of the more advanced countries. Smaller domestic markets imply that in industries with high-scale barriers, such as autos, tractors, and large power generating equipment, international efficiency sooner or later requires exporting. Second, the mature industries tend to have slower growth so that new additions to capacity are more noticeable. Firms in the NICs in steel, petrochemicals, and some minerals were creating new capacity during the 1970s at a time when the major suppliers in the OECD countries were cutting back on capacity. Third, the skill gap is much narrower than the wage gap between the advanced countries and the newly industrializing countries for many countries. Thus, wage rates may accord production facilities in the developing countries a substantial cost and productivity advantage in many industries.

The new industrial policies then have spawned two quite different conflicts on trade and investment issues.

Intra-OECD conflict

The situation is particularly tense within the OECD countries over the issue of agricultural subsidies and industrial policies. Domestic price support programmes in some industrialized countries have become so extensive that governments within the EEC are now subsidizing exports at less than market values. The U.S. Government recently began subsidizing its own agricultural exports - unleashing the first retaliatory volley in a brushfire skirmish that could set off a much larger trade conflagration.

Industrial policies in mature basic industries and high-technology industries is a second volatile concern. The EEC and the United States narrowly avoided a new cycle of trade-contracting measures by negotiating a resolution to conflicts over trade in steel. The United States also negotiated a resolution to its conflict with Japan over automobile imports, but a new debate looms when the third year of restraint ends this year. The OECD countries are thus locked in a defensive struggle with no country being willing to follow near-term market signals and cede its industry to the other. More incipient, but perhaps of greater long-term consequence, is the emerging conflict over industrial policies targeting high-technology industries for future development. Japan, France, and other countries have selectively subsidized production and technological development in several industries which have become internationally competitive. This creates new concerns within the trade-affected countries, and there is no clear legal resolution within the framework of GATT.

North-South trade disputes

Tensions also permeate North-South trade and investment relations. These problems are even more destabilizing than intra-OECD conflicts because they are potentially more disruptive to employment patterns within the OECD and they are inextricably bound to the stability of the international financial system. As the newly industrializing countries move into the production and export of products formerly the sole province of the OECD countries, the low-

wage, but higher-skill, exports will increasingly compete with established, mature industries. These industries tend to have above-average wage levels in the OECD countries and tend to employ directly or indirectly a large segment of the work force. The potential for import penetration is both greater and more disruptive than ever before.

At the same time a protectionist response poses a double threat: Not only does curbing the exports of developing countries retard their capacity to buy the products of Northern factories, it also undermines their ability to continue the service on their international debt. A widespread default would bankrupt several banks and probably contract trade and world incomes in a manner not dissimilar to the 1930s.

Each set of parties to the North-South trade conflict has a different agenda for action.

The agenda of the OECD countries

Certain OECD countries have expressed deep concern over what they see as protectionist measures in high-technology products, trade in service, and requirements on investments. Several countries view the high-technology industries as key to their national development and have sought to promote them with production and research subsidies, preferential procurement in state-owned enterprises, and unilateral legislation concerning patents. These are the industries in which the developed countries have comparative advantage.

Regulation of trade in services is also of concern. Many developing countries have adopted restrictions on banking, finance, insurance, real estate, and engineering as well as transborder data flows and telecommunications. Governments in developing countries see the regulations as important policy levers to be used in controlling domestic macro-economic conditions, maintaining national security, or closing the technology gap. The developed countries, however, are increasingly reliant on their earnings from these services and fear their loss.

Regulation of foreign investment is another concern of certain OECD countries. They contend investment requirements that place conditions on foreign investors as a prerequisite for reaching the domestic markets inefficiently and unfairly distort trade patterns. These practices include requiring companies to export more, reach a specific level of local content, or reduce imports. Developing countries see these industrial policies as tools to promote national industrialization.

The agenda of the developing countries

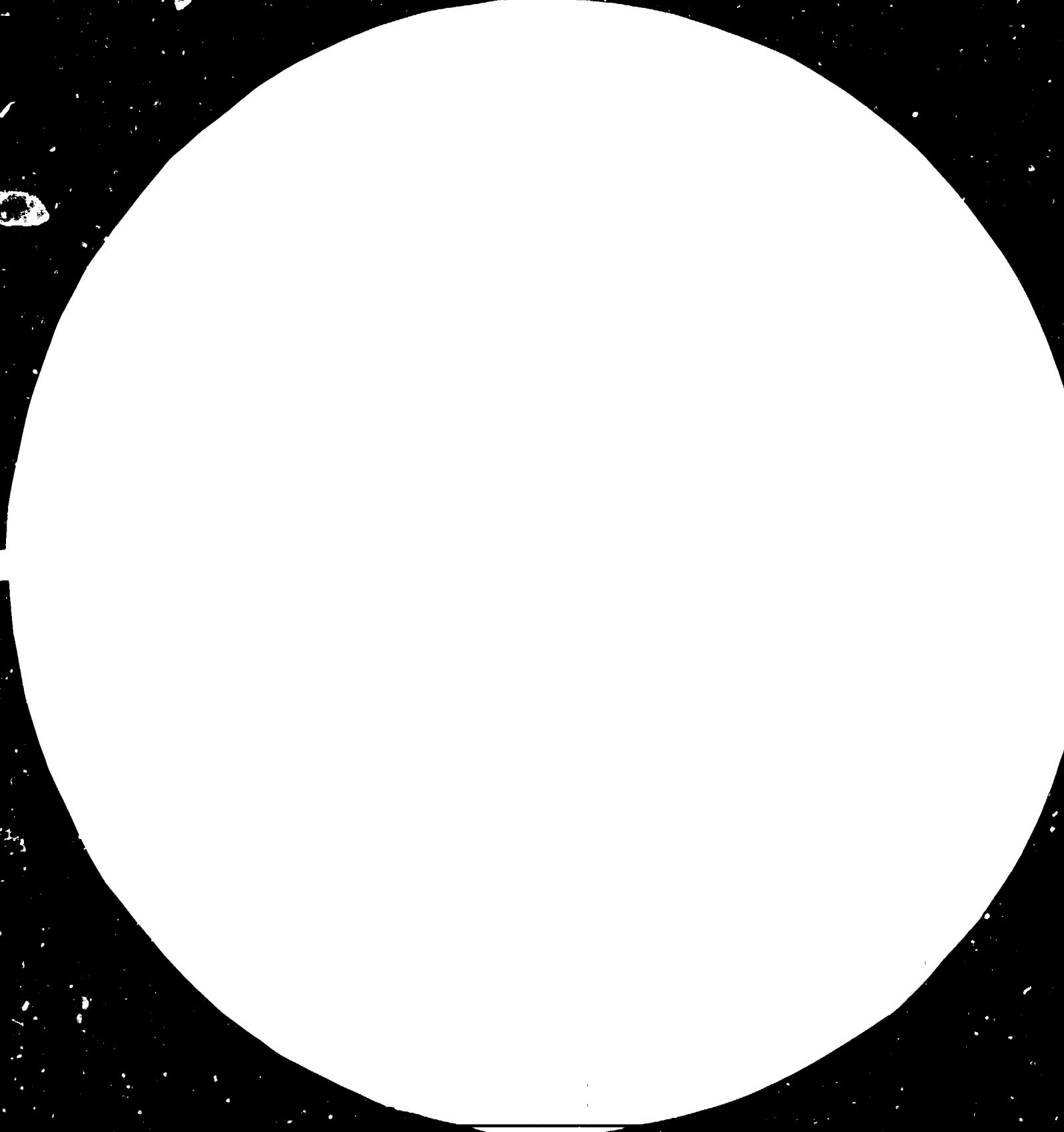
Developing countries feel particularly hurt by the new protectionist measures. Agricultural protection as well as export subsidies unfairly compete with the commodities of the developing countries. Quotas and other restrictive agreements limit the import of their sugar, beef, butter, oilseed, wheat, corn, rice, and tobacco. Orderly marketing arrangements in textiles and clothing are particularly harmful. The cascading tariff structure of the OECD countries impedes the processing of raw materials into higher valued products. A UNIDO study, for example, notes that developing countries could earn an extra \$44 billion per year if exports of seven of their raw materials could be taken up to the metal bar stage. If tariffs were removed on eight processed food commodities, the World Bank estimates that developing countries would increase their value-added in those products by 20 per cent.

Moreover, the developing countries feel they are unfairly victimized by unilateral applications of safeguards procedures. Bilateralism in trade has politicized commercial relations in a way that unfairly discriminates against those nations with the weakest bargaining position.

The common interest

These conflicts are real and likely to be enduring even if economic growth rates were to turn strongly positive and the international financial crisis were to be brought under control. But the fact that growth prospects

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are bleak and the final resolution of the financial crisis is in doubt makes the outlook for world commercial relations especially precarious. Nonetheless, all countries share a common interest in seeing that these problems do not degenerate into a wave of protection and retaliation that can only end in a deep contraction of trade, growth, and national income. Secondly, all countries share an interest in a system of multilateral rules. Without rules there can be no restraint on policies that harm other countries. The weakest countries will be hurt most in a system of purely politicized trade and investment.

Nonetheless, the system of multilateral rules established under the post-war GATT regime is under severe stress. GATT is ill-equipped to handle the needs and conflicts either within the OECD countries or between the OECD and developing countries. It is highly probable that a new system will be put in place in a far less coherent, comprehensive way than happened after the war. Developing countries, like the developed countries, have a direct stake in any evolving new system. For better or worse, the political and economic situation in the developed countries, especially the United States, offers the developing countries an opportunity to assume a new leadership role. Behind the opportunity is a danger: if the developing countries are not successful in establishing new equitable rules governing trade, they may find themselves increasingly excluded from the markets of the industrialized countries as the latter drift toward bilateral arrangements and sporadic protection.

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DEVELOPING COUNTRY DEBTS AND INDUSTRIAL GROWTH by Gerado Sicat*

INTRODUCTION

The subject of developing country debts ties more directly with overall economic strategy rather than with specific industrial development strategy, although the two strategies mutually interact. One of the causes of the growth of developing country debt is the expansion of their industries. Investments in industry have notably required external financing. It is not surprising then, to note that many countries that have raised their international debts are among the rapidly industrializing developing countries. In noteworthy cases, this rapid industrial growth could not have been possible without access to international finance to support the investments in industry.

But the reasons for the increase in developing country debts are much more varied and are the result of diverse economic developments. For instance, a country may incur huge debts even if these are only designed to finance persistent balance-of-payments deficits.

The rapid growth of international debt among developing countries is originated only during the 1970s. Several factors that need not be discussed at length were responsible for this: the rapid growth of some developing countries, mostly newly industrializing countries, which required access to international finance to meet their development strategy; the energy crisis, which necessitated, especially among the oil-importing developing countries, a higher trade gap that required financing, if their growth had to be sustained; and the build-up of petrodollars of the oil-exporting countries that had to be recycled - and as a result, the increase of international liquidity in the Euro-dollar market.

This paper focuses on the effects of recent adjustments in the international debt picture on developing countries especially in the 1980s. In particular, it touches on the impact this may have on the economic and industrial growth that is sought to be promoted in the developing countries. Some attention is given to the institutional developments affecting developing country external debts which affect their overall economic framework. At the end, the prospects of external debts in developing countries in the 1980s will be discussed.

* Mr. Gerado Sicat, Chairman of the Board, Philippine National Bank.

DEVELOPING COUNTRY COMMERCIAL DEBT:

Composition and Concentration

There is a large concentration of international debt to commercial banks by a few developing countries. At the end of June 1982, eight countries in Latin America owed \$ 278.3 billion; four countries in Asia \$ 6.1 billion; and seven countries in the Middle East and Africa owed \$ 46 billion. These twenty-one countries accounted for 86% of the total debt of developing countries from commercial banks. In addition, four of the Latin American countries owed \$ 237.4 billion, which constituted 59% of the total external debt to banks of the twenty-one developing countries.

There is no single major factor accounting for this build-up of debts. In most countries, the aggregate level of development spending accounted for a major element in this build-up of debts. Some of the middle-income and high-income developing countries had taken advantage of new investment opportunities while bracing for the high cost of energy. They financed these new investments with foreign borrowings when traditional sources of official development assistance and long-term loans failed to keep pace with their investment objectives. The lending also changed in general character. While often times there had been supplier's credit and project related assistance, the growth of international commercial lending (encouraged by the petrodollar surpluses recycled within the Eurodollar market) had shifted towards more quickly disbursing loans and had generally taken the form of balance of payments financing. Sometimes this meant borrowing to prop up the international reserves and, in addition, to financing the payments gap.

In some cases, these new investments were designed for ventures that were planned for export industries. In other cases, these were for investments considered significant for domestic development - either as infrastructure projects or as industrial projects.

Oil Shock

Two significant developments in the world economy affected the position of the debtor developing countries.

A first component of this was the second oil crisis (in 1979) when energy supply became very tight and oil prices rose to a new high; this was followed by an oil glut which forced oil prices to soften, and later to collapse. This oil-related event should be a welcome development to all oil-consuming nations, including the developing countries. But some of the heavy developing country debtors are primary oil exporters, and the down-turn in oil prices had dire consequences on their capacity to service their debts, since optimistic investment plans had caused the commitment of large amounts of their oil revenues to service imports and debts.

The second oil shock led to the tightening of liquidity in the Eurodollar market partly as a diminution of the already reduced petrodollar surpluses which are due to recycling within the financial system.

As some debt-servicing capacities were known to be in difficulty and some principal borrowers were in threat of default, the banks decided to play a cautious role in extending further credit. This led to an aggregate reduction of lending by banks to developing countries.

Recession, terms of trade loans, high interest rates

A second and related development is the prolonged international recession. The lack of demand for some exports induced depressed export prices and therefore caused severe terms of trade problems for many developing countries. Coupled with the high interest rates during 1980-1982, these developments required an inordinately high debt service level. In some cases, the debt-servicing capacity was impaired, hence causing critical domestic economic (and related social) problems.

The debts of industrializing developing countries

As stated earlier, the rapidly developing countries obtained a high proportion of the liquidity derived from the expansion of the commercial international debts for developing countries. This is partly an indication of the economic opportunities arising among the newly industrializing and other developing countries and the relative optimism that surrounded the assumption about their capacity to service their debts.

Access to international credit is dependent basically on two factors: first, the capacity to incur international indebtedness to finance existing development or other expenditures whether public or private in character, which is matched by corresponding credit worthiness, and second, the willingness to use external sources of funding as a matter of policy. Of course, the policy to borrow is a necessary condition for access to international credit. Credit worthiness, which is dependent on lenders' assessment, is the sufficient condition.

Many countries that are considered credit worthy have not turned to the international debt market because they have chosen a much more conservative (or prudent) debt policy. On the other hand, some countries do not qualify to obtain debts because of poor credit assessment and, therefore, there are few commercial banks offering them any financing deals. This is the case for many developing countries that are still largely recipients of official development assistance; whatever access they have to commercial debts is limited and, therefore, minimal. Among the least developed countries, this condition prevails, but it is also true in varying degrees among other developing countries.

Some countries that emerged with high levels of growth in the 1970s, however, have undertaken an aggressive access to international debt. Aggressive borrowing by some countries has led to a build-up of short-term debts in massive proportion to total debts, which has also gone up.

The relationship of a country to the international finance institution may be critical in ascertaining their graduation to the commercial debt market. In some instances, the relationship of a country with the IMF and the World Bank is the critical path towards passing the credit worthiness test. When these two institutions had given a country a relatively good credit bill-of-health, the commercial banks secure a higher sense of confidence in extending them additional loans.

This may not work out all the time since a country may entertain substantial disagreement with these institutions in terms of a policy strategy towards balance of payments gap financing. It does not always work out this way. If the lending banks behave competitively, some banks may not rely on signals emanating from IMF/World Bank policy. In such cases, some borrowing countries may be able to masterfully work their way by obtaining alternative financing, in a figurative sense, navigating along the dangerous waters.

The recent adverse development on the developing country debts need not affect all countries that are in the market for more loans to finance their development in the same way. Countries that have reached their debt servicing limits in the meantime would have to adjust their external debt position to something manageable within their immediate medium-term framework.

In the meantime, the lending banks proceed with much greater caution and selectivity in extending additional loans. The result is a slowdown in the access to loans of even the relatively conservative countries seeking an increase in their loan positions. This added degree of caution could be a healthy development, provided that economic growth resumes in the international setting, so that the developing countries seeking access to loan funds can continue to finance their development programmes. But those countries with a marked degree of capability to service debts should be able to continue to have access to the loan market.

Interdependence of various components of the debt problem

In examining what happens to the market for loans in the future, it is important to examine what is likely to happen to the interacting elements of the commercial debt market for countries. There are four major elements in this interdependence:

- the borrowing countries;
- the international financial institutions;
- the commercial banks; and
- the developed countries.

The recent events have made their actions interdependent, so that what one set does affects the others.

Borrowing countries

An immediate impact on some of the borrowing countries is the need for some retrenchment in their aggregate spending. This is a standard prescription to put their external debt servicing capacity within reasonable range of their export capacity. A critical component in this adjustment is a restructuring of their debt, to bring the debt maturities in line with the realities of their balance-of-payments position.

Careful recognition must be given to the fact that drastic short-term adjustments can cause domestic instabilities which are not confined to the economic effects. Social and political implications are quite sensitive and, therefore, most governments would attempt to avoid them. Retrenchments cannot be sudden, because what may be gained in economic effects may be offset by other developments. In this case, a longer-term adjustment is preferable to drastic short-term measures designed to stop balance-of-payments pressures. To what extent this is done naturally depends on other factors, such as an ability to get continued support from the commercial market and the international financial institutions.

Careful domestic economic management requires a prudent aligning of international debt maturities. An attempt to prevent a bunching of debt repayments over short-run periods of time requires appropriate screening of debts at the point they are incurred. Once this basic discipline fails to work and the debts of a country are basically short-term, the result would be inevitably a situation of short-term borrowings to roll-over maturing debt.

These are the situations that inevitably lead to debt restructuring. In the case of country borrowers, debt restructuring requires the co-operation of at least the major creditors - the commercial banks and the financial institutions - and, if the magnitude is large, as the recent cases have been, the bridging loans of the central banks of the most affected lending industrial countries.

The borrowing developing countries are, however, interdependent. The countries that have followed a prudent and conservative policy of external borrowing are affected by general developments facing a very nervous lending market. To the extent that the 1982 debt crisis had contracted their access to international liquidity, their economic programmes may have been affected adversely. This is the result of, among others, a destabilizing effect of a debt servicing problem for one country spreading to others once confidence is shaken. In fact, this was what happened when upon the advent of the 1982 debt crisis, the banks reduced their commitments to developing countries. Some countries that would normally still get good credit could obtain this only at higher cost.

The nervousness and shrinkage of funds could be a temporary phenomenon. Later on, the way could be paved for a well-ordered market for indebtedness of the credit worthy developing countries. The adjustments that the countries which faced severe debt crises recently, include a reduction of domestic spending and a restructuring of their existing loans. It is said that it takes some three to four years for some of these countries to re-establish their credit worthiness, assuming their adjustment programmes work out.

In the meantime, the credit worthy developing countries in fact could face a receptive market and therefore need not suffer from prolonged illiquidity for their international needs. In the aftermath of the debt crisis in which, it is hoped, all sectors concerned come out wiser and chastened, there could arise a better setting for international debt.

In short, it is possible to take an optimistic tone about the future. Some developing countries that are growing well via the route of industrialization and trade will continue to flourish, provided their external balance is managed well. Sound management will have to be spelled out, based on self-imposed criteria and even on certain guidelines that may be developed internationally in order to provide some collective safeguard against unstable developments.

For a country, this implies a prudent management of their external debt policy. Such management of the external debt includes the framework of a well-structured external debt, maturity structure of which means that there ought to be a balanced mix of short, medium and long-term loans. Later, below, these components of external debt discipline will be discussed further.

The international financial institutions

One major result of the debt crisis is the greater role now demanded of the international financial institutions - the International Monetary Fund and the World Bank. In addition, the Bank of International Settlements has helped in providing bridging loans to the problem borrowers while efforts to solve the crisis were being undertaken. This is the result of the combined actions of the lenders and the pressures from the lenders' governments upon these international institutions to act so as to insure conditions for continued access of the borrowers to international funds. These institutions carry the leverage to institute fiscal, monetary and balance-of-payments adjustments programmes since member governments turn to them to solve the balance-of-payments and structural economic problems.

In the aftermath of the debt crisis of 1982, the importance of these institutions was demonstrated. This enhanced their respective roles. The commercial banks made themselves more dependent on the discipline that the IMF could work out with member countries facing serious external debt problems. The conditionality related to IMF standby arrangements became a major input to commercial banks' willingness to accept restructuring of their sovereign loans.

There is an innate danger that the IMF outlook, which essentially means short-term adjustments, can provide measures that are severe from the developing country viewpoint. As stated earlier, severe adjustments can have more than just their implications on correcting the balance-of-payments deficit. It is useful to take a longer-term outlook and to closely monitor the cause of the servicing problems. In this case, the IMF's short-term outlook may be tempered by an essentially longer-term perspective that may be derived from the World Bank.

The World Bank's role can, therefore, be significant in connection with the support of middle and higher-income developing countries with loans of longer maturity. In recent years, the effort of the World Bank to graduate these countries from official development assistance may have been prematurely fast. Pressure upon the Bank to provide more loan support to these countries could assist in restructuring the loan composition of borrowing developing countries. This could pave the way for longer maturities and perhaps reduce the credit risks associated with the country in the commercial market.

To do this effectively, however, raises the question of the increase in the capital subscription to the World Bank. This issue has proceeded at a slow pace from the viewpoint of developing countries because of the industrial countries that are opposed to this, or sought a lower level of increase.

The speed with which the resources of the IMF quotas were recently increased, together with an increase of the General Arrangements to Borrow (GAB) in February 1983, demonstrates how a crisis can catalyze action within the international community. While the increase in

quotas does not raise it to a level that presently satisfies the developing countries^{1/} these increases in resources give the IMF additional fresh funds to respond to the problems posed by the debt issue.

To the extent that these fresh funds are applied to the liquidity requirements of many developing country borrowers rather than to the huge needs of the countries with crisis requirements, there will be an increase in the lendings available to support developing countries requirements. The system has, however, provided inadequate support so far. The recent moves have increased the resources ahead of the scheduled quota increases. The quota increases of 50% in 1959 and 1980.

While from the viewpoint of the Third World, the recent increase in IMF resources are still inadequate, the quota increases in resources that have been agreed upon are bigger than what was originally proposed. The sudden exigencies of recent debt crisis certainly had a lot to do with accelerating this process.

Commercial banks

The commercial banks are in finance because of the profits earned from the service of providing debt. Their continued support of developing country requirements is contingent naturally on credit worthiness, but they cannot stop the flow of credit drastically when the borrowers encounter servicing difficulties, even among highly indebted countries, without endangering the whole international system of loans on which their existence depends.

As a precautionary measure, the commercial banks decided to co-operate among themselves and, with the co-operation of the IMF and other international institutions, a set of emergency measures to continue to provide credit under a formula in which they provide additional loans to problem borrowers according to a quota allocation system based on their existing exposure to the country concerned. As a result, additional

^{1/} The increase of the IMF quotas is from SDR 61.03 billion to SDR 90 billion is short of the doubling that many proponents, including the Brandt Commission, have been suggesting. Together with the GAB, the IMF resources are "effectively" doubled, but the question is that a doubling of the quotas would have a larger effect on resources.

funds had been arranged to avoid default and ultimate crisis. In doing so, however, a cartelized atmosphere, instead of competition, has prevailed in servicing these loans. Clearly, this co-operation among the banks may only be temporary if the assumptions of viability of the borrowers' case are not warranted, in which case some banks could withdraw from the agreements.

These co-operative ("cartelized") actions are also conditioned on a stronger role played by the international institutions and on the firm backing of the lenders' governments.

Developed country actions: lenders' governments

Most important in this development was the reliance upon the collective will of the lending banks' respective governments - the industrial countries - to provide the ultimate security. This is in the form of supporting a lender of a last resort facility through the efforts of national central banks to intervene with bridging loans and provide greater confidence in the system. The actions on the increase of IMF quotas, the orchestrated easing of monetary policy, and the greater concern now for economic recovery as against the policy of containing inflation - all of these are indications of a changed mood that may have been ignited by the developing country debt crisis.

As a result, perhaps this is the opportune time to look into the maintenance of an international trading system. There is need for the industrial countries to revise their economic strategies of national management to emphasize economic growth and stimulate trade. The borrowing capacities of developing countries grow with their economies, and their debt-servicing capacity depends on their ability to sell their goods to the industrial markets.

Prospects of developing country debts in the 1980s

What then, can be said about the rest of this decade in respect to the prospects of increased liquidity for developing countries through the international financial system? With the hindsight of the debt crisis

of recent months, a lot of lessons have been learned which are likely to have a significant effect on future developments.

The steps undertaken by affected sectors, which are all inter-dependent, are likely to crystalize in the form of improved co-ordination and regulation. Whether on a voluntary basis or as a result of conditionality in borrowings from the IMF and other international institutions, some restraint on aggregate spending that leads to excessive loan demands of some developing countries will likely materialize.

Reliance on voluntary mechanisms by borrowing countries could be a measure that some developing countries may wish to pursue. The measures the Philippines adopted in 1970 prepared it for greater restraint during the succeeding years of build-up in its foreign loans. The condition that any time the debt-service payments should not exceed 20% of the foreign exchange rates of the preceeding year served as a mechanism not only to restrain further borrowing but to enforce on the lending community offers of foreign loans with longer maturity profile.

The commercial banks, individually or in concert, will work out efforts to refine appropriate credit ceilings by country, taking into account their evaluation criteria. It is also likely that there will be greater cartelization of the effort to project for all banks country ceilings for some countries. If the developing countries are undertaking self-restraint by adhering to their own limits for foreign debts, it is likely that their efforts will be matched by the credit ceiling levels utilized by the lending institutions.

Voluntary efforts are only workable when everyone uses relatively similar decision rules. A regulatory atmosphere could emerge, if the IMF undertakes to impose guidelines on foreign debts. Indeed, this is a direction that the lending institutions and their governments are suggesting and as a result, the IMF's hand is likely to be strengthened. Of course, the IMF already undertakes this when it assists countries in balance-of-payments distress but a more explicit set of guidelines which could be binding or at least generally known to the financial markets could be worked out.

Together with these are institutional measures that should be undertaken to prevent the sudden contraction of loans to borrowers to prevent a bank "run" on borrowers, whose credit position is temporarily impaired. This requires a lender-of-last-resort facility that is not yet institutionalized, although the Bank for International Settlements had acted to do this on an ad hoc basis and some developed country authorities (like the US Treasury and European central banks) have lent bridging funds to distressed borrowers.

Ultimately, developing country external debt capacity depends on the way the countries concerned are able to stimulate their export growth and internalize economic development. This in turn depends on how they take advantage of the conditions for trade growth within the world economy.

Aside from domestic development strategies, the major factor then depends on the nature of the world economic recovery for the rest of the 1980s. If indeed, the rest of this decade is one of slow growth, then this sets a lower limit on the growth of many developing countries that are trading with the industrial economies.

But there will always be some developing countries that will, as a group or alone, require much more access to external debt, in spite of this climate of greater regulation, whether internationally or through voluntary self-restraints. This is because there will be high-performing developing countries that would be able to take advantage of growth opportunities more than others, whether this is due to international, regional, or national developments. As a result, the concentration of access to external debt by relatively few developing countries is likely to continue, although it may not be to the same extent as the conditions found in 1982. Therefore, relatively more developing countries will find access to external debt if they so wish. But with greater discipline exercised on spending programmes, there will be a greater spread of external liquidity that can be availed of by other developing countries.

A major factor that would help reduce developing country demand for external debt may however be considered. The major source of the growth of the Eurodollar market in the 1970s may no longer be around for the 1980s - the petrodollars of the OPEC and oil producing countries, as the price of oil continues to remain steady and as the oil-exporters continue with their high spendings for development. The contraction of the petrodollar surplus means that there may no longer be a major resource that has to be recycled. In fact, many oil-producing countries are now in balance-of-payments deficits and are in fact in danger of having debt crises of their own.

On the other hand, the conditions for large requirements for borrowings may not exist, especially among developing countries that benefit from the down-turn in energy prices, precisely on account of reduced energy bills. There may also be factors that would favourably improve the conditions for economic recovery on a world scale. The improvements in the balance-of-payments positions of these countries will be helped not only by oil prices but also by an improvement in their terms of trade because of a recovery in their commodity markets.

THIRD WORLD INDUSTRIALIZATION: INDUSTRIAL STRATEGIES AND POLICIES IN THE 1980s
AND 1990s by Ajit Singh*

INTRODUCTION

The brief for this paper is to provide an 'evaluation of (Third World) industrial development in terms of establishing a socially and economically viable industrial structure; and (to consider) adjustment and industrialization in the 1980s and 1990s'. Taken literally, this involves a discussion of the past, present and future of Third World industry, which could easily be the subject matter of several learned volumes. It shall, therefore, necessarily be selective and very brief and shall not be able to do justice to the issues involved.

In 1975 the Second General Conference of the United Nations Industrial Development Organization issued its well known Lima Declaration and Plan of Action on Industrial Development and Organization. This was in effect a call for industrial revolutions to be brought about in Third World countries, however, late in the day, and thereby for a fundamental change in the world economic order. As Professor Arthur Lewis (1975) has reminded us, the present unequal structure of the world economy - its division into two groups of countries, those which are largely producers and exporters of manufactures and those which are largely producers and exporters of primary products - is a comparatively recent phenomenon in world history, essentially one of the last century or so. The Lima Declaration, noting that the developing countries constituted 70% of the world population and generated less than 7% of industrial production, called for accelerated industrial development and for the developing countries' share of world industrial production to rise to at least 25% by the year 2000.

Meeting in Lima in the midst of the most serious crisis faced by the world economy since the 1930s, it is particularly fitting that we should take stock, evaluate the course of Third World industrial development and ask how the aspirations of 1975 may be fulfilled. The central question to be addressed in this paper is: how, if at all, can third world countries continue with their industrial revolutions in the context of a possible long-term deceleration in world economic growth? What are the appropriate economic policies for this purpose, in both the short- and long-terms, in the changed circumstances of the world economy?

* Mr. Ajit Singh, Fellow and Director of Studies in Economics,
Queen's College, Cambridge University, England.

THIRD WORLD INDUSTRIALIZATION IN RETROSPECT: STRENGTHS AND WEAKNESSES

A recent GATT study (GATT 1983) on the world economy estimates that in 1982 GDP in non-oil developing countries increased by less than one per cent. This represents for these economies the lowest annual growth rate in the post-war period and, on a per capita basis, an even greater decline than in 1981. For many well known reasons, the economic outlook for the developing countries in 1982 is worse still.

Nevertheless, if one takes a longer view, the long-term record of Third World industrial development during the last two decades is far from depressing. Despite its many weaknesses, Third World industry has very important achievements to its credit. These strengths - as well as weaknesses - are summarized and reviewed below.

Strengths

The magnitude of industrial development

Table 1 brings out in a summary form the major long-term structural changes which took place in the world industrial economy between 1960 and 1980. During these two decades, the third world's share of world manufacturing production, though still small, increased significantly: from 6.9% to 10.2%, a rise of nearly 50%. Along with the developing nations, the socialist countries also recorded a large increase in their share of world manufacturing - again about a 50% increase (from 17.1 to 26.6%).

The statistics in Table 1 also enable us to compare the industrialization experience of the 1960s with that of the 1970s. It is important to observe that, whereas there was a trend decline in world industrial growth during the 1970s compared with the 1960s, the developing countries actually recorded a trend increase in their pace of industrialization over this period. The rate of industrial growth in developed market economy countries showed a sharp drop, from nearly 6% in the 1960s to less than 4% in the ensuing decade; it also fell,

Table 1

Structural changes in the world industrial economy: 1960-80, manufacturing output (value added) for major economic groups

| | 1960 | 1970 | 1980 |
|--|-------|-------|-------|
| <u>Value added</u> | | | |
| (Billions US dollars at 1975 prices) | | | |
| Developing countries | 49 | 101 | 218 |
| DMEC ^a | 533 | 942 | 1,358 |
| Socialist countries | 119 | 283 | 572 |
| Total | 701 | 1,326 | 2,150 |
| <u>Contribution to GDP (per cent)</u> | | | |
| Developing countries | 13.4 | 15.7 | 19.7 |
| DMEC ^a | 24.3 | 26.5 | 27.8 |
| Socialist countries | 24.6 | 30.7 | 36.7 |
| Total | 23.1 | 25.9 | 28.4 |
| <u>Share in world manufacturing output</u> | | | |
| (per cent) | | | |
| Developing countries | 6.9 | 7.6 | 10.2 |
| DMEC ^a | 76.0 | 71.1 | 63.2 |
| Socialist countries | 17.1 | 21.3 | 26.6 |
| Total | 100.0 | 100.0 | 100.0 |
| <u>Average annual growth (per cent)</u> | | | |
| Developing countries | | 7.6 | 8.0 |
| DMEC ^a | | 5.9 | 3.7 |
| Socialist countries | | 9.0 | 7.3 |
| Total | | 6.6 | 4.9 |

Source: UNCTAD, 1981.

a/ Developed market-economy countries.

though not as much, in the socialist countries. In contrast, in the Third World countries industrial growth was slightly faster in the 1970s than before. If the experience of the 1970s were to be repeated over the next two decades (i.e. if Third World industrial development were twice as fast as that of the rich countries), the developing nations would easily be able to meet the Lima Target of a 25% share of world industrial production by the year 2000. (Singh: 1981, UNIDO: 1979).

The quality of Third World industry

Rapid industrial development has led to very important changes in the economic structure of Third World countries. Table 1 shows, the contribution of manufacturing to GDP in these economies increased from an average of 13.4% in 1960 to nearly 20% two decades later.

Disaggregated data for the individual industry branches indicate that industrial development in the Third World has also been widely based. The developing countries' share in world production has risen in most industrial groups. Over the period 1960 to 1976, the Third World's share in world output of heavy industry increased from 4.9% to 6.2%, and of the light industries from 11.6% to 12.4%. Table 2 presents data for the 1970s. It shows that with the sole exception of petroleum refineries, the developing countries increased their share of every industrial group.

Of course, qualitatively, the most significant feature of Third World industrial development during the last two decades has been the widening and deepening of the industrial revolution in a small group of developing economies - the so-called semi-industrial or newly industrializing countries (NICs). The NICs have been particularly successful in creating their own industrial capacities and capabilities. They are emerging as important exporters of manufactures, and are now providing actual and potential competition for the older industrial nations, not just in labour-intensive products, but also in a range of capital-intensive industries like steel and shipbuilding. Consequently, as the statistics produced by the Secretariat show, the Third World's share in world exports of manufactures nearly doubled during the 1970s: from 5

Table 7

Share in world manufacturing value added, by branch of
industry and economic grouping^a
 (percentage)

| Branch | ISIC | Developed market economies | | | Centrally planned economies | | | Developing countries | | |
|--|----------------|----------------------------|------|-------------------|-----------------------------|------|-------------------|----------------------|------|------------------|
| | | 1970 | 1975 | 1978 | 1970 | 1975 | 1978 | 1970 | 1975 | 1978 |
| Food products | 311/2 | 65.2 | 62.8 | 62.7 | 22.8 | 25.0 | 24.3 | 12.0 | 12.2 | 13.0 |
| Beverages | 313 | 69.2 | 65.1 | 64.2 | 19.2 | 20.7 | 20.5 | 11.6 | 13.2 | 15.3 |
| Tobacco | 314 | 61.0 | 57.7 | 56.4 | 13.3 | 14.7 | 14.6 | 25.7 | 27.6 | 29.0 |
| Textiles | 321 | 61.4 | 55.4 | 54.3 | 23.8 | 27.8 | 28.8 | 14.8 | 16.8 | 16.9 |
| Wood and cork products | 331 | 74.2 | 70.3 | 70.9 | 16.7 | 20.2 | 19.3 | 9.1 | 9.5 | 9.8 |
| Industrial chemicals | 351 | 76.4 | 68.8 | 69.8 | 18.6 | 24.1 | 23.1 | 5.0 | 7.1 | 7.1 |
| Other chemicals | 352 | 83.9 | 79.5 | 79.8 | 5.2 | 6.8 | 6.4 | 10.9 | 13.7 | 13.8 |
| Petroleum refineries | 353 | 54.7 | 53.5 | 50.2 | 9.2 | 14.2 | 14.8 | 36.1 | 32.3 | 35.0 |
| Miscellaneous products of petroleum and coal | 354 | 52.7 | 48.1 | 46.4 | 35.7 | 38.1 | 33.1 | 11.6 | 13.8 | 15.5 |
| Pottery, china and earthenware | 361 | 58.7 | 50.1 | 48.3 | 29.8 | 37.2 | 38.8 | 11.5 | 12.7 | 12.9 |
| Glass | 362 | 75.9 | 68.1 | 67.4 | 17.1 | 22.8 | 23.7 | 7.0 | 9.1 | 8.9 |
| Other non-metallic mineral products | 369 | 64.6 | 57.7 | 58.1 | 27.8 | 32.8 | 31.6 | 7.6 | 9.5 | 10.3 |
| Engineering goods | 381/2 383/4 | 67.1 | .. | 56.0 ^b | 29.4 | .. | 39.3 ^b | 3.5 | .. | 4.6 ^b |

Source: UNIDO, 1981.

a - Based on data in 1975 United States dollars.

b - 1977.

The weaknesses of Third World industrial development

Against the above generally favourable long-term record, it is necessary to set serious weaknesses which have emerged in Third World industrial development, some of which today cast doubt on the further progress of Third World industry.

The international distribution of industrial production

The data presented in Tables 1 and 2 treat all developing countries as one group: there are inevitably very great differences in performance and industrial potential between these countries. More specifically, UNIDO (1979) has shown that only 10 countries accounted for nearly three-quarters of the total growth of manufacturing production in the Third World between 1966 and 1975. These countries, in descending order of their contribution to the total increase in manufacturing value added in all developing countries during this period, are Brazil, Mexico, Argentina, Republic of Korea, India, Turkey, Iran, Indonesia, Hong Kong and Thailand. It would, however, be wrong to infer from this that Third World industrialization has been only a limited process, restricted to a small group of unrepresentative developing economies. It should be remembered that in 1975 the ten countries listed above accounted for 60% of the total population of the developing countries (included in the 'Third World' or 'developing countries' aggregate in the discussion of this section).^{1/}

The national distribution of the fruits of industrial development

Many economists argue that, although Third World countries have achieved impressive results in industrial development, the distribution of gains has been highly unequal. It is suggested that only a small elite benefits from the immense resources devoted to the industrialization drives of the Third World economies, while the basic material needs of the masses are overlooked.

^{1/} China is not included among the developing countries in the statistics presented in Tables 1 and 2. In view of the rapid industrialization which has taken place in China, its inclusion would make the point of this paragraph even stronger.

These are controversial but extremely important arguments, on which there is a large literature; they will be considered later.

Debt, 'dependence' and development

The most important weakness of Third World industrial development is that a small but significant part of it has been financed by foreign borrowing, particularly during the 1970s. Much of this debt carries variable interest rates. The introduction of highly restrictive monetary base control policies by the Federal Reserve System in the U.S. in 1979, and the consequent quantum jump in nominal and real interest rates, have led to an enormous accumulation of debt (see Table 3), which the Third World countries are unable to service in the current depressed state of the world economy. The depression has been directly responsible for the extremely large adverse movement in the terms of trade against the non-oil producing developing economies, and for commodity prices being at their lowest level in real terms since the last Great Depression of the 1930s.

The above combination of events has brought industrial growth to a standstill in many Third World countries, including the most industrially advanced of the developing economies, such as Brazil and Mexico. There is a crucial difference between the effects of a balance of payments constraints on industry in the advanced countries and in the developing countries. In the former, the adverse impact comes essentially from the demand side. The balance of payments constraint obliges the Government to reduce economic activity by fiscal or monetary policy; reduced demand results in lower industrial production and under-utilization of industrial capacity. However, in most developing countries there is a 'supply side' effect which is often more significant than the effects of reduced demand. Industrial production in Third World countries is highly dependent on complementary inputs from abroad. A balance of payments constraint, by reducing imports, directly lowers production. Despite the fast industrial development of countries like Mexico or Brazil, their dependence on imports in this sense has increased rather than diminished over time. The dependence of domestic production on imports of goods and services (including technology)

raises extremely important immediate as well as long-term policy questions for Third World countries.^{1/}

Other features of Third World industrial development

Even in a brief assessment of the long-term record of Third World industrialization, it is useful to remind ourselves of two further aspects. First, as Arthur Lewis (1980) notes, the rate of industrial and economic progress achieved by the Third World economies during the last two decades was as recently as the 1950s regraded by many economists as inconceivable:

'In 1950...these people were sceptical of the capacity of less developed economies to grow rapidly because of inappropriate attitudes, institutions or climates. The sun was thought to be too hot for hard work, or the people too spendthrift, the Government too corrupt, the fertility rate too high, the religion too other-wordly, and so on.'

Secondly, and equally significantly, let us recall that until not too long ago there was a serious and highly influential Marxist literature which argued that only a socialist revolution in developing countries could bring about their industrialization. Basing his argument on the experience of Asia and Latin America, Paul Baran (1957), the leading Marxist theorist of development, suggested that the bourgeoisie in the developing countries, in view of its historical evolution, could not perform the same tasks of economic and social progress as it had done in the West. He maintained that the domination of society by an alliance between local elites and international capital ensured that the economic surplus would not be used to promote accumulation: the surplus would instead either be wasted by the domestic bourgeoisie or invested abroad rather than at home.^{2/}

Although Baran made major contributions to our understanding of the problems of economic development in many areas, this particular analysis

^{1/} These issues are examined below.

^{2/} See further MacEwan (1983).

has not been borne out by subsequent history. The industrially successful Third World countries during the last two decades have included not only socialist countries like China, but many large and small non-socialist countries, e.g. Brazil, India, Republic of Korea, Singapore and Hong Kong. More importantly, the historical record indicates that among the non-socialist countries, successful industrialization has been carried out under a variety of different economic regimes. A country like Brazil has relied on a relatively open trading regime and foreign investment by multinationals and achieved rapid industrial progress. On the other hand, India has followed the path of strict control on imports and foreign capital in building up its industrial base, which includes the most sophisticated capital goods industry in the Third World. (Lall, 1980). To be sure, the specific economic policies followed by a country affect the pace and the content of industrial development; more importantly, they have a significant bearing on how the fruits of industrial progress are distributed. But the essential point is that Third World countries with widely varying economic and political regimes have been successful in creating an industrial base - 'successful' in the sense of having a large and diversified manufacturing sector and possessing a trained labour force and the necessary skills for future industrial development to be self-sustaining.^{1/}

INDUSTRIALIZATION AND ECONOMIC AND SOCIAL OBJECTIVES

There is a very large technical economic literature on the relationship between industrialization, distribution of income, employment creation and meeting the minimum basic material needs (e.g. food, clothing, shelter etc.) of the people. In the popular conception, the basic needs of the poor majority of the Third World are best met by rural development and increased agricultural production, rather than by promotion of industry. It is also suggested that, since industry tends to be capital-intensive, its development hampers growth

^{1/} To be fair, MacEwan (1983) and Evans (1979) have recently modified the Marxist analysis to argue that, although industrialization in the capitalist periphery is possible, it may not be self-sustaining, since it is 'dependent capitalist development', based on debt and operations of foreign multinationals and also because its gains are too unequally distributed. It remains to be seen whether this modified thesis is borne out by events.

of employment and hence the achievement of basic needs.

However, the relationship between basic needs and industrialization is a complex one, and a deeper analysis shows that these popular anti-industry conceptions are seriously misleading.^{1/} The main reason for this is that the satisfaction of basic needs on a sustainable basis requires economic growth in the sense of the development of the economy's productive potential. Although at any time a redistribution of the national output may enable a society to better meet the basic needs of its people, such needs can only be met on a long-term basis if there is expansion of the national economy. Economic growth generates increased employment and household incomes; equally importantly it increases government revenues, which may be spent on health, education, water supply and other basic needs of the people.

It has been argued that economic growth should not be an essential objective for the developing countries, since it does not necessarily enable a nation to achieve 'economic development'. That is certainly true, but it would be a mistake to assume that somehow one can obtain 'economic development' without 'economic growth'. Precisely because the benefits of economic growth trickle down automatically through the market to the disadvantaged groups in society, the state has to intervene on their behalf through appropriate fiscal and other policies. However, its ability to do so depends on the growth of public revenues, which in turn is a function of the expansion of the economy, for otherwise the result will only be inflation.

There is a large empirical literature which indicates a close relationship between long-run economic growth and industrialization. This evidence is supported by a systematic body of economic thought, which not only explains why manufacturing industry should expand faster than the economy as a whole during the course of economic development, but would also assign strategic causal significance to industry in raising the overall rate of growth of productivity in the economy. This analysis of the growth process also suggests that, within manufacturing, capital goods industries need to grow

^{1/} For a further discussion of these issues, see Singh (1979).

at a faster rate than consumer goods industries as the economy expands.^{1/}

It is sometimes suggested that agricultural development is a pre-condition for industrialization, since agriculture must in some sense provide a 'surplus' for industrial expansion. However, both in a priori terms and in the light of the results of recent empirical research on the Soviet Union (Ellman), China and Japan (Ishikawa), which casts doubt on these surplus theories, it does not seem to be a helpful approach to the relationship between agriculture and industrial development. The two are best regarded as being linked through a chain of cumulative and circular causation. The growth of agricultural productivity requires modern industrial inputs; at the same time it makes possible higher farm incomes and greater demand for industrial products. Such a perspective is particularly important for a discussion of economic policy in developing economies.

Turning to the relationship between industrial development and employment, it is necessary to examine both the direct and indirect effects of industrialization on employment. It is also essential to consider this question in terms of the long-term and sustainable creation of productive employment opportunities. As far as the direct effects are concerned, empirical evidence shows that employment elasticity of manufacturing industry in developing countries is on average about 0.7%, i.e., a one per cent increase in manufacturing production is associated on average with an 0.7% increase in employment. Thus over the period 1960-1975, industry in the Third World grew at a rate over 7% per annum, while industrial employment expanded by nearly 5% per annum. (UNIDO: 1979). This is considerably greater than the rate of growth of population in these countries, although it is somewhat lower than the rate of urbanization.

The more significant point is that industry also creates employment indirectly, by helping to increase production in other sectors of the economy, e.g. agriculture and services. In fact in agriculture, where there is normally disguised unemployment, the elasticity of employment with respect to output

^{1/} For a fuller discussion of these issues and the references to the literature, the reader is referred to Singh (1981).

tends to be quite small, often near zero. The values of these elasticities are much higher in service industries; however, a sustainable growth of output and employment in many such industries, e.g. domestic transport and distribution, depends crucially on the expansion of primary and secondary sectors. As Neild (1979) rightly points out, 'many services are best viewed as a social charge on the production of goods rather than an alternative form of wealth creation. A nation cannot live by producing only health services except to the extent that such services enhance the production of industrial and agricultural products or to the very limited extent that they can be exported.' It is therefore difficult to see how sufficient productive employment opportunities in a developing economy can be created on a sustainable basis by means other than rapid industrialization.

As far as economic policy is concerned, the relevant conclusions of the foregoing analysis may be summarized in the following two propositions:

- The basic material needs of the poor of the Third World can only be met on a long-term basis by a continuing expansion of their economies; and
- At the level of per capita GDP of a typical Third World economy, a one per cent increase in GDP normally entails a 1.5% increase in industrial production.

The international Labour Organization (the ILO), which first put forward the concept of basic needs, has estimated (ILO: 1976) that if the minimal needs of the poorest 20% of the Third World population are to be satisfied by the end of the century, national incomes in the Third World countries will need to grow on average at a rate of 7 to 8% per annum. This calculation allowed for the feasible redistribution of incomes within these countries. If such a goal for the required rate of economic growth to remove absolute poverty were accepted, it would imply an expansion of manufacturing industry in the Third World by over 10% per annum. By past standards (see Table 1), this suggests very fast industrialization of these economies.

THE WORLD ECONOMY IN THE 1980s AND 1990s AND ITS IMPLICATIONS FOR THIRD
WORLD INDUSTRIALIZATION

Many economists would accept, the world economy today may be on the verge of another Great Depression. The rates of unemployment in countries like the U.S. are at their highest level since the last Depression. In the OECD countries, there are nearly 30 million people out of work. Manufacturing production in the U.K. has fallen by 20% since 1979 and the rate of unemployment there is now close to that recorded during the worst years of the 1930s Depression, and rising.

I should, however, like to call attention to two points with respect to the current world slump. First, under the present trade and payments regime, its main cause is not protection but what may be called a system of beggar-my-neighbour competitive deflation. Even without creating any trade barriers, when each country attempts to achieve a balance on its payments by deflating its economy, it pushes other countries into deficit and the net outcome is a vicious circle of deflation. This is what the world economy is suffering from today, rather than beggar-my-neighbour protection.

This distinction is very important. The present depression of the world economy is far less a consequence of trade protection than of free capital movements (particularly short-term capital flows across the exchanges) and highly restrictive monetary policies in countries like the U.S. and the U.K. The result is that, for example, even an intrinsically strong industrial country like France,^{1/} with a Government committed to high levels of employment and economic growth, is unable to achieve a growth rate of even 2% without running into balance of payments difficulties, exchange rate instability, capital flight, etc. The financial markets have recently forced France into a sharp deflation.

Secondly, in considering slumps in capitalist economies, it is essential to take a long view. As Arthur Lewis (1978) notes, one group of economists

^{1/} France had the highest rate of industrial growth of the EEC countries over the last two decades.

'expect every recession to be over in eighteen months. The unfortunate consequence of this over-optimism is that measures to end the recession are underplayed. The other group are the children of the Apocalypse. Starting with Marx in 1848, every time there has been a recession critics have predicted the imminent arrival of Judgement Day. Capitalism will certainly pass away; all social and economic systems do. But its capacity to survive great shocks has been thoroughly demonstrated and has to be taken seriously by friend and foe alike.'

Hence if we take a long view and consider the present state of the world economy in historical terms, we observe that the two decades before the collapse of the Bretton Woods system and the oil price rise of the early 1970s were a golden age for the western industrial economies, and in many ways for the world economy as a whole.^{1/} During this long period, countries like France, the Federal Republic of Germany and Britain maintained virtually full employment: a rather unusual phenomenon for capitalist economies. In fact, these countries were not only able to employ their own available labour forces, but also to give jobs to a significant number of workers from abroad. In the 1960s in West Germany and France, immigrant workers constituted something like 10 per cent of the employed labour force. In this golden age, a number of Third World nations also made major industrial strides.

The historically high long-term rates of growth of output, consumption, and employment achieved by the advanced countries in the 1950s and 1960s were accompanied by an enormous increase in world trade. World exports of manufactures grew at an unprecedented long-term rate of over 10% per annum - an expansion in which again a number of Third World countries also participated.

But the world economy is today in deep crisis. In 1980 the volume of world exports rose only by 0.5%; in 1981 the volume actually contracted by 1.5%, which was the first decrease since 1975 and only the second in the past three decades. According to the latest GATT estimates, in 1982, there was a further contraction of 1.5% in the volume of world exports

^{1/} There is no implication here that these two events were the cause of the demise of the 'golden age' - they just mark significant landmarks in post-war economic history.

and 1983 is not expected to be much better. Although, for a number of reasons, the Third World as a whole was relatively unscathed (in terms of industrial development) by the first oil-price rise in 1974 and the subsequent slow-down in world trade, most Third World countries have found themselves during the last three years in serious balance of payments and external financial difficulties. These external disequilibria have forced them to severely curtail their industrialization and development programmes.

It was noted above, that the Third World countries require an annual rate of economic growth of 6 to 7% and of industrial growth of about 10% for compelling economic and social reasons: to reduce absolute poverty and to expand employment opportunities for a growing and increasingly urban population. Given this inescapable objectives, what can the Third World countries do in the current circumstances of the world economy?

One obvious answer is that their efforts should be directed towards stimulating the growth of the whole world economy. For if the advanced industrial countries and the world economy grew faster, the Third World would benefit from the increased capacity of the advanced countries to import their manufactures, increased commodity and raw-material prices, and hopefully also from the larger amount of foreign aid, loans or investment which the industrial countries might then be willing to provide. However, the developing countries (because of their small share in world economy) cannot do all that much to increase world economic growth. Only the US and the advanced countries together have between them the initiative and the ability to do so.^{1/}

Unfortunately all the signs from previous economic summits such as at Versailles and Ottawa have been that the industrial countries are unlikely to take that course of action. In principle, it is possible that good sense may finally prevail at the coming summit at Williamsburg and the rich nations may agree on a programme of collective reflation, and take the other necessary measures of international economic and financial co-operation to put the world economy back on its long-term trend rate of growth achieved during the golden

^{1/} Even the US alone can no longer act as a 'locomotive' for the world economy as the experience of the 1976-1978 reflation initiated by President Carter showed.

age. However, it is not probable. Similarly it is possible that in view of the serious debt situation of large Latin American countries like Brazil, Mexico and Argentina and the threat this poses to the viability of the international financial system, the US may embark on another Marshall Plan. It will be recalled that to save Western Europe from the perceived communist threat, between 1948 and 1952, the Government of the US devoted annually 2.8 per cent of its GDP to foreign economic aid under the Marshall Plan - compared with a total foreign aid figure of 0.2 per cent today. But again although such a happy sequence is possible, it is not probable. Today, the Third World countries have to contend with the probability that the growth rate of the world economy during the current decade will lie in the lower range of the available estimates - which vary from a pessimistic -2% p.a. to a highly optimistic +3%.

The crucial consequence for the Third World of the expected long-term deceleration in world economic growth is that world trade will expand much more slowly than in the 'golden age'. This will necessitate a re-examination of the general Third World perspective (as illustrated for example by the traditional UNCTAD view), on the relationship between trade and development. For if overall trade increased very slowly, then even if there were no tariff or non-tariff barriers in advanced countries to imports of Third World manufactures, the latter would still probably only be able to grow at a pace inadequate to generate the socially required rates of economic expansion in the developing countries (in the sense mentioned earlier).

The policy conclusion to be drawn from this analysis is that in the coming decade the countries of the South will have to rely much more on their internal dynamics, on the growth of internal demand, rather than on world market forces to generate economic expansion. They will need greater import substitution, more internal technological development and more economic and technological co-operation among themselves.

This change of economic course raises a whole range of economic policy issues, some of which will be outlined in the next section. However, at the very outset we should note an extremely important preliminary point. It must

be recognized that such a programme is easier for the large semi-industrial countries like Mexico, Brazil or India to implement than for the smaller or less developed economies. This is for two reasons. First, the 'large' size of the former means that they are in principle much more capable of insulating themselves from the impulses of the world economy; foreign trade normally accounts for a relatively smaller proportion of their GDP as they usually have large enough internal markets for reaping economies of scale. In principle, the rate of growth of such economies is therefore much less dependent on the growth of world economy. Secondly, the semi-industrial economies already possess fairly diversified industrial sectors with trained manpower, managerial and organization skills, so that on the supply side, they have the possibilities of self-sustained internal growth to a degree which is much less open to economies at lower levels of industrialization.

It is, however, important to stress that the policy emphasis on internal growth in large developing countries does not mean that export opportunities or the export effort should be neglected. For example many semi-industrial countries have an enormous export potential in the Middle Eastern markets (in contention with the industrial countries) as well as in other developing economies. Some of them (e.g. India, China, Republic of Korea) also have opportunities for increasing their foreign exchange earnings by 'export' of labour to the Middle Eastern oil-producers. In view of the external financial gap which many semi-industrial countries will face for a long time to come (not least because of previous debt accumulations), it is clearly necessary for them to make full use of such opportunities to the mutual benefit of themselves as well as of the Middle East oil producers. The main burden of the analysis presented here is that in order for the NICs to continue to achieve fast growth in a slow growing world economy, the essential dynamic will have to be provided increasingly by internal factors rather than by the external economy.

The problem which small countries face in such a situation are far more difficult and in case of some of them may even be intractable. Small countries must necessarily rely on trade and specialization in order to achieve industrial development. There have therefore been a number of schemes for the establish-

ment of common markets of contiguous countries to promote these aims. However, these integration schemes in the developing economies have to date not been conspicuously successful. The main reason is the large differences in the levels of development of the various countries; in a free trade situation, the more developed regions or countries have a tendency to develop even further without commensurate development in the less developed regions. (Kaldor, 1970). For example, it is certainly arguable that industrial development in a country like Tanzania was aided by that country's withdrawal from the East African common market and thus from competition with the more advanced Kenyan manufacturing industry. Nevertheless, industrialization in smaller developing countries does require much more intra-developing country trade; the latter is more likely to increase and to aid the development of all participating countries if it is planned rather than free trade. The international development agencies such as the UNIDO can play an important role by helping to create and implementing such arrangements.

INDUSTRIAL STRATEGY AND POLICY FOR THE THIRD WORLD: THE SHORT- AND THE LONG-TERM ISSUES

In analyzing questions of economic policy, it may be useful to consider in more specific terms the industrial situation which the developing countries are faced with today. Unlike the economic theorist's models, economic policy - even long-term policy - must start from the actual current situation. I shall, therefore, very briefly describe the present position in a small number of developing economies.

First, the increasingly severe balance of payments constraint in Tanzania during the last three years has pushed the industrial economy to progressively lower levels of capacity utilization. Because the country cannot afford the necessary imports of industrial raw materials, at present only 25% of the manufacturing capacity is being utilized. This, however, does not only lead to layoffs, dislocation and disequilibrium in industry, but also generates severe disequilibria in other spheres. For example, the Government budget imbalances at which the IMF directs its accusing finger are entirely a consequence of this industrial disequilibrium. Sales taxes account for something like 60% of the total recurrent revenue of the

Government. It has been estimated that if industry were operating at its normal capacity, sales and excise tax revenues would be doubled; that would not only eliminate the current fiscal deficit but also make a significant contribution to the capital account (Singh: 1982). Similarly low levels of capacity utilization and production adversely affect agricultural production, through reduced supply of direct agricultural inputs (fertilizer, transport equipment, etc.) and equally significantly through the lower availability of the so-called "incentive" goods for farmers (soap, cooking oil, etc.).

Parenthetically, although there is such a high degree of underutilization of existing capacity, foreign aid still continues to be provided to Tanzania for long-term projects to create new capacity. Apart from the indirect foreign exchange costs the new projects inevitably entail, they absorb scarce managerial and governmental resources which could be more profitably used elsewhere. It is clear that if instead of foreign aid being given to create new industrial capacity, a fraction of what is provided now is given for increasing production and utilization of existing capacity, it would be of far greater benefit in the present economic circumstances.

Although Tanzania is a small developing country at a low level of industrial development, the situation of the industrial economy in a relatively much more advanced country like Mexico is not all that different, at least in the short-term. The balance of payments constraint has led to the curtailment of essential imports needed for normal utilization of existing industrial capacity; this in turn generates the usual disequilibrium in other economic spheres with extremely serious social and political consequences. As Mexico is a more open and sophisticated monetary economy, these disequilibria are reflected in a particularly acute form in inflation, devaluations, currency and financial instability. Again an increase in industrial capacity utilization through enhanced import capacity would lead immediately to significant improvements in both the real and the financial economies.

The Brazilian industrial economy is also in equally serious straits. In view of the size of the Brazilian debt, it is estimated that if the world economy grows only at a slow rate (as suggested in the last section), the re-

quired servicing of the debt would condemn Brazil to a zero or a negative rate of economic growth for a number of years. (This estimate is based on the assumption that the existing observed relationships between economic variables, e.g., income elasticity of demand for imports, the world income elasticity of demand for Brazilian exports, persists.) The social consequence of prolonged economic stagnation in a country with a rapidly expanding labour force such as Brazil need hardly be spelled out.

How did all these diverse economies - a poor African country following a "socialist" path, and capitalist industrial giants of the Third World such as Brazil and Mexico - come to this pass? The answer lies in the fact that during the golden age many developing countries, including these three, created industrial structures which were highly and often increasingly dependent on imports and private capital inflows. The diversification of these economies from producing simply agricultural products and minerals to the production of manufactures did not, as envisaged, reduce their degree of dependence on the world economy; instead the latter appreciably increased. Mexico may be an extreme case in this respect, but in the short span of five years between 1976 and 1981, imports as a proportion of GDP in that country rose from 10% to 15%.

During the golden age, as seen in section II, many of these countries undoubtedly benefited on balance from their greater integration with the world economy in much the way orthodox economics extols the virtues of increased trade and specialization. However, it also left these economies extremely vulnerable - a concept which orthodox economics usually ignores altogether. In the last Great Depression Keynes observed:

- "We do not wish...to be at the mercy of world forces working out, or trying to work out, some uniform equilibrium according to the ideal principles, if they can be called such, of laissez-faire capitalism... It is my central contention....that we all need to be as free as possible from economic changes elsewhere, in order to make our own favourite experiments.... and that a deliberate movement towards greater national self-sufficiency will make our own task easier."(Keynes, 1933).

Keynes was here calling attention to a significant negative aspect of the international division of labour and specialization. The more a country is specialized, the more its growth will be dependent on the rise in exports - the more easily, that is, might its growth be checked by demand limits which, unlike those arising from domestic demand, the country's own economic policy may not be able to overcome, given the specialization. The vulnerability of a country is in this sense not only a function of the degree of specialization (the import content of its production), but also depends on its level of industrial development and the nature of its specialization. *Ceteris paribus*, it will for example, be greater if the production of exportable surpluses involves goods which are subject to stiff foreign competition and/or changes in the level or composition of other countries' final demand. The country's vulnerability is also greater if its exportable surpluses serve to meet imports of essential wage goods and their means of production. There are clearly greater possibilities of insulating the growth of the economy from an insufficient rise in its import capacity, if imports mainly consist of "luxury" goods and/or their means of production. Orthodox trade theory can ignore this problem of vulnerability only by assuming that there will always obtain full utilization of resources: if integration with the world economy leads to lower levels of overall capacity utilization, the traditional argument in terms of greater efficiency of resource utilization is no longer necessarily valid.^{1/}

In the context of this discussion it is interesting to reflect briefly on the case of the Indian economy in contrast to those of Mexico or Brazil. As India has long chosen to follow a policy of "self-reliance", and it is relatively much less integrated with the world economy than the latter two countries, its rate of economic growth is more or less independent of the world growth rate. The indigenous factors - e.g., the weather and the growth of agriculture - are far more important in determining the expansion of the Indian economy than the world economic situation.

Thus, as far as short-term industrial policy in countries like Tanzania, Brazil or Mexico is concerned, there is no option except to: (a) reduce the

^{1/} See further Keynes (1933), De Vivo and Pivetti (1980) and Crotty (1983). Singh (1981).

propensity to import and (b) to enhance import capacity to the extent it is possible. Both (a) and (b) are clearly extremely difficult to achieve in the present circumstances of the world economy and require exceptional measures suited to the particular conditions of each country. For a discussion of such short-term measures in relation to Tanzania's economy, the reader is referred to Singh (1982).

However, in a slow growing world economy, even in the long-term, the creation of viable industrial structures requires strategic attention to be focused on both (a) and (b), particularly the former. This in turn requires reconsideration of traditional economic policies on the demand as well as the supply side. It is not possible to do more than to conclude by listing the most important questions with respect to each; reasons of space preclude their proper discussion here.

- In order to ensure that developing countries are able to achieve the desired long-term rates of growth of demand by domestic means, they will have to pay particular attention to distribution of income. This is so not only for reasons of securing social harmony as industrialization proceeds, but also for narrowly economic considerations. As the Third World economies expand and become internally more integrated, the under-consumptionist arguments will become much more relevant for many of them. Already there is an influential school of thought in India which argues that inequalities in income distribution have been responsible for a deceleration in the country's long-term rate of industrial growth.^{1/}

- On the supply side, with reduced international competition, questions of micro-economic efficiency assume special significance. Two points may, however, be noted in this respect. First, micro-economic efficiency in the dynamic sense (e.g., the rate of growth of productivity) is essentially a function of the rate of growth of a firm's or industry's production (pace Verdoon's law). Secondly, to the extent it is agreed that x-inefficiency may be reduced by competition, in the large semi-industrial

^{1/} The author is personally not persuaded by this thesis. There is, however, a large literature on the subject. See Dutt (1982) for references and also for the development of a rigorous theoretical argument along these lines.

economies, in principle, domestic competition can be encouraged to replace foreign competition.

- The developing countries in pursuing the path of internal growth must clearly also learn from the failures as well as successes of import-substitution policies practiced in the past. The Appendix briefly examines the experience of what can be regarded as the most successful of import-substituting economies, namely that of Japan.

THE ORGANIZATION OF PRODUCTION: THE JAPANESE EXPERIENCE

The post-war experience of Japan is highly relevant to the developing countries, particularly the large semi-industrial economies, for a number of reasons. First, let us recall that in the early 1950s Japan produced less steel than countries like Mexico, Brazil and India do today, and was largely an exporter of labour-intensive products. Yet, less than two decades later, Japan was producing more than a hundred million tons of steel; and Japanese workers, starting from Asian wage levels, were well on the way to achieving European standards of real wages. It seems to be an entirely appropriate question to ask why a large country such as Mexico, with its oil, should not repeat Japanese industrial history over the next twenty years, especially as Japan's growth was achieved without oil, and starting from a similar, if not lower, level of industrial development.

Secondly, the Japanese example is extremely important in another context: in relation to the desirability of using world prices and allocating resources according to the orthodox economic doctrine of comparative advantage. In the early 1950s, Japan, as a country with a relatively large population and a labour surplus economy, was advised by orthodox economists to specialize in the labour-intensive manufactures in which its comparative advantage was thought to lie. The Japanese costs of producing steel at that time were twice world prices, and therefore the advice was to produce and export, for example, textiles and not steel. However, the Japanese rejected this prescription and instead embarked on a structural policy whose cornerstone was the purposive and rapid development of steel, chemicals, machinery and other heavy industries, regardless of their short-run comparative disadvantage. It is worth quoting the rationale of this industrial policy given by Vice-Minister Ojimi, of the Japanese Ministry of International Trade and Industry (MITI).

- "The MITI decided to establish in Japan industries which require intensive employment of capital and technology, industries that in

^{1/} This appendix is based on section III of Singh (1982a).

consideration of comparative cost of production should be the most inappropriate for Japan, industries such as steel, oil-refining, petro-chemicals, automobiles, aircraft, industrial machinery of all sorts, and electronics, including electronic computers. From a short-run, static viewpoint, encouragement of such industries would seem to conflict with economic rationalism. But, from a long-range viewpoint, these are precisely the industries where income elasticity of demand is high, technological progress is rapid, and labour productivity rises fast. It was clear that without these industries it would be difficult to employ a population of 100 million and raise their standard of living to that of Europe and America with light industries alone; whether right or wrong, Japan had to have these heavy and chemical industries. According to Napoleon and Clausewitz, the secret of a successful strategy is the concentration of fighting power on the main battle ground; fortunately, owing to good luck and wisdom spawned by necessity, Japan has been able to concentrate its scant capital in strategic industries." (OECD: 1972).

Although in the 1950s and early 1960s this structural policy could perhaps be justified in orthodox infant industry terms, the Japanese have continued with it ever since. Recent thinking about the appropriate long-term industrial structure for Japan envisages a shift in the 1980s towards "knowledge-intensive" industries, such as electronic computers, electric cars, new synthetics, communications equipment, the more sophisticated products of heavy and chemical industries and software. (Singh: 1980).

How does Japanese industrial policy actually work? Its fundamental basis is a national consensus and a close relationship between Government and enterprises. It is a highly interventionist industrial policy which would make an orthodox economist bristle. Professor Caves of Harvard University and Professor Ukeusa, have described this policy in the following terms.

- "Each sector of the Japanese economy has a cliental relation to a ministry or agency of the Government. The ministry, in addition to its various statutory means of dealing with the

economic sector, holds a general implied administrative responsibility and authority that goes well beyond what is customary in the United States and other Western countries. While the Ministry of International Trade and Industry (MITI) plays the most prominent role, its operations are not distinctive. The industrial bureaus of MITI proliferate sectoral targets and plans; they confer, they tinker, they exhort. This is the "economics by admonition" to a degree inconceivable in Washington or London. Business makes few major decisions without consulting the appropriate governmental authority; the same is true in reverse". (Quotation in the original). (Caves and Ukeusa 1976, p. 149).

It is of interest to observe how conventional economic analysis assesses the operations of such an industrial policy. Let us quote Professors Caves and Ukeusa again:

- "Japanese industrial policy appears in some instances to have served the nation's economic interests, in others to have hindered development. Japan's antimonopoly policy has been a hobbled and limited copy of that long used in the United States. Its enforcement has fallen far short of the US model - itself hardly an example of perfect adherence. Its failures have placed significant costs on the Japanese economy in the form of allocative inefficiency and diversion of rivalry into costly non-price forms. We cannot detect any compensating gains". (Ibid.)

Such an appraisal by orthodox neo-classical economists - and Professor Caves is certainly one of the best practitioners of this genre - is simply astonishing. It may be observed that (a) the transformation and expansion of the Japanese industrial economy over the last three decades has not only been more rapid than that of other industrial economies, but it is among the most spectacular in the history of industrialization, and (b) throughout this period the Japanese Government has followed an active interventionist industry policy. In the context of (a) and (b), Caves and Ukeusa's conclusion says less about the merits or demerits of this industrial policy than about the degeneracy of the neo-classical paradigm: a system of analysis which is unable to cope

with real world situations such as that provided by industrial development in countries like Japan. So notwithstanding the "allocative inefficiency" in Japan as perceived by orthodox economics, the developing countries have a great deal to learn about the supply side and the organization of production from the Japanese experience.

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STRATEGIES AND POLICIES FOR INDUSTRIAL DEVELOPMENT IN THE DEVELOPING COUNTRIES:
SELECTED ISSUES by Boguslaw Sosnowski*

PAST EXPERIENCE AND PRESENT ISSUES

The industrial development of the developing countries in the 1970s was generally of an initiative nature in a two-fold sense:

- in terms of the structural patterns; and
- in terms of the technological patterns.

As a totality, therefore, the developing countries have increased their dependence on the industrialized countries with long-run consequences. Their manufacturing exports to industrialized countries, in terms of their contribution to GDP, increased from ca. 14% in 1970 to over 20% in 1980. At the same time, however, the share of imports of manufactures from industrialized countries in their local consumption went up from around 39% in 1970 to over 45% in 1980.

Parallel to that, industrialized countries dependence on the developing countries' markets has increased substantially. It is estimated that the developing countries' share in industrialized countries' imports of manufactures went up from 5.3% in 1970 to over 10% in 1980. In capital goods sector this dependency is extremely high. It is estimated that in recent years some 40% of the industrialized countries' capital goods export went to developing countries. There was a significant increase in the importance of developing countries as markets for the industrialized countries. The share of developing countries in the total exports of the US, the European Community (EC) and Japan (excluding the EC intra-trade) rose from about 30% in 1970 to almost 40% in 1980. That phenomena reflects not only the rising potential of developing countries but above all the saturation of the industrialized countries' markets.

The developing countries gains in manufacturing exports are, however, very limited in terms of beneficiaries. The bulk of the gain has been enjoyed by Hong Kong, Taiwan Province and the Republic of Korea, followed by Mexico, India, Brazil, Singapore, Israel and Malaysia. Thus if one disaggregates the picture, the majority of developing countries have not improved their industrial position in the world economy and in particular

* Dr. Boguslaw Sosnowski, Assistant Professor, Central School of Planning and Statistics, Warsaw, Poland.

this refers to the least developed countries (LDCs). The whole idea of international redeployment and restructuring has proved a rather unsuccessful attempt for the majority of developing countries. In effect, new approaches are needed and in particular with regard to the least developed countries.

Transnational corporations (TNCs) have become a very important factor of the world's economy over the past two decades. However, their contributions to the development of the Third World was of a very limited nature. Over 95% of foreign direct investment flows originate from the OECD countries and about three-quarters of the flows are channelled to other OECD countries. Among the recipient developing countries six of them accounted for between 50% and 75% of all inflows.

The vast majority of developing countries have not attracted substantial amounts of capital and technology flows. Thus, the contribution of TNCs to the strengthening of the industrial and technological capabilities, as well as export growth of developing countries has on the whole by-passed those that badly need foreign resources namely the low-income countries.

The implications of the fact that a large proportion of various international economic transactions takes place within TNCs are not yet fully known. Intra-firm transactions are of particular concern to developing countries, since special capabilities are required to regulate and monitor pricing and payment methods used in these exchanges.

East-South trade was the most dynamic component of the world trade over the period 1955-1970. The main reasons behind that phenomena were the complementary structure of the domestic demand and the legal framework of the clearing agreements. In the last decade the rate of East-South trade slowed down substantially. Both the developing and socialist countries are supply constrained and import oriented economies. There is

a structural lack of production capacities in those countries as compared to the structural surplus of supply in the industrialized countries.

The developing and socialist countries, in trying to satisfy the internal demand, stimulate imports and sell abroad only the surplus of production over domestic demand. The importance of exports is therefore only limited to the currency earning activity to pay for required imports. The long-term solution for the further increase in East-South trade is the change in the structure of the respective economies, the shift from intra-industries exchange to the intra-branch trade and more complex and long-term forms of industrial cooperation.

The debt problems of the developing countries are the most crucial aspect of the present world economic situation. Falling export sales and high interest rates have resulted in acute debt payment problems. The medium- and long-term debt of the developing countries now stands at \$ 530 billion, and including short-term debt brings the total debt of the developing countries to some \$ 700 billion.

The global recession has contributed greatly to the current difficulties of the developing countries. Between 1980 and 1982 falling export income and rising debt service have together had a negative impact of about \$ 70 billion on the balance of payments of the developing countries. About half the increase in the Third World debt service payments since 1980 has been due to higher interest rates. In response to the tremendous increase in the debt burden the developing countries have drained their reserves and cut back on imports. That in turn, diminished the export possibilities of the industrialized countries.

It is necessary, then to look for a global solution of the total debt of the developing countries as to increase the chance for the stable and long-term world recovery.

STRATEGIC OPTIONS FOR DEVELOPMENT POLICY IN THE 1980s AND 1990s

The international economic crisis, the mounting debt pressure on the developing countries and rising international protectionism, point out that the continuation of the present imitation strategy based on continuously growing import dependency is unlikely to produce any positive results unless new approaches for global industrial strategy are worked out.

It seems advisable therefore to look for more innovative strategy and to reshape the industrial priorities within the developing countries' economies. The elements of this new strategy could include:

- a reorientation of industrial priorities to the needs of local agriculture, food production, clothing and building materials production;
- a reorientation of technological priorities to the development and utilization of local technologies and skills;
- a reorientation of industrial policies to the development of the soft part of industrial capacities;
- the transfer of resources from armaments to the financing of socio-economic development programmes; and
- a reorientation of foreign economic policy towards intra-regional integration among the developing countries and more extensive use of the possibilities offered by the socialist countries.

The top position in these industrial priorities ascribed to agriculture has at least a three-fold justification:

- it serves the interests of the majority of professionally active population - 70%-90%;

- it provides the nutrition for the fast growing population; and
- it creates an enlarged internal market and thus provides for the establishment of a modern industrial society. If we look at the experience of the socialist countries we can conclude that only those which managed to assign a proper place to agriculture in their industrialization drive have achieved balanced economic and social performance over the long run. The others which neglected the agricultural sector are facing serious difficulties in their development process.

The totality of foreign dependency may be in the last resort reduced to simply technology. Much has been done so far to decrease the unfavourable terms of the acquisition of technology. Far too little attention has, however, been given to the creation of indigenous technological capabilities. As long as the developing countries do not introduce some technological protectionism and appropriate regulatory mechanism in technology imports their innovative strategy can hardly be visualized.

Again if we look at some historical experience, a negative example of some of the socialist countries could be mentioned. They too were trying to overcome local technological inadequacies by massive inflows of technology from abroad, with sometimes limited success. On the other hand, a highly protectionistic policy of Japan in the 1950s and 1960s could be quoted as the way to upgrade the existing and developing new indigenous technologies, thus decreasing the technological dependence. It is well known that only locally generated technologies can best fit local social traditions, cultural patterns, resource limitations, etc.

Most of the attention so far has been given to the development of physical industrial facilities. At the same time the whole soft part of industrial capacities has been neglected. The lack of standards, norms, proper industrial statistics and satisfactory training programmes are only some examples to be mentioned. The coming decade should be the decade of the development of soft industrial capacities which

particularly in the developing countries constitute serious constraints to industrial development efforts.

The share of developing countries in the total world armaments financial outlays is ca. 15% which amounted in 1982 to slightly below \$ 100 billion. In the 1970s in over 100 developing countries, GNP increased about 50%, whereas the military outlays rose over 70%. During the last decade, military spending consumed ca. 5-6% of GNP, compared to health and education share in GNP of 1.2% and 3.6% respectively.

There is no point in arguing about the adverse effects of substantial military spending on the socio-economic advancement of developing countries. One could only mention that the import of military hardware and its servicing severely drains foreign currency resources as well as imposing costly demands on the skilled labour. This problem is only mentioned here so as not to be overlooked in the elaboration of general approaches to shape the future industrial strategy and search for resources to implement this strategy.

Any industrial development passes through an infancy period. During this period a need for preferential treatment of the industrial products in some markets is highly important. Therefore, one should argue that the developing countries should open more their markets for intra-regional cooperation. So far there are no wide-spread examples of the reciprocal preferential treatment among these countries whereas they are widely used among the industrialized countries. Why not follow some old routes?

The socialist countries are continuously somehow aside of the processes taking place in the world economy. The reasons are manifold and it is not the intention to discuss them here. On the other hand, it should be pointed out that the relations with them have some obvious advantages for the developing countries, it is enough to mention the various forms of long-term industrial cooperation often on concessionary terms and thus advantageous for the developing countries. The adverse influence of

TNCs investments in the exploitation of natural resources in the developing countries and the subsequent establishment of enclave industries could be mentioned as a negative example in the North-South cooperation not being followed by the socialist countries.

SOME INTERNATIONAL ACTIONS TO BE TAKEN

The above presented general issues touching upon constraints in industrial development seem to indicate the necessity to pursue a new innovative strategy and may influence the nature and directions of the activities which could be initiated, organized and/or implemented by UNIDO. This international organization should concentrate in future mainly on the following activities.

Technical assistance in establishing national, regional and inter-regional centres for the development of agriculture related technologies. This could be supplemented by the extensive educational activity in this respect. Direct financial participation of the UN system in industrial development should be mainly concentrated in this field.

The Technology Advisory Service of UNIDO should be redirected to the problems of the development and utilization of local technologies instead of concentrating exclusively on the terms of technology inflow. To reinforce the "localization" of the technology it could be advisable to undertake efforts in redirecting the international financial assistance mainly to the projects based on local technologies.

Much more technical assistance should be offered in the field of the development of the soft industrial capacities. There is an urgent need to identify the problem in the developing countries and provide an in-depth analysis on the consequences of the lack of soft industrial capacities in hampering the growth of industrial output and structure of the balanced socio-economic development.

Promotion of various forms of intra-regional and inter-regional cooperation schemes should be reinforced. A need for the assessment of

the results achieved so far in the ECDC programmes and the experience gained to date is of paramount importance.

Much more attention should be given to the potential available within the socialist countries both in terms of their industrial experience (e.g., the operation of the nationalized sector, the role of technology import, the creation of indigenous technological base) and in terms of their possible contribution to industrial development processes in the developing countries (e.g., redeployment opportunities, industrial cooperation possibilities, assistance in the skill formation). An urgent need for more study and exploratory work in this area should be spelled out. So far this seems to be a relatively neglected area.

DEVELOPMENT AND INDUSTRIALIZATION by Joachim Peter Storfa*

DEVELOPMENT AND INDUSTRIALIZATION

It is difficult to conceive of economic development without industrialization. Thus, without industrialization there is no development of the economy. However, this does not mean that industrialization is a synonym for development. Most of the Governments of the developing countries see in industrialization the sole possibility of escaping from the vicious circle of poverty, underdevelopment, and dependence. When one looks at the industrialized countries, these Governments would appear to be right, because there is in fact a causal relationship between a considerable percentage of industrial products in a nation's gross national product and high per capita income.

The developing countries' share in world industrial production is extraordinarily low. In 1981, this share was 10.3%, which represented an increase over the 1960s, when it was constant at 7%. In any case, the target of 25% laid down in the so-called Lima Declaration is still a long way off. If in addition one takes into account the effects of the world economic crisis, which has now been with us for several years, namely the enormous foreign debts of many developing countries, increasing protectionist tendencies, high interest rates, mounting energy costs, etc., then the goal of 25% of world industrial production can only be considered utopian. The equation that has been drawn between industrialization and development has, in recent decades, led a number of developing countries to undertake sustained efforts to industrialize. In so doing, they have copied in toto the mode of industrialization of the advanced nations. A major characteristic of this borrowed process of industrialization is an unshakable faith in the omnipotence of industrial technology. The social and cultural costs of industrialization conceived along these lines have been given secondary importance, the concept of "development" has been interpreted exclusively in technico-economic terms and considerations of principle regarding the feasibility of carrying over and copying the models developed in the industrialized nations have not even had the good fortune to be discussed.

Without intending to become embroiled in philosophical problems - such as for example, whether industrial civilization is not a circumscribed historical phenomenon which is valid only for certain societies and the transplantation of which to other societies and cultures is not at the

* Mr. Joachim Peter Storfa, Federal Chancellor's Office, Co-operation for Development, Austria.

very least questionable - we should like to discuss briefly two aspects of the industrialization problem in general, namely:

- the objective limits of industrialization; and
- the specific character of the imitative industrialization process in the developing countries.

The objective limits

The ideology of unlimited progress - the characteristic conceptual setting for industrial technologies - is a kind of faith which has accompanied the industrial civilization since its beginnings. Today, however, more than ever before, doubts are beginning to arise, above all in the industrialized nations themselves. The conviction that there are no limits to man's dominion over nature is being exposed, some would say, as a myth, like the idea that nature will in any event restore its own balance regardless of the industrial society's interventions through its various forms of production. Actually, let it be noted in passing, even the physics of the last century imposed its constraints on this ideology, namely through the discovery of the second law of thermodynamics, which indicates a progressive reduction of the possibility of transforming heat into energy. It is, however, the rural economy, totally neglected by the partisans of industrialization, and above all the economy of living organisms that reveal the limits of technology.

An analysis of the structure of the agrarian economy shows that needs increase exponentially as they are satisfied. Robert Malthus formulated this discovery as the law of the constant scarcity of resources in relating to the number of births. But Malthus also discovered another law which has extraordinary relevance in our age - the law of the decreasing productivity of the cultivated land. This is more generally known today as the law of the decreasing productivity of non-renewable resources. The importance of this discovery has been dramatically revealed since chemical fertilizers first came to be systematically used in agriculture.

Between 1934 and 1976, world cereal production scarcely doubled, while the use of chemical fertilizers (especially nitrate fertilizers) increased by a factor of 8. In other words, in order to obtain in the future a

constant quantity of products from a given area, it will be necessary to use more and more nitrates. The soil's need for nitrate fertilizers increases to the degree that it is satisfied. This means that productivity declines. Of course, this also holds for the use of fossil fuels, since in the days when the deposits lay practically on the surface far less energy was required for their extraction than today. In other words, as time goes by one tonne of energy yields less and less energy.

The idea that the discovery of a "pure" energy source (e.g., nuclear energy) would ensure the unlimited expansion of production is also simply an illusion. The same second law of thermodynamics referred to above states that all transformation of energy involves a loss of heat to the environment, something that must inevitably lead to an increase in atmospheric temperature, with all its related global consequences.

The imitative industrialization process

In developing countries the industrialization process begins with the production of day-to-day consumer goods, for which there is generally a relatively large internal market. Foods, fabrics, clothing, leather goods, footwear, furniture, etc., all items previously imported for the consumption of the land-holding and ruling social class, are now produced by domestic industry. This industrialization strategy, known as the import-substitution strategy, does nothing to change the patterns of internal demand nor does it alter the distribution of income among the different social groups, (UNIDO, Industry 2000 - New Perspectives: 77).

It is of central importance to bear in mind that the technology required to produce these consumer goods is itself imported from the industrialized nations where it was developed. This technology has specific characteristics which make its application in a developing country problematical, even though our first impression may be different since

- the limits of the internal market take some time to reach, given that the capacity of the machinery does not grow particularly rapidly, and, consequently, neither does the "optimum size of the enterprise"; and

- with the exception of synthetic fibres, the substitution of raw materials plays a secondary role.

"The process of industrialization is based on processes and patterns pioneered abroad and is to some degree directed from abroad. Instead of being a mechanism by which a country can begin its march along the road to self-sustained industrialization, the import substitution path may well serve simply to reinforce the status quo set of international power relations". (Ibid: 77).

Decisions to invest in industrial projects are therefore reached on the basis of the demand situation in an internal market which is made up of the elites in the developing countries.

In his studies for the Economic Commission for Latin America (ECLA), Celso Furtado has demonstrated that the cultural "dualism" one so often finds in developing nations - i.e., the contrast between imported and ever changing models of consumption, on the one hand, and the traditional models, on the other - is projected on to the structure of the production systems in these countries. The origin of this dualism lies in the control of technological progress by one or more centres. Its result is an imbalance in the factors of production characterized by a constant and structurally determined surplus of manpower, which brings with it an irrational and inequitable distribution of income. Technological progress places the industrialized metropolitan nations in a position to impose specific models of consumption perpetuating and deepening even further the developing countries' status of dependence vis-à-vis these nations.

The thesis that the adoption by the developing countries of cultural models borrowed from Europe or the United States of America is an impediment to independent and self-centred development is not a new one. As long ago as 1951, at the annual meeting of the American Economic Association, Ragnar Nurske of Columbia University and John H. Adler, the World Bank economist, referred to this problem. The so-called "demonstration effects" theory which Dusenberry had developed for the United States was applied by Nurske on a North-South basis, i.e., between industrialized and developing nations. Pointing out that there was possibly too much

copying throughout the world of United States production methods, Nurske concentrated his analysis on consumption and concluded that it would not be possible to aid the developing countries until the negative international consequences of the demonstration effects were overcome.

Both these economists were convinced that the promotion of industrial projects could not be the sole instrument for economic development. The indispensable condition for development, in their view, was the "balanced growth" of all sectors of the economy.

A reading of a wide range of writing on the problems of Third World industrialization reveals an automatic and apparently natural identification of the objective interests of the developing country with the interests of the businessman in that country. This "equation of interests" is not at all immediately evident and there is no theory to substantiate it. It might be useful at this point to quote the words of John H. Adler of the World Bank at the 1951 meeting to which has already been referred: "... it is hard to see how the sum of all private entrepreneurial decisions will produce the maximum of social benefits for the economy as a whole. From the point of view of the individual entrepreneur it may be quite rational and most profitable to invest in the establishment of movie houses, lipstick factories or in the construction of luxury type real estate; but from the point of view of the economy as a whole and particularly under the criteria of its 'external-economies significance', this type of investment is decidedly undesirable".

The alternative as to whether to use raw materials available in the developing country or to use substitute synthetic materials, which must of course be imported, is of interest only to the country; for the individual businessman it is nothing more than a question of costs, at least until such time as he turns his attention to production and thus to the consumption of raw materials. Nor is it at all clear why an entrepreneur should necessarily be interested in eliminating unemployment or in the greater integration of the labour force in the production process.

It is, however, during the "difficult" phase that the contradictions and shortcomings of the imitative industrialization process become most evident. Once the limits of the internal market for day-to-day consumer goods have been reached, there are, as Urs Müller-Plattenberg has pointed out, two possible ways of continuing the industrialization process:

- going on to export the goods produced until that time; and
- going on to the production of other goods.

But exports can only be successful if it proves possible to penetrate the markets of the industrialized countries, a virtually unattainable goal, particularly at times of economic crisis, since the industrialized countries can be expected to introduce protectionist measures to shield their light industry. What remains, therefore, is an alliance between transnational corporations and the business circles in the developing country, an alliance which merely leads to a new international division of labour.

If the developing country makes the transition to the manufacture of durable consumer goods, such as cars, domestic electrical appliances, and the like, it soon begins to suffer very severely from its technologically dependent status. Before very long the capacity of the machinery acquired in the interests of technical progress, and therefore the "optimum size of the enterprise", begin to outgrow the limits of the domestic market. But how is the country to export when the world market is dominated by the major producers in the industrialized nations, against which any competition is unthinkable? And from where is it to obtain the enormous sums of money necessary to construct these plants?

Aid in the form of foreign loans is indispensable unless the transnational companies decide to invest on their own. But indebtedness means increased dependence on international financing institutions, while foreign investment means acquiescence in the fact that the decision making authority will lie outside the country itself, namely in the executive suites of the multinational corporations in the developed countries.

In summary then, it would be correct to argue that the transfer of technological progress to developing countries inhibits rather than encourages development.

As negative examples of these industrialization strategies mention might be made of the so-called "newly industrializing countries". Take for example, Brazil, for a long time a country whose catastrophic political and social situation was concealed by noisy propaganda about an "economic miracle". Since 1977, the gap between the rich and poor in this country has been widening perceptibly. During the period from 1973 to 1980, the population of Sao Paulo grew by 33%, while the slums in that city expanded by 548%. In 1980, one out of every three residents of the Federal State of Rio de Janeiro was a slum-dweller, whereas in 1950 the figure was only one out of ever fourteen (BASE, 1982). In 1976, a parliamentary commission estimated the number of abandoned children in Brazil at 13 million. For its part, the archdiocese of Sao Paulo put the figure at 25 million, i.e., 40% of the population below 18 years of age. In 1978, the strata of society with the highest incomes earned 225 times more than those with the lowest incomes, whereas in 1970 this ratio was still "only" 1:178. 12% of the population have no monetary income. As the Austrian economist Kunibert Raffer has said, accurately describing this process of dependence brought about by imitative industrialization, "The whole structure of production and consumption satisfies not the basic needs of the population, but the whims of the wealthy and the export desires of the metropolitan nations".

The purpose of these comments is not to suggest an explanation for the dramatic situation of the developing countries based on any single cause, but rather to caution against a monocausal technological fetishism based on the implied equation: development = industrialization = technological innovation. Such an equation is simply an epistemological blunder, the effect of which is to lead the developing countries - and not only those countries - to catastrophe.

In addition, we regard a critical feedback as more than necessary in the discussion and analysis of past and future industrialization strategies.

Endogenous industrialization

The only type of industrialization that would appear to be suitable for the developing countries is the type that UNIDO has defined as "endogenous" (UNIDO, op. cit.: 78). Such a development model may be conceived exclusively within the framework of a self-centred development process and is aimed at satisfying the needs and enhancing the possibilities of the majority of the population.

A self-centred development process should:

- integrate the majority of the population in the economy in a productive way;
- feed the entire population with locally produced agricultural products, a corollary of which is that agro-industry is of primary importance;
- develop means of production and technologies adapted to local requirements and possibilities;
- curb and reverse the process of internal disintegration which is known under the concept of "structural heterogeneity" and which serves as the background for the increasing militarization of the developing countries; and
- proceed to the construction and expansion of infrastructural assets as a basic condition for endogenous industrialization; infrastructure alone can make possible the indispensable "collective consumption" through communications systems, educational and training centres, a socialized system of health care, etc,

Given that this type of development, a development unlike the development of underdevelopment, will be difficult to implement within the framework of the present international economic order, many Third World representatives are calling for the establishment of a new world economic order. It must be made clear, however, that a new world economic order is certainly no guarantee that the potential greater influx of wealth and resources to the developing countries will automatically benefit the impoverished and wretched masses. The struggle for a new international economic order may also turn out to be a "struggle over distribution among the rich and privileged" (Kunibert Raffer: 1982, 2 165).

The position of Austria

The paradoxical situation that, on the one hand, there are idle production capacities in the industrialized nations and, on the other, basic existential needs cannot be met in the developing countries makes far-reaching, radical and multilateral action imperative. As everyone knows, Mr. Bruno Kreisky, the Federal Chancellor of Austria, has for many years been proposing a kind of "Marshall Plan" for the Third World. In recent times, the idea of a massive transfer of resources has taken on fresh vigour in the face of the alarming world economic recession. The implementation of a plan of this kind would not only contribute to the development of the Third World, but would also benefit the industrialized countries by helping them to overcome the recession. Apart from the economic objectives of such an initiative, one should also not lose sight of the political goals - namely, the prevention of armed conflicts and the turning around of the increasingly scandalous militarization of the developing countries.

The industrialized countries should form a common fund of budgetary and/or financial market resources. The initial capital could be increased annually over a predetermined period. Under this arrangement, the developing countries would be given drawing rights, that is, they would decide from what country they wished to receive goods. Orders would be paid for out of the fund's money, made available

either as grants or as long-term "soft" loans. The developing countries would then sell these goods on their internal markets, using the proceeds to establish a revolving counterpart fund in national currency. This last fund would pay for the further development of infrastructure and for the financing of endogenous, self-centred industrial development.

UNIDO could administer the fund as a special programme.

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SOME TRADE ISSUES FOR CONSIDERATION IN THE FORMULATION OF STRATEGIES AND POLICIES FOR INDUSTRIAL DEVELOPMENT IN THE DEVELOPING COUNTRIES DURING THE 1980s AND 1990s
by the UNCTAD Secretariat

INTRODUCTION

The purpose of this brief note is to highlight some of the important trade related issues pertinent to the formulation of industrial development strategies and policies in developing countries. International trade plays an increasingly important role in economic development and particularly in the industrialization process. The formulation of effective industrialization policies requires that such policies fully integrate complementary measures related to the promotion of requisite trade flows for capital formation, infrastructure, input requirements and exports of finished products. The scope of the trade policy requirements in developing countries in the face of the extensive nature of the industrialization efforts required has to be comprehensive, and at the same time strike a complementary balance between national and regional goals and the realities of the international trading environment.

In view of the present depressed situation in the world economy, and in particular the trends in trade in manufactures, trade and industrial policy formulation for the 1980s and 1990s by individual developing countries should contain the necessary pragmatism required for adaptation to the dynamics of world trade. In this connection, both trade and industrial development strategies and policies should be formulated against the background of the changing character of the international trading system which, through various feed-back mechanisms, can ultimately affect the development process and consequently industrial development as well.

Trade issues related to industrial development strategy and policy formulation

Over the course of the 1970s and early 1980s certain important developments have occurred in the structure and patterns of international trade of the developing countries. Consequently, the formulation of industrial strategies and policies should take them into account in order to harness their positive features and minimize their negative aspects. Some of these trade issues which will affect the developing countries' trade and industrialization patterns are briefly presented in the following paragraphs.

Intra-industry trade

The importance of intra-industry trade had been documented in many studies. The main conclusion of these studies was that for both developed and developing countries, intra-industry trade was growing faster than total trade. For developed and developing countries which participated in trade groupings, intra-industry trade was growing faster within the groupings than with trading partners outside the groupings. Among manufactures, intra-industry trade appeared to be growing most strongly in the quantitatively important engineering industries. While it was true that the level of intra-industry trade was greater among industrialized countries, it is now clear that such trade was not merely a feature of the trade of such countries, but that it was becoming an important feature of North-South trade and of trade among developing countries themselves. While there are some reservations concerning the extent of current levels of retained value from the growth in such trade and the distribution of benefits, the effects of expanded intra-industry trade are generally found to be beneficial for both developed and developing countries. In respect of North-South trade, evidence shows that as developing countries become more industrialized, their trade with the developed countries is likely to be based on intra-industry specialization, with production and trade being rationalized at the process level, and that whole industries are unlikely to be redeployed to the newly industrializing countries. The tendency towards greater intra-industry specialization on a North-South basis is also likely to be associated with lower adjustment costs in the North than had been anticipated on the basis of traditional explanations of trade.

While at present it appears that trade between developed and developing countries is more of an inter-sectoral nature than is the case between developed countries, this situation is changing rapidly, reflecting the progressive industrialization of many developing countries. Particularly in the case of those developing countries which have successfully adopted export-oriented industrialization strategies, there is an increasing amount of intra-industry trade between them and developed countries in manufactured and semi-manufactured products. At present such trade is complementary or vertical, i.e. the exchange of products of adjacent stages of production,

but its quantitative significance, its rapid growth, the range of traded products and its potential to be influenced by policy action suggest that it could be an important means of expanding and diversifying exports of manufactures from developing countries in a manner which creates fewer structural pressures on the industries of the developed countries. It may provide new opportunities for expanded trade in complementary products of the same industries. Such an approach could be used to promote export-oriented industrialization by more developing countries especially the lesser developed ones where the relatively low labour costs should provide a basis for initial specialization in complementary labour-intensive processes.

Trade-related industrial collaboration arrangements

While the internationalization of production, as reflected in the increased intra-industry trade particularly of the vertical or complementary type, provides the vehicle by which complementary production and trade takes place, attention should also be directed at the instruments and modalities through which such trade is conducted in the form of trade-related industrial collaboration arrangements.

Collaboration arrangements at the enterprise-to-enterprise level are increasingly playing a significant role in trade and industrial, as well as financial, relations between developed and developing countries. The various forms which industrial collaboration could take are such that they could link together countries belonging to different regions, through intricate networks of contractual, equity and financial arrangements, involving both North-South and South-South cooperation, and are likely to gain in importance in the coming years. The importance of inter-firm arrangements is reflected in the growing attention given to them in recent studies by various international organizations. Although these arrangements were often designated "new forms of investment" and differed from the traditional type of direct foreign investment, characterized by the inseparability of control from ownership, the question arose whether, in the final analysis, flexible contractual forms of inter-firm arrangements did

not offer to the developed countries' enterprises the same advantages as direct foreign investment, without involving the same risks. In so far as developing countries are concerned, there is no general answer to the question whether these arrangements were superior to direct investment. Under certain conditions, they could make a genuine contribution to the development objectives of these countries, but they could also become a source of economic dependence.

In addition to the consideration of the appropriate industrial collaboration arrangements in formulating industrial strategies and policies for developing countries, attention should also be paid to trade-related arrangements as well as in order to maximize the contribution which trade under such arrangements can make to the overall industrialization efforts. In the light of the recent experiences of many developing countries, such industrial strategies should also take into consideration overall investment problems and debt servicing capacity.

Trade between developing countries

The developing countries as a group constitute one of the most important and dynamic markets in world trade in manufactures. In 1980, developing country exports of manufactures to other developing countries almost equaled their exports to the United States (valued at \$ 40 billion). Intra-developing country exports of manufactures grew rapidly between 1970 and 1980. Between 1970 and 1980 this increase approached 28%. In value terms trade in manufactures among developing countries rose from \$ 28.9 billion in 1979 to \$ 38.6 billion in 1980, or at a growth two-and-a-half times as fast as the 13% growth of their exports of manufactures to developed market-economy countries between 1979 and 1980. Hence, trade in manufactures among developing countries accounted for 38% of their exports of manufactures to the world in 1980 - an increase of 3% points from the preceding year.

Considering the higher economic growth rates and birth rates of developing countries projected for the future relative to those of the developed countries there will be increased competition to service the

former countries' increasing demand for manufactures by developed and developing countries alike. In view of the past and present dynamism of developing country markets and the likelihood of a continuation of relative trends in the future, it would appear that the formulation of industrial strategies and policies would assign a high priority to increasing trade, between developing countries, including in the regional and sub-regional context, where complementarities in production and trade are likely to be more prevalent. In this context attention should be directed at exploiting existing arrangements which may already exist as well as the promotion and support of new arrangements to facilitate industrialization and trade efforts.

The concept of 'retained value'

The UNCTAD Secretariat has recently undertaken a preliminary study of retained value of trade in manufactures as an alternative indicator of export performance and for evaluating the trade policies of developing countries. Given the close linkage between production and trade, the relevance of this potential tool for evaluating trade policies could also have important implications in the formulation of industrial strategies and policies as well.

The study pointed out that export performance could be measured in a number of ways and drew a distinction between the gross value of exports which included the value of intermediate inputs, both imported and domestically produced, and value added. Since the gross value of exports could well rise much faster than their value added content, it was desirable to assess also the net contribution of exports to the economy or to a particular industry.

Retained value was defined in the study as that part of value added in production or exports which accrued to domestic factors of production. The study found that the ratio of retained value to value added varied from country to country and from industry to industry, largely owing to the differences in natural resource endowments of individual countries and different degrees of foreign participation in domestic economic

activities. It also varied greatly from branch to branch within the manufacturing industry. Since the retained value of exports of manufactures could differ widely from the gross value of exports, the contribution of a particular branch to total exports of manufactures might be quite different when expressed in terms of retained value rather than of gross value of exports.

The study noted that foreign participation in economic activities could affect retained value, whatever the stage of development reached. However, the scope for attaining high levels of retained value in the export of manufactures and semi-manufactures, and hence for retaining foreign exchange earnings from such exports, was positively related to the level of diversification of the industrial base, in terms both of its depth and breadth, and to the availability of indigenous resources.

The experience of several developing countries would seem to suggest that a strategy of industrial development based on exports need not depend solely on maximizing value-added to indigenous raw materials nor simply on minimizing the import content of exports. There are opportunities for the further processing of imported raw materials as well as for exploiting and processing domestic natural resources.

Structural adjustment, protection and reform of the international trading system

The formulation of strategies and policies for industrial development in developing countries should also take into consideration the linkages between structural adjustment, protectionism and the reform of the international trading system. UNCTAD has a continuous programme concerning these interdependent subjects. Some relevant observations which may be of use to the Expert Group Meeting are briefly outlined below in order to provide background material for consideration in formulating the issues to be considered at UNIDO IV.

On an annual basis governments review in UNCTAD changing patterns of production and trade with a view to observing the nature of structural

change in the member countries. There is a commitment on the part of governments to facilitate the process of structural adjustment in line with change in comparative advantage.

Should an activity in any country lose its international competitiveness, there are, by definition two possible courses of action. The activity may regain international competitiveness or may be phased out without the intervention of government. Alternatively, the government may intervene where the activity, although uncompetitive, may be maintained through some sort of assistance. While the first course of action may involve structural change in line with market forces, the second provides the link between the implications of a lack of structural adjustment and the resort to protectionist measures.

For developing countries, the pace at which the major developed market economy countries phase out their uncompetitive industries is of crucial importance. Recent experience has shown that comparative advantage had changed more rapidly than a number of major developed countries can, or are willing to structurally adjust. As is well known, the situations where developed countries face the major adjustment problems is precisely in those areas where a number of developing countries have become internationally competitive.

In this process where international competitiveness changes more rapidly than importing countries adjust their structure of production, there are two crucial concerns for the role of trade in the process of development. First, there is a certain inbuilt disadvantage that works against the trading interests of developing countries because of the nature of the products which they export. A manifestation of this is, of course, the Multi-fibre Arrangement which, as a derogation from GATT principles and procedures, provides a framework for the restraint of developing countries' exports of textiles and clothing.

The second concern, however, is that not only are developing countries disadvantaged because of the nature of the products in which they have a

comparative advantage, they fare poorly in the "arrangements" that are, one way or another, drawn up in response to the situation. In the Multi-fibre Arrangement, not only are the products subject to restraint, certain countries, that is the developing countries themselves, are the only signatories subject to restraint. This situation prevails even though it is well known that other countries have export growth rates that far surpass those of many of the developing countries, and that developing countries may not be the source of "market disruption". Such disruption is the phenomenon which the Arrangement was designed to avoid, and the justification for the imposition of restraints on "low-cost suppliers", who by definition are developing countries.

Thus, it is for reasons such as this that many countries, particularly developing countries and other smaller countries, are questioning whether the functioning of the world trading system is conducive to trade being a means to promote economic development.

The trading system is most certainly not open and liberal; it is becoming increasingly regulated in an ad hoc manner that serves the interests of very few. The motivations behind the current trade regulations are frequently mixed and not always clear, and little consideration is given to the economic impact domestically or on the aspirations of trading partners. Of particular concern, in this respect, is the increasingly discriminatory and non-transparent manner in which trade is regulated. We now see a greater degree of 'made to measure' protection tailored to the needs of "special cases" such as textiles and clothing, footwear, steel, automotive products, and agricultural products. Such exceptions now constitute the bulk of international trade; if the Multi-fibre Arrangement heralds the managed trade arrangements of the future, then the member countries of UNCTAD should sincerely rethink a number of factors bearing on the international trading system.

Thus, in short, governments have considered it appropriate to review in UNCTAD the problems that relate to the process of structural change and to explore the link between that process and the growing incidence of protection coupled with this; they have for the reasons noted above found

it necessary to review at the same time the evolution of the rules that govern the functioning of the world trading system.

In this process, it has been noted that trade is being regulated in an increasingly non-transparent fashion. As governments fail to adhere to the appropriate rules and procedures there is a lack of discipline and objectivity in the regulation of trade. To monitor this process, the governments have requested that the Secretariat record the incidence of non-tariff measures facing products of export interest to developing countries. An inventory of non-tariff measures has been completed and over 21,000 official governmental measures have been identified. This inventory is updated and added to on a continuing basis.

THE ROLE OF THIRD WORLD MULTINATIONALS AND SMALL AND MEDIUM-SIZED COMPANIES IN THE INDUSTRIALIZATION STRATEGIES OF DEVELOPING COUNTRIES by Eduardo White*

INTRODUCTION

The process of industrialization of developing countries has been historically dependent on relations with developed countries through trade and investment flows. Such dependency was in general concentrated on a few industrialized countries which for a long time divided among themselves the main spheres of influence in the Third World. During the 1970s, however, there were several indicators that developing countries were gaining more autonomy in their external economic relations, through a wider diversification of trade and investment flows. In terms of trade, such trends were manifest in the increasing number of export markets and countries supplying imports, and more significantly, in the dynamic rate of growth of trade relations between developing countries themselves.

In terms of investments, developing countries started to enjoy an increased availability of supplies of capital and technology through the entrance of enterprises of a larger number of resource countries, the proliferation of new forms of investment and the emergence of new actors with certain special characteristics. Among such entities, particular interest was arised by the so-called "Third World multinationals", (MNCs) or firms of other developing countries that invest and transfer technology abroad, and the small and medium-sized companies of industrialized countries (SMFs) that set up projects in developing countries.

Despite their different origins, MNCs and SMFs appear to share some crucial common denominators which sharply contrast with the patterns of Transnational Corporations (TNCs): basically, they neither operate in oligopolistic markets nor enjoy dominant positions at the international level; and they do not exercise global control and strategic planning over a network of affiliates in several countries. For these reasons, the main interest on the new entrants has arisen in the context of the search by developing countries for wider and better alternatives than those traditionally offered by big TNCs for the acquisition of productive

Unless otherwise mentioned, the data in this paper are based on the following papers of the author: White and Feldman, White(a), White 1983.

* Professor, Centro de Estudios Juridico-Economicos, Buenos Aires.

resources needed for economic development.

In principle, MNCs and SMFs are likely: to offer more advantages and lower costs, than TNCs; to serve to channel the importation of "appropriate" or adapted technology, in better terms and conditions; to facilitate the participation of local firms and investors of recipient countries; to impose less restrictions on the transfer of technology; and because of their lack of oligopolistic powers and resources, to facilitate the building up and exercise of stronger bargaining capacities in developing countries. Such are the advantages viewed - but, so far, not definitely corroborated - in the increased participation of these new actors.

The present international economic crisis seems to offer some positive ground for the development of new forms of investment in developing countries. Among other factors, protectionism and recession in the industrialized countries are creating a stronger rationale for South-South cooperation and joint ventures, as well as for stimulating the expansion abroad of smaller companies under heavy pressure in their increasingly tight markets in the industrialized countries. At the same time, the aggravation of the crisis, particularly in the financial area, and its repercussions in the economic policies of both developed and developing countries, could have negative effects in the future development of such phenomena.

Before discussing some characteristics of the recent trends and experiences of MNCs and SMFs in developing countries, the next section quickly looks at some figures about their existence and scope.

Developing country firms

An estimate of the United Nations Center on Transnational Corporations, based on data available for 30 countries, shows that the flow of foreign direct investment (FDI) originating in developing countries grew from an average annual amount of \$32 million in 1970-72 to \$508 million in 1976-78 (UNCTC, 41). The tendency of such investments is to originate in developing countries with semi-industrialized economies or large foreign exchange surpluses - the leading countries being Argentina, Brazil, Colombia, Venezuela and Mexico in Latin America; Hong Kong, Singapore, India, Philippines, Malaysia, Taiwan Province, and the Republic of Korea in Asia; and oil-exporting

Arab nations such as Kuwait, Saudi Arabia, and Iraq - and to locate in other developing countries, particularly the neighboring economies at a lower or similar level of development. The intra-regional tendency of FDI is particularly strong in Asia, where developing countries of the region accounted for 14% of the combined total investment in ten host nations during the 1970s. This includes cases as Malaysia and Sri Lanka, where more than one-third of FDI had a regional origin. The comparable figure for Latin America was 6%; but for certain host countries, such as Colombia and Peru, intra-regional investments accounted for 14% to 19% of the total (Ibid, 73).

The number of firms of developing countries engaged in FDI operations seems to be increasing. In Latin America by the late 1970s there were around 400 parent companies registered as foreign investors of regional origin (excluding Panama and other "tax havens" used by TNCs). Argentina featured with 60 and Colombia with 30 parent companies with projects throughout the region (White, 1983). In Asia, 666 foreign manufacturing projects originated from other countries of the region were identified. For South-East Asia alone there were 494 projects (Wells, 1980). Indian companies had nearly 200 projects in operation or under implementation in other Asian countries, approved by the Indian Government by 1980 (Lall, 1982). As of June 1979, the total number of overseas FDI projects of firms from the Republic of Korea had reached 314 (JO 1981, 54).

MNCs are also active in the transfer of technology to other DCs - through non-equity forms, such as turnkey jobs, exports of complete plants, technical assistance and licensing agreements. For example, a recent analysis of technology exports from Brazil identified 176 operations, most of them located in other developing countries (Sercovich 1981); and firms from the Republic of Korea had been awarded contracts for more than \$400 million in mid-1978 (Rhee and Westphal 1978). In 1978-1979, 36 consulting firms in India sold their services abroad earning \$45 million (Lall 1982).

SMFs

Evidence about the actual participation of SMFs from industrialized countries in developing countries is still less solid than for MNCs.

Coming from the same countries of origin than TNCs, they are not disaggregated in the statistics and registers of foreign investment and technology transfer. However, recent studies in some Latin American countries showed that their presence is not negligible (White and Feldman). After a careful analysis of the government registers, which permitted the classification of the sizes of the parent companies and foreign licensors in several European countries, a study revealed that the numbers of firms with less than 500 employees in the home countries, involved in direct investment and technology transfer in Latin America, was very significant. It ranged from 28.3% in Brazil and 18.5% in Mexico to 14% in Peru and Venezuela (see Table 1). In terms of the volumes invested, however, the weight of SMFs was significantly lower, ranging from 1% to 2% of the total investment of the respective country of origin. But the table shows that in the field of technology transfer through licensing agreements the performance of smaller firms is also remarkable.

Characteristics of the new entrants

Both MNCs and SMFs can be characterized as small by international standards. Yet MNCs are usually medium-to-big firms in their domestic markets, and the same would happen to many of the SMFs viewed from the host country perspective^{1/}.

Most MNCs investing abroad in the manufacturing sector are leaders in their home markets, operate in moderately concentrated sectors, and have a long period of previous experience at home, which includes export activities. Also many engineering and consultancy firms have recently started to expand and operate in other countries as a result of the huge investment programmes undertaken by some developing countries' governments for the development of the physical infrastructure. Also state enterprises of countries such as Brazil, India and the Republic of Korea, have become significant exporters of turnkey deals, engineering and consultancy services, and construction projects. Yet in terms of the number of overseas ventures, privately-owned enterprises clearly predominate over state companies.

^{1/} A company of up to 500 employees in its home country fits into the category of SMF in many industrialized countries but it would be probably big in the smaller markets of most DCs.

TABLE 1

SMALL AND MEDIUM-SIZED ENTERPRISES OF EUROPEAN COUNTRIES (*) WITH EQUITY PARTICIPATIONS AND
LICENCING AGREEMENTS IN BRAZIL, MEXICO, PERU AND VENEZUELA.

Percentage number of independent ** SMEs with up to 500 and 1000 employees in the home country, in respect of total European firms, classified by form of technology transfer and recipient country.

| FIRMS \ Recipient countries | BRAZIL | | MEXICO | | PERU | | VENEZUELA | |
|---|--------|--------|--------|--------|-------|--------|-----------|--------|
| | < 500 | < 1000 | < 500 | < 1000 | < 500 | < 1000 | < 500 | < 1000 |
| Equity Participation (Subsidiaries and joint ventures) | 28.3 | 41.8 | 18.5 | 33.5 | 13.9 | 27.8 | 14.0 | 23.3 |
| Licensing | 30.0 | 37.8 | 20.3 | 26.9 | 29.2 | 35.4 | 13.5 | 27.0 |

* Federal Republic of Germany, France, U.K., Netherlands, Italy, Sweden, Switzerland.

** Not listed as subsidiaries or holdings of other companies in the repertories utilized for detecting size.

SOURCE: White and Feldman, The Role of Small and Medium-sized Enterprises in the International Transfer of Technology: Issues for Research. TD/B/C64, Tables 2 and 3.

The involvement of subsidiaries of TNCs is clearly marginal in most capital and technology exporting countries, although the technology exported is usually originally imported from developed countries. There are also several cases of arrangements in which TNCs act as "technical partners" in trilateral joint ventures among developing countries.

Most SMFs with investments and transfers of technology to developing countries are companies in the range of 100-500 employees at their home headquarters. They are in general family-owned and managed, but quite a few of them are run by sophisticated university graduates. Although by definition they are not leaders in the sectors in which they operate, many of them occupy a prominent position in their particular submarkets or sectoral niches. They also tend to be highly specialized, typically in one or two product lines, which they are able to manufacture in many short series, adapted to the specifications and needs of certain "contractual markets" given by other industries. A good share of them undertake their own research and development. Most of the SMFs operating in developing countries have international antecedents in other regions, particularly through exports and productive activities.

Sectoral diversification

The spectrum covered by MNCs and SMF is wide. Contrary to some views of this phenomenon as substantially confined to sectors or branches neglected or abandoned by TNCs, it includes a diversified range of industrial activities.

Manufacturing and other industrial activities (such as civil construction) concentrate the largest share of direct investment and technology transfer among developing countries. Traditional, mature sectors using low scale and labour intensive technologies - such as textile and garments, food products, light engineering, plastics, etc., where domestic enterprises of the more advanced developing countries have years of experience to offer to the less developed ones - predominate as the object of direct investment. Yet there are also cases of projects in high technology sectors such as machine tools, transport equipment, pharmaceuticals, and capital intensive intermediate products such as paper and pulp, steel and petrochemicals. As above mentioned, developing countries' firms are also present in the supply to other developing countries of public works (highways, hospitals) and industrial plants.

On the other hand, the overseas activities of small and medium firms of industrialized countries correspond in general to the pattern of sectoral diversification in the home economies, where they participate significantly in certain branches such as metal-working and capital goods, textile and clothing, food, furniture, ceramic products, non-metallic products. Thus in principle their productive profile appears similar to that of the MNCs. Yet the international expansion of SMFs is clearly more concentrated on innovative companies of highly specialized, relatively sophisticated branches, such as capital goods and precision industries.

Geographical scope

As above mentioned, the geographical diversification of investment and technology flows among developing countries tends to follow a regional pattern. This trend is particularly true in the case of producers of final or intermediate goods, which typically follow previous trade flows, which in general are regionally concentrated (more in Latin America than in Asia). Yet a more global orientation can be observed in the case of non equity ventures such as turnkey deals, and engineering services. For example, India and the Republic of Korea are offering more industrial projects of that kind to the Middle East than to their own regions, and Brazilian construction companies have been recently awarded the largest works in Arab and African countries.

The SMFs geographical orientation is not very different. They show a tendency to seek out the markets that most closely resemble the home economies for which they first developed their products. In fact, most of the flows go to other developed countries, and the expansion to developing countries is clearly concentrated in the more advanced economies of the Third World. Thus, although the tendency of SMFs to move to developing countries is increasing - for example, according to a recent survey in the FRG, companies with less than 500 employees accounted for 56% of the firms with investment plans in developing countries (White and Feldman) - the main target is the group of the largest, fast-growing and semi-industrialized areas, such as the big countries of Latin America.

This outlook suggests that the least developing countries are certainly not the main beneficiaries of the expansion abroad of MNCs and

SMF. The phenomenon has its focus on the high and middle income group of developing countries, although a few low and lower middle countries could partially benefit from the geographical proximity to more advanced developing countries.

Factors behind the emergence and spread of DCF and SMF ventures in developing countries

The international projection of DCFs and SMFs and their expanded role in developing countries can be explained by a set of common factors complemented by reasons more specific to each kind of actor.

Certainly the phenomenon of increasing diffusion of specialized information throughout the world and the expansion of world trade during the last two decades, the access to financial markets during the 1970s, and the increased availability of services and organizations of great importance for international investment operations, such as trading companies, banks and insurance companies, engineering firms etc., have created a stimulating environment for the international projection of more and more firms.

Developing countries, particularly the more advanced ones, achieved by the 1970s a relatively strong growth performance in the manufacturing industry, both in terms of production and exports. Foreign investment grew in these countries as a whole at a higher rate than in developed countries. At the same time, new forms of investment emerged, partly as a result of legal demands of many host developing countries which promoted the use of non-equity control schemes such as joint ventures and licensing agreements or, in other words, unpackaged forms of investment which innovated with respect to the traditional forms of TNC investment, and at the same time were more adapted to the capacities of smaller, non-TNC firms.

Of course the internationalization of MNCs and SMFs is not only a reflection of changes in the international environment but also a sign of a process of modernization of smaller companies of industrialized countries and domestic companies in the Third World. Regarding the first, there is no doubt that despite worldwide concentration pressures, they continue accounting for a large share - up to about 70% - of total employment in

industrialized countries. Moreover, they have contributed with important technological contributions in sectors such as machinery, electronics, scientific instruments, where they have proved to be more efficient than large companies (Freeman 1974).

In recent times, they have also increased their share in the exports of some industrialized countries such as Japan, France and Italy. In the European Community, for example, industrial integration led to a significant specialization of many specialized producers of capital goods and non-standardized goods of small size, which supply producers of final goods across national frontiers. For such firms, once a certain level of expansion has been reached, the possibilities for continued growth and preservation of their positions are more and more linked to the conquest of external markets.

In the case of domestic firms of the more advanced developing countries, a similar process of maturing and consolidation has been taking place over the years in their domestic markets. The high rates of growth in these countries during the last decades - some, as the Latin Americans, with fairly old antecedents of industrialization, and others, as the South-East Asians, after a much more recent and faster development process - gave rise to a diversified production base, coupled with an increasingly experienced entrepreneurial sector. Despite the strong presence of foreign investment from industrialized countries in most such countries, domestic firms took an active part in the industrialization process occupying significant positions in certain branches, particularly of traditional industries.

In India and the most advanced Latin American countries the policies of import substitution under high protectionist barriers and the expanding role of the State in the development of heavy industries and infrastructure works stimulated the emergence of domestic firms in a number of sectors. Early educational programmes in countries such as Argentina and India provided the basis for the availability of skilled human resources for the industry; and the exposure and experimentation with foreign technology during long periods of open door policies for TNCs was an important factor for building up local capacities.

Paradoxically, these capacities were further promoted, at a second stage - and particularly during the 1970s - by the introduction of government controls on the imports of technology which tended to protect local developments. In the more recently industrializing countries of South-East Asia, the strategies of industrialization combined a strong outward-looking approach with a significant reliance on the role of domestic firms in the development process. Finally, the emergence of capital-surplus Third World countries after the dramatic oil price rises of 1973-74 added a new source of South-South industrial cooperation leading to a number of joint ventures.

The impressive export performance of the manufacturing sector that took place in the last two decades in developing countries - and particularly those in South-East Asia - has been pointed out as a key factor leading to foreign production (Wells 1980). A large share of such exports went to other developing countries - predominantly on a regional basis - and was undertaken by domestic firms. The limited size of the home-economies was an important stimulus for firms venturing abroad, particularly for those large companies that had achieved a significant share of the domestic market and looked for alternative ways of continuous growth and diversification.

At this stage, the explanation of expansion through foreign investment rather than through exports makes use of the famous product-cycle theory, in a modified version. In effect, after a certain period the smaller developing countries to which exports go start their own process of import substitution and adopt protective measures that threaten exports, so that, as a response to the potential loss of such markets, firms of the more advanced developing countries may decide to make a direct investment.

The move towards developing countries seems to have a different rationale in the case of SMFs. The study of their experience in Latin America showed that few of them were exporting to the countries of the region where they located subsidiaries or joint ventures before such decision was taken. It appears that aggressive rather than defensive motivations predominate in the internationalization of SMF, the strongest determinant being the desire to penetrate or to develop new markets. Expansive strategies may be

closely related to the products of some of these firms, which are by nature international (such as surgical and medical instruments). The "drag effect" of transnational corporations - which as major industrial customers of small firms at home are followed by these in their overseas ventures - is also important.

Domestic and international recession has played an important role in the expansion abroad of both SMFs and MNCs. Many small firms of industrialized countries have gone abroad because their local and export markets had reached saturation point or because of the slowdown or other problems in the economic conditions at home. For smaller producers of capital goods, for example, the shortage of work at home and the pressures of international competition may have been important motives for geographical diversification. In the case of smaller firms in structurally weak sectors (for example, textile and clothing), the challenge came also from imports from a number of developing countries having competitive advantages deriving from their significantly lower labour costs.

The same factor seems to have played a role in developing countries. For example, India and other Asian and Latin American countries, started in recent years to suffer severe slowdowns in the rate of economic activity, affecting various industrial sectors which had been growing together with local demand. Thus many civil construction and engineering firms which were participating in huge public investment programmes found themselves suddenly with a significant overcapacity that led them to compete in other developing countries for large contracts.

The problem of higher labour costs seems to be an important factor particularly in the case of SMF operating in labour-intensive sectors in developed countries. The drive for greater cost efficiency through the use of cheap and abundant labour in developing countries is in that sense a strong motivation in such firms when they are planning a certain international specialization, but is less important so far in South-South investments where labour differentials are less critical.

Risk diversification is also strongly present among the determinants of both MNCs and SMFs. The strategic consideration is not only to compensate for recession of home with profits in other countries. Political instability and insecurity of private property is typical in developing countries, but many smaller companies of the Northern hemisphere have started to be motivated by similar considerations, including the risk of international conflicts.

Another element is the desire to escape or circumvent strong government controls and regulations in the areas of foreign exchange and taxes. This has always been behind overseas ventures of MNCs; but more recently, SMFs of industrialized countries showed sensitivity regarding similar interventionist policies in their home countries, such as environmental protection and labour regulations, which may have a stronger impact on them than on bigger firms.

The objective to capitalize on technological advantages is an important determinant in a number of cases of SME overseas investments, and to a lesser extent in the case of MNCs. Many SMEs have in fast developed highly innovative manufacturing techniques, and are conscious that such methods put them in a favourable position in other countries. However, owing to the limited resource base of smaller companies, they are not always able to protect their technical superiorities from the pressures of competition on a long-term basis. This may explain a tendency of small and medium-sized enterprises to a quick capitalization of their technological edge through overseas activities. On the other hand, firms of developing countries have occasionally projected abroad on the basis of relatively important developments of their own. But their main technological advantage lies in the adaptation of imported innovations to the local conditions of their domestic markets, which are similar to those of other developing countries.

Finally, both SMFs and MNCs have recently started to receive incentives from their home governments to invest abroad. Thus in the

Federal Republic of Germany, the Netherlands, Japan, financial and tax incentives are available for SMEs that set up activities in developing countries and in this manner contribute to the promotion of exports. A similar policy has been adopted by advanced developing countries such as India and Brazil with regard to domestic companies that sell technology abroad. However, recipient developing countries have not adopted so far special treatment or incentives for foreign SMEs and MNCs. The latter enjoy certain advantages, so far incipient, in the context of regional integration schemes such as the Andean Group and ASEAN.

Advantages of SMEs and MNCs for developing countries.

The spread of SMEs and MNCs seems to offer a number of important advantages from the viewpoint of host developing countries. To begin with, the increase in the degree of competition among potential foreign suppliers of capital and technology may serve to enhance the bargaining strength of host countries and to diversify their external economic relations.

Secondly, to the extent that developing countries prefer joint ventures and other "unpackaged" forms of technology transfer, both SMEs and MNCs seem to be equally adapted to such requirements. Studies on both types of firms have shown that they are more likely to adopt joint ventures structures than wholly owned subsidiaries or other equity-controlled forms^{1/}. The reasons are the same in both cases: lack of overseas experience, insufficient financial resources, positive evaluation of the contributions of the local partner, less monopolistic advantages than TNCs (even in cases of high technology SMEs) and therefore lower need for unambiguous control or weaker bargaining capacities to impose controlled arrangements.

Thirdly, the technology offered by MNCs and SMEs tends to be more appropriate to the needs of developing countries, on several dimensions. In the case of MNCs, one aspect of such appropriateness derives in general

^{1/} For evidence on equity and control strategies of SME in developing countries, see White (a). For evidence on MNC in Latin America, see White, 1983; on India, see Lall 1982; on the Republic of Korea, see Jo 1981; see also Lecraw 1981, Wells and Warren, 1979, Ahmad, 1981.

from the adaptation of the technology to local conditions of other developing countries, such as the smaller scale of the market, the abundance of labour, the available raw materials and inputs, the climatic and environmental conditions. Similarly, SMEs tend to transfer more labour intensive (as in the case of capital goods producers), adapted nevertheless to the smaller scale production needs of many developing countries. Another dimension common to both cases seems to lie on the higher flexibility of the technology at an earlier stage than TNCs, either because their weaker market positions encourage them to penetrate new markets ahead of their larger competitors, or because they lack the means for pursuing global strategies in marketing their technological advantages.

Similarly, MNCs have revealed significant capacity for introducing new products and processes originated in industrialized countries, moving ahead of the marketing decisions of TNCs. For example, the weakness of patent protection in Latin America has allowed domestic firms from experienced countries such as Argentina to anticipate the introduction of new drugs in the regional markets. These reasons together with the lack of an integrated transnational production system and their lower overhead costs explain also why SMEs and MNCs are less likely to use restrictive practices in their technology agreements, such as tie-in clauses, export prohibitions and transfer pricing mechanisms.

The transfer flexibility of SMEs and MNCs may have another advantage in terms of the capacity of absorption and learning of the recipient parties. In contrast to TNCs, which tend to limit the transfer to the designs and product technology, smaller firms are often able and willing to transmit software techniques - including experience, management and organizational forms - which are often the real bottleneck in developing countries. Such transfer is made easier by the direct contact with the owners and managers of smaller firms, where the technology and industrial experience is embodied, and very often has been learnt not so many years ago, so that the firms can still understand the problems of late starters. Furthermore, the productivity of labour intensive techniques increases through "learning by doing", and the less automatic equipment being used could be adequate for the production of short-run series of several products, as might be the case in the small markets of developing countries.

Fourthly, whereas TNCs have been criticized for concentrating in relatively high-income consumer durables markets based on sophisticated and advertising-intensive marketing techniques, MNCs and SMEs tend to operate in sectors more closely matched to the industrial development needs of many host countries. These sectors include, on the one hand, traditional lower-income mass consumer goods such as food, textiles, clothing, etc., which could be of particular interest both to less developed countries in relatively early stages of industrialization and to more industrialized developing countries seeking to diversify their industrial structure. On the other hand, they include capital goods and industrial inputs which may correspond to the needs of both larger, more industrialized developing countries with gaps to be filled in their increasingly diversified manufacturing sector, and of less developed countries pursuing the development of their physical infrastructure.

Finally, the entry of MNCs and SMEs in the economies of developing countries could contribute to the creation of more pluralistic and less concentrated markets. In this sense, they may have positive effects on domestic competition. Both types of new entrants have a definite tendency to enter by establishing new companies rather than taking over local concerns. The administration of their overseas ventures is highly decentralized from their parents abroad, and local partners have an important role in the direction of the projects, which are often comparable in size to the parents. Their less sophisticated inputs and labour intensive procedures make them more inclined to source their supplies in the host countries, mobilizing local raw materials. Hence SMFs and MNCs tend to become more integrated in the local economy of host developing countries, and in fact cases of gradual and full "indigenization" are not rare.

Final considerations

Despite all its promising features, the increasing participation of "newcomer" MNCs and SMEs should not be viewed as a panacea. First, their involvement in the industrialization process of developing countries is still an incipient trend. The volume of South-South direct investment and

technology transfer by SMEs is a small fraction of total foreign participation in the developing world. Larger firms will continue to dominate the bulk of the process of international resource transfer, as long as there is a strong correlation between such process and the size of firms. Smaller firms lack the financial, managerial and information resources needed to take full advantage of the existing opportunities. The costs and risks involved in international production may prove to be too high for most of them.

Second, there are areas and activities which seem to be out of the scope of their potential contribution to developing countries, particularly the large scale industry, the continuous transfer of sophisticated technological innovations, and the development of massive export programmes.

Third, their competitive advantages depend on the way and extent to which they remain small, less-diversified internationally and not dependent on patented and sophisticated technologies. Yet some of these newcomers are being taken over by TNCs, precisely when they start to show international competitiveness. Others that enter the developing countries' markets as subcontractors of large TNCs may curtail the possibilities of domestic suppliers. Still others grow so fast that they tend to become TNCs and develop similar behaviours. Thus, their participation may not always improve the conditions of developing countries.

In addition, mention was made of the tendency of SMEs to concentrate their projects in the more advanced developing countries, due to their risk sensitivity and need for a similar environment. The least developed countries seem to be excluded by most of the spontaneous international projections of smaller firms. Moreover, for certain small firms the lack of experience and familiarity with developing countries may imply the need to maintain control of their overseas operations through 100% on majority ownership. Such weakness may also create problems in the negotiation of non-equity arrangements and joint ventures. There are also cases in which highly priced and quality products and sophisticated machinery were introduced without consideration for the need to make adaptations to the new environment.

Finally and perhaps more importantly, at this stage of dramatic and worsening conditions in the international economy and particularly in the situation of developing countries, issues such as the role of smaller firms in the South-South and North-South redeployment, may appear as insignificant in comparison to the great financial and trade problems.

Yet one of the main dangers of the present debate about the ways and means to get away from the crisis and revive the industrialization process is to forget and neglect the existence of certain positive long-term trends that were maturing in the years before the last aggravation of the crisis, and run the risk now of being directly or indirectly aborted by future developments and public policy reactions.

In fact, whatever the limits of their present contribution and their lack of short-term impact in the growth rates of the industrial sector, the increased participation of these newcomers in the international production relations of developing countries is certainly a crucial element in the process of building up of self-reliant industrial structures in the Third World, based on the active involvement of national decision centers capable of negotiating and competing with other actors in the international market. The present participation of MNCs and SMEs in the industrialization of developing countries is a clear manifestation of a long-standing process of gradual accumulation of experience and bargaining capacities, and an indicator of the potential offered by this phenomenon if adequately capitalized and promoted by public policies in the coming years. Probably what is at stake are not only the direct benefits of the internationalization of smaller firms, viewed in particular from the standpoint of recipient countries but, more seriously, the future survival of domestic enterprises in developing countries, and of smaller enterprises in developed countries, as long as such survival increasingly depends on the capacity to participate in international activities.

In effect, the internationalization of MNCs and SMEs is to a large extent explained by the patterns of post-war industrialization in developed countries and the more advanced developing countries. Such

trends encouraged the emergence and spread of small firms, in the case of the former via specialization and in the case of the latter through learning by doing with imported technologies coupled by protectionist policies. In the last two decades, this process was further encouraged by the growth of world trade, the higher transparency and narrowing of the international system, the increased access to financial markets, the phenomenon of technological diffusion and the emergence of new forms of international investment and transfer of technology.

But in recent years, some of these conditions have suddenly changed. World recession, which up to a certain point played a positive role in stimulating the overseas expansion of SMEs and MNCs, and was supposed to favour some North-South redeployment trends, has given rise instead to a growing protectionism coupled with an increasing concentration, oligopolization and conglomeration of production on a world scale. World trade has become increasingly dominated by barter transactions and complex arrangements that imply the control of very large organizations and South-South trade is decreasing even in regional integration areas. Profound technological changes are at the same time encouraging a greater centralization of economic activities.

The years of easy access to the financial markets are also over, and with them the stimulus for smaller firms and countries to unpackage productive resources. Many developing countries have flexibilized or discontinued policies of foreign investment and technology transfer that led to new forms of international production, adapted as we have seen to the characteristics of MNCs and SMFs and have also revised incentives and subsidies granted to national enterprises. Further, they have started to allow higher concentration levels in their narrowed markets, while opening the doors again to big TNCs, in the hope of getting the much needed financial resources.

To sum up, the current international economic crisis and the present mood of the public policy reactions may seriously affect one of the most

promising developments in the industrialization process of developing countries. Thus in the context of the arrangements to be undertaken in order to overcome the most serious problems, governments and international organizations should take care of preserving and stimulating the process of redeployment of Third World firms and smaller enterprises of industrialized countries.

But whatever the expectations on the results to be obtained through global negotiations, developing countries should adopt by themselves all the policies and measures needed to prevent the loss of an asset which has involved decades of patient efforts. Such policies and measures entail the preservation of incentives to domestic enterprises, subsidies to technological development, selectiveness in the foreign investment and technology transfer field, and other actions of state intervention which are not always consistent with the global trends and pressures. Co-ordinated moves by developing countries will be necessary in order to have some success in pursuing such policies. In turn, developed countries should understand that developing countries are presently offering an excellent field for the future survival of their small and medium enterprises, one of the key factors of pluralism and competition in modern capitalist societies. Such an understanding implies the granting of incentives and facilities to the redeployment of SMEs to developing countries, instead of curtailing the existing opportunities by deepening the concentration process and the protectionist policies.

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INTRODUCTION

The theses of this contribution are that:

- the recognition of technological unemployment (tech.u.) is hindered by the presuppositions of both Keynesian and monetarist economics;
- jobs are as important as incomes;
- product innovation (the invention of goods and services substantially different from all those at present available) creates little tech.u., while process innovation (the invention of cheaper ways of making existing things)^{1/} creates a lot;
- there may or may not be such unemployment today in advanced capitalist countries (there certainly is in the Third World);
- in view of the immensity of the unemployment problem in all market economies it is as well to use technological controls even though technology may not have created the unemployment; and to prevent some new technologies from establishing themselves, in rich and poor countries alike; but
- such measures should be confined to the non-traded sectors.

The present world depression is very deep. Keynesianism is said to have failed - though that is not the opinion expressed in this paper - and monetarism has failed overtly and completely. Indeed it has been the major cause of the slump. Unemployment affects all market economies, including the most advanced. Many young people now entering the labour market will never have a job all their lives, since by the end of the present slump (if any) they will have become unemployable.

That in so great a slump and such a vacuum of policy the imposition of labour-intensive technology on new investment has hardly been mentioned indicates a deep ideological incompatibility between such ideas and "normal" economics. This incompatibility can be traced back to the early nineteenth century, but would perhaps be out of place here.

* Professor Peter Wiles, Professor of Economics, London School of Economics and Political Science.

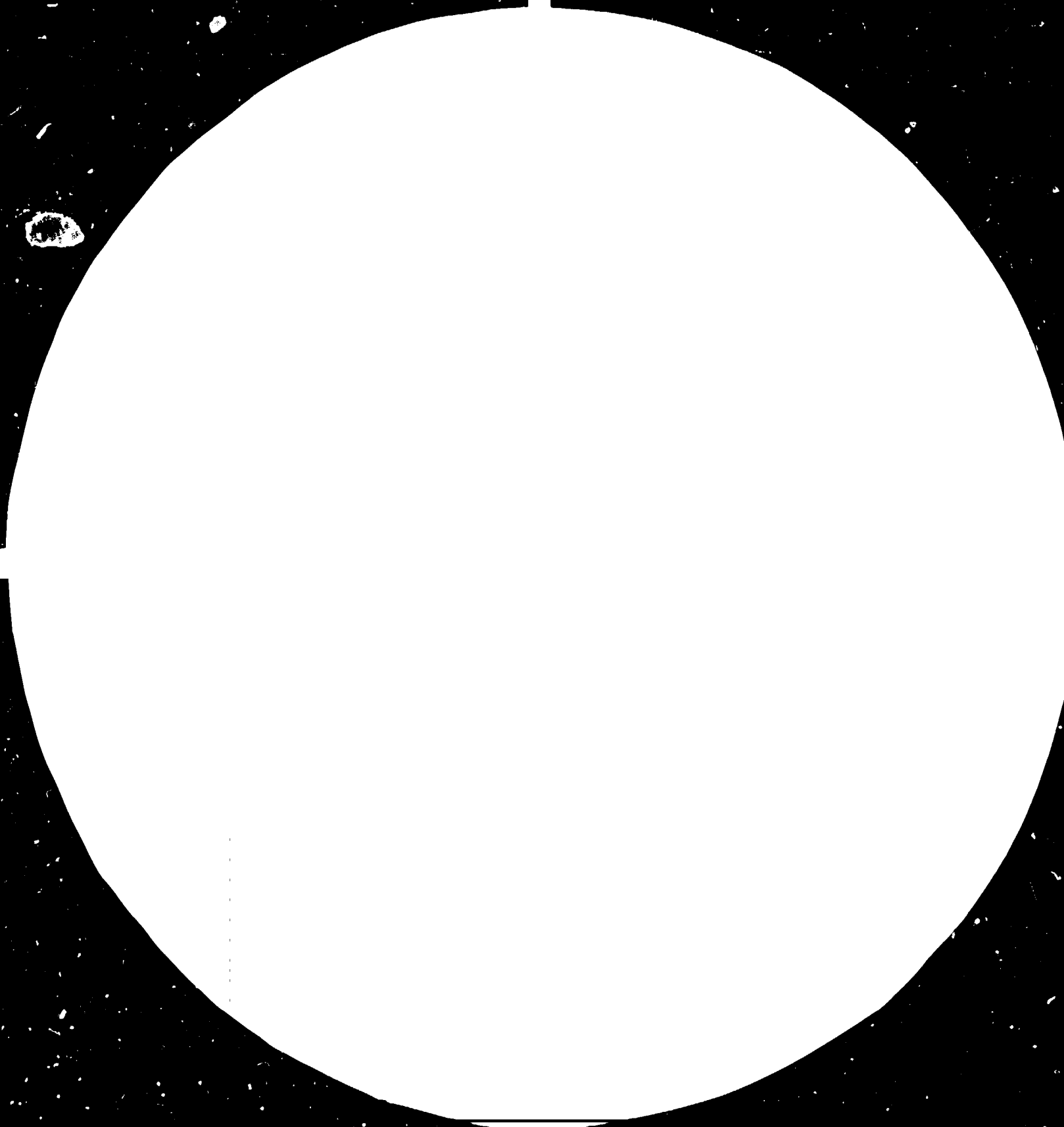
^{1/} A new machine for producing existing things resembles a product innovation while it is being sold, but not in macro-economic terms.

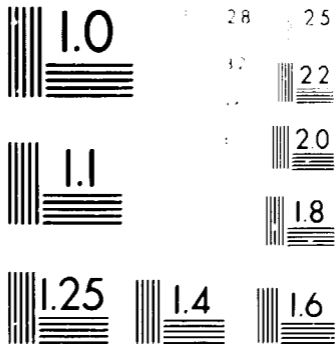
If we skip forward to Keynes (1936), it is clear that he made certain changes in the basic assumptions of economics: homo was not always economicus, wages were sticky, savings could be hoarded, expectations were irrational, investment was due to animal spirits, etc. Therefore Say's law - that supply creates its own demand, i.e. that incomes earned must be spent, and that human wants are so expansible and flexible that there is no danger of earnings being hoarded - was untrue in the short-run. Investment, for whatever reason, was often too small to offset saving (but the technocrats had it, by implication, too big to offset by the labour force, and were in no way concerned with aggregate demand). It is surprising that Keynes, laying so much stress on sticky wages, does not wonder whether new technology puts people out of work; for they will not or cannot price themselves downwards enough (in real terms, of course) to get re-employed somewhere else in an older technology. But the fact is that he does not raise this question, and sets his whole mind to investment's multiplier effect on aggregate demand. The actual number of workplaces created on the first round of the multiplier is no concern of his.

The monetarists can be simply dealt with. They re-establish the position of Say, and make explicit what he did not: the downward flexibility of wages, if not hindered by unions or high state doles, will always re-establish full employment in the face of technical problems.

None of the views of main-line economists to technological unemployment should be rejected absolutely. But they must be condemned as one-sided and incurious to a remarkable degree. As usual, only development economists and Sovietological, nay also Soviet, conomists have shown breadth of mind and an interest in the possibilities. But main-line economics is about advanced capitalist countries, and here mere technological snobbery, and not by any means only among economists, plays a large part. For the very word "advanced" means not in need of intermediate technology, does it not? And the use of the very latest (most labour saving) thing is the main source of economic price in every single country in the world.

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MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A
 NATIONAL BUREAU OF STANDARDS-1
 NATIONAL BUREAU OF STANDARDS-1
 NATIONAL BUREAU OF STANDARDS-1

Yet what is intermediate technology but investments of sufficient labour intensity to mop up unemployment in developing countries - perhaps even at the expense of national income growth? What is Soviet full-employment policy but investments carefully located so as to mop up unemployment where it arises? And indeed in an economy of pronounced capital shortage if some plants are super-modern for, say, military reasons, must not the rest be of intermediate technology if enough workplaces are to be created with the capital available? - or if not whole plants then many particular functions within all plants, such as materials handling and dealing?

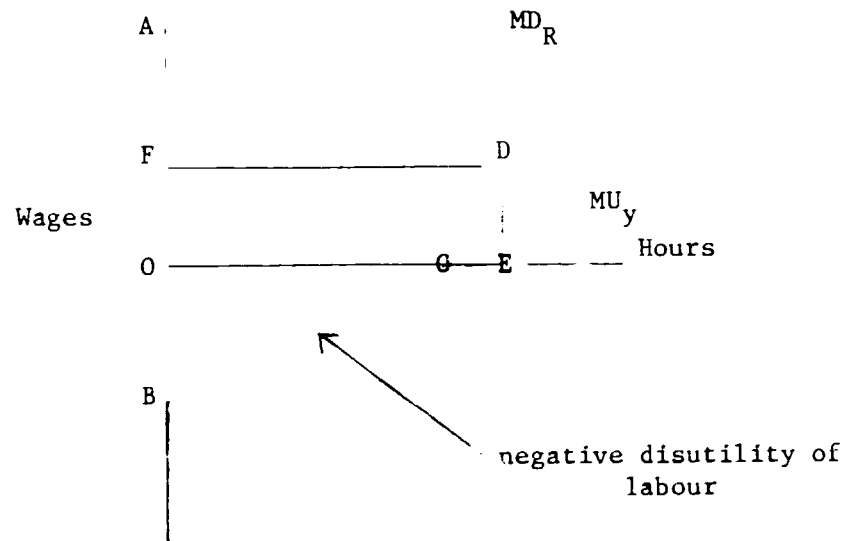
The notion of the workplace is missing in neo-classical economics. Yet it comports huge transaction costs at its creation, so that enterprise bankruptcy destroys workplaces for a very long time. And once we have moved off the planning stage (from "putty" to "clay") the substitutability of factors is very small indeed, so that the number of workplaces is very insensitive to subsequent moves in the wage/product price ratio. Perhaps only office work and agriculture, with their large number of postponable activities, are exceptions.

Dualism (in development economics) is yet another instance of a concept handled incorrectly. It is constantly implied that it should be abolished as quickly as possible, in order "better to integrate" the economy. But the dualism creates employment, and keeps people happier than in slums. And what is it precisely? - nothing but an all pervading, natural, traditional, powerful resistance to new technology. We should be so lucky as to be able to re-grow a little dualism in Toxteth.^{1/}

Another reason for our visceral resistance to the concept of technological unemployment, is that work is supposed to be bad, while only income is good. But in general only the marginal, or at any rate last few, hours of work are bad, or even unpleasant, for the average person, unless the form of the work is itself particularly disagreeable. So

^{1/} The section of Liverpool largely inhabited by blacks. Long-term unemployment is exceedingly severe, and rioting and petty crime correspondingly so.

it is better that 95% of the labour force should work and be paid 100 each (total 9500), than that 80% should work and be paid 120 each (total 9600), or even much more - which is the likely result of technical progress. In the following figure it is irrelevant how the level of employment OE was reached, except to know that for some extraneous reason the wage rate is OF: the figure only shows how it feels when we are there. The curve MU_y is not a demand curve for labour, but the marginal utility of income derived by labour from being employed. The "worker's surplus" ABDC includes as well as the usual area AFD indicating the superior utility of intramarginal income, the large area OBC in which work is a good in itself. This sentiment (area) is rather insensitive to the rate of money income received. It expresses one's feeling of worth in the community, sheer technical interest in what one is doing, etc.



It is of course difficult, to put it mildly, to know the relative magnitudes of OCB, ADCO, DCE and recorded income OEDF. It is nevertheless true that DCE is much smaller than OCB for most people; that a society in which this is not so is severely threatened; and that long-term and even (among the young) medium-term unemployment tends to move C to the left, accustoming people to cynicism and idleness. In any case, and this is the main point, OBC is destroyed in one individual by unemployment but not greatly increased in another by the upgrading of his work - and these are both likely results of technical progress. What the more fortunate person gets is a higher wage, of course, so that in all probability his "crude money income" OEDF rises.

There is also the distributive aspect of technological unemployment. As an economist, one is taught to think of national income as primary, and its distribution as secondary. But the supporters of intermediate technology are on the whole less interested in the total than in its distribution. They assert, so to speak, that $95 \times 100 > 80 \times 120$; because with most intermediate technologies it is the many unskilled jobs that are preserved, and with most advanced ones it is the few skilled that remain in employment. In the opposite case (e.g. textiles) their argument applies, of course, a fortiori. In all cases, it should be recommended that, under a system of artificial technological controls, all capital-intensive technologies be held back, and all labour-intensive ones be promoted^{1/} where employment is threatened.

Of course all this only goes to show why economists must be expected to approach the subject of tech.u. with inhibitions that ordinary people do not feel. It proves nothing at all.

Economists have nevertheless made substantial contributions to the study of technology as such, and one of these, largely unrecognized in the technology market, is very important for us: the distinction between process innovation and product innovation.

For its the former that causes tech.u., while the latter tends to mitigate it. Let us first examine this proposition on a world-side scale. If there were no product innovations anymore and there were only the present list of products, and their production rose and rose, then all technical progress would cause tech.u. This is inescapable and obvious. But if there were only the present list of products, and the cost of producing them fell and fell, every consumer would eventually be satisfied, because of the law of diminishing marginal utility. That is to say, each product is subject to this law, so any fixed list of products is also subject to it. So consumer demand would cease to be indefinitely expansible, and all process innovation would cause tech.u. to sit in even sooner than it would in any case.

^{1/} I.e. a more advanced technology could conceivably be more intensive, yet save so very much capital that it still lowered costs. To allow for this base possibility, the words "advanced" and "intermediate" are suppressed in the text.

The idea, prevalent but not universally accepted among Marxists, of Full Communism includes by definition a state of zero marginal utility for all goods. This is entirely possible if product innovation ceases while process innovation continues: it is hard to imagine that humanity could not produce for itself in this way enough manufactured products and services to bring about that state of affairs in a century or so. The "indefinite extensibility of human wants", so beloved by economic textbooks, is caused by product innovation.

But simultaneously, tech.u. would rise to great heights - expressed, it is to be hoped, through rationally distributed reductions of working hours. Eventually every improvement would result in exactly matching unemployment.

There is not enough space here to enter into the cases of agriculture and construction (diminishing returns and shortage of space respectively, so heavy dependence on population growth), and transportation (it is difficult to imagine the limits to tourism, or exactly what the "cessation of product innovation" might mean). This contribution concerns after all industrial technologies first and foremost.

Now it is evident that both product and process innovations probably come into any country from abroad. At present most innovations of both kinds come from advanced capitalist countries, and are protected by patents or more simply by the fact of technological leadership^{1/}. But Brazil and Mexico already export technology and this may become commoner in future.

Now our whole grasp of the distinction is comparatively recent. Yet the market for technology makes no distinction between the two kinds. Moreover, nearly all technology has a foreign origin, and imports are easily controllable, and a poor country cannot afford to buy all the knowledge that there is, so it must and can choose the licences and machines least likely to lead to tech.u. at home, since it suffers quite peculiarly

1/ The firm that has developed the present innovation is probably in the best position to develop the next one too, so it hardly needs to protect the present one with a patent.

from that. These are clearly the product innovations, *ceteris paribus*. In the *ceteris paribus* clause one finds, evidently, short-run profitability in the home and export markets. But while recognizing here the likely foreign origin of most technology, the question of foreign trade in its products is postponed until later.

Can it be shown, then, that in recent years, say the last 15 or 20 which takes us back well before Yom Kippur, 1973, there has been *inter alia* technological unemployment in advanced capitalist countries?

For instance:

- consumption is reaching some ceiling of real demand, so that the more productive labour is, the less one wants of it;
- progress is quicker than ever, so that more and more people are put out of work for the same expenditure on R and D and investment. There is, therefore, a succession of ever more unfavourable short-run situations; and
- wage rates are not merely sticky in a downward direction, but stickier than ever; so all substitutions of one thing for another lead to unemployment, including those of one technology or product for another.

As to the first point, it has been shown that continued process innovation would certainly bring in tech.u. in this case. Price elasticity of demand for more of the same product is bound to decline. But after all product innovation (in consumption goods) is an entirely different thing, and it does continue at a great rate. The disillusionment with consumption would, in any case, manifest itself in a higher rate of saving year by year, not simply that high rate that mystifies everyone in a period of inflation. There is no such constant increase in saving rates, so this first point may be dismissed.

As to the second point, factor productivity residuals show no increase in recent years. The micro-chip is of course very spectacular - but so was the railway. Each spectacular advance renders people unemployed in a way that no reduction of real wages, even to below subsistence level,

could counter - but it was always so (statistical estimates are, however, lacking here).

This forces one back, then, into the eminently neo-classical third point, which needs no explanation. The assertion of stickiness is clearly true: process innovation is not resisted by lower wages, so it always leads to unemployment, at least on a world scale. But the curing of that unemployment entails new enterprises and products, i.e. very heavy transaction costs and indeed investment costs. In an era of monetarism these are not undertaken. So technology does indeed play its part in our misery, though it need not have done so, and the wound is self-inflicted.

That technical progress has created unemployment in the Third World is surely beyond the least doubt. It has not done so everywhere, nor are the mechanisms qualitatively different from those at work under advanced capitalism. The Indian example is the one best (though not well) known.

India contains as an enclave the largest NIC in the world: the so-called "8 crores" or "organized sector". If this sector were to be entirely self regarding it should perhaps go for the most advanced technology on all fronts and so compete on foreign and domestic markets with advanced countries.

For technical progress cancels comparative advantage. To quote Mr. Bharat Ram:

"There is then the misplaced concept of comparative advantage. We continue to hang on to the idea supported by Western scholars that our labour enjoys a potential comparative advantage in areas of intermediate or 'appropriate' technology suited to a combination of mediocre skills and low wages. To the extent these skills can be improved the potential advantage will be realized.

Comparative advantage is an illusive concept. Among other things it depends on the nature of technology. As a matter of fact, the greatest productivity strides in industrial nations have come

out of technological advancement. Some credit to skills notwithstanding this is how Japan and the West are able to outdo the developing countries in spite of their wage rates being higher by orders of magnitude. The new microprocessor-based production methods now threaten to further widen this gap.

Unfortunately we are still trapped in the notion that we enjoy comparative advantage because our labour is cheap. But robotized production will be cheaper than the output of the cheapest labour imaginable in any environment. This will doubtless set off convulsions of mental and physical readjustment. In advanced countries where the blue-collar production oriented labour is already a small and shrinking proportion of the total work force, the problem will be one of coping with structural unemployment and retraining for white collar oriented functions. The change in the working pattern of the white collar workers resulting from a new information and communication technology of course will be close to traumatic".

This is a desperate vision already for advanced countries. It is hardly less desperate for the "8 crores". In India's tragic circumstances, free and rapid technical progress has not much expanded, and may even in future contract, employment in the organized sector; for technologically that sector has still a very long way to go, and can reach "world level" only with a massive increase in productivity.

But above all such a policy offers no promise of immediate or medium-run improvement for the "60 crores". Basically, they can only benefit, in Mr. Ram's scheme of things as in the more dogmatic and inhuman schemes of an older generation of technocrats, from "trickledown": the gradual and virtually unplanned percolation of prosperity from the organized sector. But this expansion is, as one has seen, very doubtful.

It should be noted that supporters of "trickledown" come from the left as well as the right of the organized sector. The great Indian debate about private property and a free market versus public property and a degree of planning has extremely little to do with the "60 crores", and does not, in the terms in which it is now conducted, affect their fate. Thus as a left-wing technocrat of more traditional mould said, India's main problem is to raise (by better management and planning) the rate of profit, even in the private sector: then there will be more investment, and

so more output. Inter alia there will be more tractors, and "so we shall mechanize agriculture". When asked "and what will they do?" he did not understand. When the question was repeated, he still did not understand. To the question "What work will they do?" he replied "Oh, they will sit and drink beer".

Fleeting words, in an informal conversation, hardly meant seriously. But they are very revealing. For there can be no trickle-down if you put people out of work; not even beer will trickle against gravity. It is the business of educated and thinking people, all of them by definition in the organized sector, so to plan that sector's development that it will not directly harm the "60 crores". For sales to the "60 crores" are themselves liable to constitute free and rapid technical progress in their economy too. Cheap machine-made cloth knocks out khadi, of course, but cheap tractors knock out labour directly. All this would be excellent if people have something else to do, but if organized employment doesn't grow they won't.

So one comes around again to stronger restraints on technology in some industries: the declaration that selected labour-intensive techniques are "protected species". Labour intensity must be protected against both internal and external competition, i.e. from the installation of better machines at home and from the importation of the cheaper products of those machines if situated abroad. The choice of these industries is admittedly a difficult technical and political task, and such controls, while easier to enforce than price controls, must still cause trouble. It is perhaps best to choose a few large and simple industries such as cotton-weaving, where indeed a few such controls exist already. It remains important for India's ultimate future, present self-respect and indeed military posture that technology should grow rapidly outside this "game preserve". There is nothing disgraceful about Bharat Ram's high-technology vision of the "8 crores". Indeed without it they may emigrate: a brain drain clean contrary to every other Indian interest.

It may be asked what will happen to the national income? Its growth will diminish during the period of the introduction of the technology controls, in order that employment may grow quicker. Income will also be more equally distributed. Specifically, the income of the organized sector will be reduced each year by the greater amount it pays for the protected goods: but "an old tax is no tax" - growth will pick up again.

One refers, of course, mainly to process innovations, and so does the actual Indian legislation (to which we now turn), though without using the phrase. Product innovations in the textile industry are common, since the product may fairly be defined as a series of combinations of heat, colour, texture etc. But it happens that a comparatively primitive technology, especially in weaving and finishing, can provide most of them, though at great cost.

The Indian Government's technological restrictions are:

- selected (woven) products are reserved for the "decentralized" sector;
- the use of filament yarn by the "organized" sector is restricted; and
- yarn exports are restricted to assure a regular yarn supply to the "decentralized" sector, which mainly weaves not spins. (Adhyaru et al., 1979, 43).

These controls, be it noted, do not at all exclude technical progress within the "decentralized" sector: indeed the Government strongly encourages it. In extreme circumstances this would be wrong, and indeed if it progresses far enough the decentralized sector will cease to exist separately. But without a good deal of such progress the sector will not keep up with product innovations, and consumer dissatisfaction would become intolerable. And so of course process innovations seep in as well.

The main point is that in all market economies there is vast unemployment, and, whatever the cause, technological controls can be part of the cure. The cause, incidentally, is clearly monetarism. Monetarism seems to respond to some deep need in the human psyche. So it is not going away, and in any case the damage it has done is so vast that many millions in the advanced capitalist world have been rendered unemployable for the rest of their natural lives. These people all need protected jobs. If you do not agree that monetarism is far and away the main cause of unemployment, and actually allocate to technical progress a large part of the fault, your attitude should of course be less complicated, but the result is the same.

The protection of any job means that neither demand nor technical change may destroy it. The defial of demand is less defensible: small subsidies, maybe, but no-one would tolerate the piling up of mountains of unsaleable commodities, unless it be in agriculture. Such policies go "against the grain" of the capitalist system. Butter mountains are very unpopular, steel mountains or type-writer mountains would be totally unacceptable. But the idea of resisting technical progress is altogether less controversial: indeed it is a straightforward part of trade union tactics and strategy. Nevertheless a legal, as opposed to grassroots, prohibition of new technology, and still more the destruction of recent technology, is a very serious affair, and would not be easily accepted.

Above all, it would affect our balance of payments: also the most sensitive element in our technological snobbery (above). In theory, one could delay technical progress at an even rate in all branches of the economy. In practice that would mean a perpetual pressure on our balance of payments, because import penetration would be forever rising and exports forever falling, and devaluation for whatever reasons always insufficient.

It is accordingly suggested that protected jobs should be confined to the non-trading sector, which makes directly neither exports nor import substitutes. There are further criteria:

- the jobs should rarely be directly tax supported. With tax support as well we are creating able-bodied pensioners;
- militant unions should as far as possible be excluded from the circle of beneficiaries;
- other similar principles, such as jobs for the disabled, should be applied in much the same way. It is true that the disabled can work on very high technology, but disablement quotas should not be imposed on unprotected firms. In the same way such firms have certain labour-intensive operations, such as materials handling in Soviet factories; but they should not be hindered from abolishing them if it is profitable; and
- all minimum wage laws should be summarily abolished.

What is the cost of such a policy to: (a) society, (b) the protected sector itself, and (c) the buyers of the output? The answer to (a) which is the main point, is, in money terms, not much, since one saves the dole immediately and in the longer run also the crime prevention costs. Against this is the administrative cost of yet another series of regulations. In larger than merely monetary terms there are of course greater and greater gains to register the wider we look: above all the areas OBC in the figure.

As to (b), no firm's competitive position is of course changed. But the first problem is that each industry in the protected sector has to charge higher prices. Even though the industry-wide demand curve is inelastic, this is a very serious matter and will lead to protests. But a very large part of the demand is public: teachers, road-builders, health workers, etc. That is to say, much of the protected sector faces inelastic public demand, which contradicts our condition in the first point above and seriously reduces the value of the whole proposal.

A second problem for industries thus singled out is the morale of their more skilled employees in the long-run. What engineer wishes to be condemned to "inferior" machinery? What manager does not resent "molly-coddling"? It will probably be necessary to designate excepted enterprises, which have permission to import or invent whatever they please; because it is particularly wrong to let the country fall behind altogether in any branch.

It is then on these points (b) that the whole idea of technological controls may founder. If they cannot be made minimally acceptable to the industries on which they are imposed, they will not work at all. It is suggested that the protected jobs should be in designated occupations, not branches, within the non-trading sector, and specifically those upon which the technology of the branch does not depend; secretarial, materials handling, catering, etc. With the advance of electronics we may shortly have to add elementary teaching, dispatching, and heaven knows what besides: our controls need not protect only the unskilled. It will be observed that this answers the second problem just discussed, but not the first.

The buyers or the taxpayer (c) must of course shoulder the burden of the extra cost. In so far as the taxpayer pays, he does not lose but he gains, as already shown under (a). The experience with individual buyers in the market is that they have never rioted against the vast and unjust levies made upon them by trade union restrictive practices, which of course weigh upon single commodities quite disproportionately.

The idea of technological controls, has thus been floated and an attempt made to try and sink it. It seems to be still around, though water-logged. It is quite obviously no panacea - but after all, the disease is very desperate.

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SOME CONSIDERATIONS CONCERNING THE INDUSTRIAL DEVELOPMENT STRATEGY AND POLICY OF THE DEVELOPING COUNTRIES IN THE EIGHTIES AND THE NINETIES by L.Z. Zevin*

The developing countries' industrial development experience of the 1970s permits certain conclusions that could prove useful in defining the strategy and policy in this field for the 1980s and 1990s.

Many developing nations have scored definite successes in industrial development. Their industries have become the most dynamic sector of their national economies, possessing newly created industrial capacities, producing for internal consumption goods that used to be imported, increasing the output of manufactures for export, and substantially broadening employment opportunities. With the direct participation of the state, some of these countries are building large industrial and infrastructure projects using up-to-date technologies and skilled labour.

At the same time, however, the process of industrialization in the developing nations is meeting with serious obstacles, both internal and external. The complex and diverse tasks of overcoming backwardness and speeding up the rates of economic development and industrialization require, for their solution, the creation of favourable conditions both at the national and international levels.

In the developing countries themselves, these include the need for progressive socio-economic changes with a view to dismantling, in the first place in agriculture, the archaic social structures posing obstacles in the way of the growth of effective demand, to modernizing the economy, to resolving the food problem, and marshalling all the potential resources for the needs of development. Industrialization strategies can be successful only through the active participation of the working masses in the towns and country. There is also a growing importance for the policy of a more equal income distribution, including implementing a tax reform, carrying out effective agrarian changes, increasing state funds of social infrastructure, and introducing state regulations of prices and distribution.

Assistance to industrial development must provide for the restoration and assertion of national sovereignty over natural resources and their development to meet the needs of national economy and its industrial sector, as well as for effective control over the activities of private foreign business and transnational corporations.

* Professor, Institute of Economics of the World Socialist System, The USSR Academy of Sciences

Overcoming these countries' backwardness is a global task whose resolution will help improve the international relations and make for the progress of mankind as a whole. The system of the international economic relations, resulting from the colonial and post-colonial periods, geared to suit the self-seeking interests of monopoly capitalism, and above all those of the transnationals, remains the principal external obstacle in the way of the developing countries in their efforts to overcome backwardness, to build a modern industry, and to create an independent economy.

Crucial to the success of the economic and social progress of the developing countries is the need to curb the arms race, banish the threat of a nuclear catastrophe, and end local conflicts.

The performance of the 1970s has laid bare significant unevenness in the levels of industrial development reached by the different groups of countries in Asia, Africa and Latin America. Some, more industrially developed countries have proved able to appreciably increase their rates of growth, while those of the least developed nations did not exceed one per cent during that decade.

In countries with high rates of national income growth, however, there has also been an increase in the number of people living in misery, growing disparities in the national income distribution, and unshrinking armies of those jobless and partially employed. The sharp social stratification and misery affecting the bulk of the population, especially in rural areas, have been exacerbated by the uneven development and structural disparities in their economies, as well as by the limited scope of the progressive socio-economic changes in the main group of these countries.

In the course of the 1970s, the slowing down of growth rates in the economic "centres" did not trigger an instantaneous economic recession in the "periphery", i.e. in the developing nations, since for some time the international monetary and credit systems continued to operate as a compensator permitting the receipt of means for sustaining economic growth and servicing debts. By now, however, these possibilities are practically

exhausted. That is why one can expect further difficulties in obtaining external resources for development, including industrial growth. This ought to prompt the urge to diversify foreign economic ties through expanded cooperation between the developing countries themselves, as well as with the socialist states.

The aggregate impact of these internal and external factors is stimulating a re-orientation of the industrial development policies in many of the developing nations. In the process, in some cases urgent tactical tasks requiring genuine solutions, tend not only to overshadow the long-term, strategic objectives, but also to cause a rupture between them and a substitution of tactical tasks for strategic objectives. In industry, this manifests itself in a lower priority for industrialization, in the loss of the long-term perspective, and in the loss of sight of the final goals of industrial development.

For this reason, the objective of UNIDO IV should be the discussion of the problems of industrialization itself. Industrialization should be regarded as a long-term policy, a strategic line over a definite, rather long period in the process of national revival of the developing countries. The difficulties, individual errors, and the excessive hopes of the 1960s and the 1970s that failed to materialize, must not be allowed to lead to the abandonment of the policy of industrialization, or to its "dismemberment" into fragmented and desultory measures. It is only a consistent policy of industrialization, and a strategy aimed at establishing a national economy on a modern basis, that can integrate a multi-structured economy into a single economic organism, create the material and technical base for the process of national reconstruction, strengthen other sectors - with agriculture in the first place - and bolster the country's position in world trade and the international division of labour.

It would, probably, not be realistic to try to work out a single, uniform industrialization policy and strategy for the whole of the developing world. There appears, however, to exist a number of the most general features that are indispensable for the pursuit of industrialization

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in the specific conditions of an individual country, to which the attention of UNIDO IV should be drawn. These include: enhancing the role of state enterprise in industrializing an industrially backward nation; ensuring reasonable protection of the emerging national industry against unfavourable effects of external factors; applying the levers of medium- and long-term planning and programming, assuring industry's leading role in its interaction with agriculture and its modernization; broadening the participation in the international industrial co-operation by expanding the traditional and forming new ties, overcoming the unilateral orientation in foreign economic relations, and striving for an optimum combination of indigenous and external technologies with a view to the eventual establishment of a national scientific and technological base.

Crucial to the shaping of the industrialization strategy and technology will be to determine its basic, principal criteria. The impression now is that it is industrialization's international criteria - like restructuring the world economy, ensuring the supply of energy and raw materials, and adapting to other world economy processes - that are now being brought to the forefront. These criteria are, doubtless, of extraordinary importance, and their impact must be taken into account in working out a developing country's policy and strategy in the field of industrialization. If, however, they come to be regarded as being of paramount importance, the developing countries' industrialization and industrial development will be determined not by internal needs and socio-economic tasks, but rather by factors external to national economy.

Given the actual current alignment of forces in world economy, this would amount to nothing more than a "runner-up", "imitating" type of industrialization, subjected to external factors and in which the dominant role is played by the industrially developed "centres" and transnationals, rather than the interests of the developing countries themselves. This approach is incompatible with the concepts of national and collective self-reliance. That is why UNIDO IV could, in discussing industrialization policies and strategies, pronounce itself in favour of the priority of internal criteria, but, naturally, taking a possibly

fuller account of the external factors' impact and possibilities of using them. This approach would be in line with the political watchword "Industry for the People" that could be proclaimed by the Conference.

As an international organization, UNIDO ought to reflect the fact that at present the process of industrialization in the developing countries, proceeds within the framework of different social systems, which accounts for the application of quite different implementation methods and differing policies and strategies. One of them is based on public ownership of the means of production, and planning, the other on private property and the market instruments. UNIDO must grant equal standing and "citizenship" to both types of industrialization, and the documents of the General Conference and of other bodies ought to analyse both the common and the specific characteristics of each type.

There is a possibility (and the need) for a detailed analysis of the more profound objectives and nature of industrialization. In our day, they are formulated quantitatively, par excellence ("the Lima objective" is to reach 25% of the world's industrial output, and the Arousha Declaration speaks about 30% of the world's exports of manufactures). To this, one ought to add also some qualitative characteristics, like integrating the national economy into a single whole on a modern basis, increasing per capita industrial output and raising the living standards, developing agro-industry, consistently raising the technical level of industry and of the whole of economy, and searching for an optimum combination of the large, medium-size and small enterprise at the different development stages, as well as of the capital and labour intensive processes.

In the 1970s, concepts such as basic needs, endogenous development, preferential development, of light and medium-size industries, deployment of industrial enterprises outside big cities, the link between industry and agriculture, agricultural development, etc., gained increasing currency. It would be worthwhile giving thought to ways of combining these concepts, which express the essential needs of individual countries and definite stages in their development, with the long-term policy and

strategy of industrialization. Without such a combination, industrial development policy will tend to be fragmented, to lack continuity, and to lose sight of the final goals, while the national forces will lose the ability to channel the process of industrial development into the mainstream of the basic long-term interests of the developing nations. In this situation, the external resources will go mostly into sectors and spheres servicing the needs and interests of production and capital outside the country in question.

Thus, what is called for is an integrated approach to the policy and strategy of industrialization so that they could incorporate short and medium-term development concepts mentioned above, and combine them into a single effort as applied to the specific conditions of a particular developing nation where industrialization is one of the principal goals. This would make it possible to provide to a large extent an indigenous basis for the process of expanded reproduction, and to create more favourable conditions for the country's participation in the world trade in manufactures, and for the international industrial specialization and co-operation.

Resolving this task may be assisted by industrial development through setting up not only individual, albeit even large enterprises, but also sectoral (industrial and agro-industrial) complexes consisting of groups of related productions, and through a parallel and well-timed development of service enterprises and those supplying materials and components, as well as the development of product markets both inside the country and elsewhere. Such complexes are apt to stimulate specialization and co-operation inside the developing country, a fuller mastery of foreign know-how and technologies, and the development of national R and D activities. Their role is great in doing away with a lop-sided industrial development, the excessive groundswell of individual production and the unilateral specialization in the international division of labour. In the process, the export sector can be created not as an isolated enclave, but rather as an integrated part of the emerging modern economy of a developing nation.

In the process of industrial development, an ever growing weight is being added to the possibility of utilizing the achievements of the scientific and technological progress, and of gaining access to foreign experience and knowledge.

Scientific and technological progress is lending a special urgency to establishing the order of priorities in introducing advanced technologies into a backward economy. The increased scale of production in our day requires larger investments, greater financial inputs into the development of science and applied studies, mass training of skilled cadres, and the search for an optimum combination between capital- and labour-intensive production, large-scale and small-size industries, and between unsophisticated and science-intensive productions. The problem of striking an optimum balance between the internal markets capacity and product output is growing more complex, and the role of foreign markets and international cooperation is growing.

The borrowing of foreign technologies and know-how is helpful to some extent in coping with the set of these complex problems, forming a modern national industry and in utilizing the achievements of technological progress in other national economy sectors. The experience to-date indicates, however, that the advanced technologies and related know-how imported fail to deliver the expected result and remain an alien body in the developing economy, if their introduction does not go hand-in-hand with the mass-scale training of local specialists and establishment, in the country, of a developed scientific and technological infrastructure including a network of general education and vocational training schools, secondary specialized and higher education establishments, research institutions, design organizations and centres for scientific and technological information. Of no lesser importance is the development of institutional framework ensuring a normal functioning of new equipment and its link with the traditional sectors as well as the establishment of material and technical supply.

For these reasons, the developing countries' strategy of cooperation with the developed countries has to rely on a combination of the use of foreign technologies and know-how with the national efforts, that would

eventually open the way for a self-sustaining growth of the developing countries' production and scientific and technological potential on the basis of deepening the international division of labour in production and scientific and technological research.

Practice indicates that this is especially characteristic of the relations with the developed capitalist countries: the most typical trend in the transfer of technology to the developing countries is the granting or sales of licences and know-how, equipment supplies for the enterprises, assistance in its assembly, organization of the production process, etc. In the process, the highest level of cooperation is the sector, when foreign technologies and know-how are used for the development of an individual national economy sector (like the production of petroleum, copper, tin, bauxite, aluminium, oil refining, individual types of machine building and others). Here, it is necessary to stress that the transfer of technology and know-how as a rule fails to be accompanied by assistance in the establishment of the scientific and technological, design and laboratory experimentation base at the level of both the enterprise and the whole sector.

The sectoral approach to the transfer of technology has some advantages, permitting concentration of resources for establishing, in developing countries, priority productions and sectors using favourable natural climatic conditions and the immense labour resources.

At the same time, however, the sectoral approach reveals substantial deficiencies manifesting themselves with growing force at this time of rapid scientific and technological progress. The transfer of technology for building individual large projects fails to create sufficiently strong stimuli for the integration of national economy on the basis of modern technology, and in some cases tends to perpetuate the existence, in the developing economy of the traditional and the modern sectors. Not infrequently in this case, the modern sector has a strong export orientation, with no organic links with other sectors, which hinders the spread of scientific and technological progress to the entire national economy, while these enterprises and sectors themselves show a

tendency to rely mostly on imported R and D findings, equipment and technologies.

A selective transfer of technology is not conducive to the development of national specialization and cooperation, which significantly reduces the national economic effectiveness of foreign technology and may simultaneously increase technological dependence on partners in the developing countries. The weaknesses of confining technology transfers to one sector manifest themselves with special clarity in the social sphere.

Not infrequently, this leaves outside the bounds of technological progress sectors whose development is crucial for national revival and liquidation of the fragmentation of national economy, while the fruits of technological progress are enjoyed by relatively narrow segments of the population, incomes differentiation intensifies, and the level of investment precludes the use of possibilities for providing maximum employment opportunities.

Finally, cooperation at the sector level does not do away with the lopsidedness of the developing economies, and prevents the achievement of expanded reproduction and establishment of a scientific and technological infrastructure on the national basis that could avoid the growing unilateral dependence on the developed states and transnational monopolies. The application of state regulation levers can only mitigate some of the unfavourable implications of the above widespread practice in the transfer of equipment and technology, but cannot overcome its principal deficiency, i.e., the inability to resolve a developing country's essential economic, scientific and technological and social problems comprehensively and with account for the overall national interests.

The Soviet Union and the other countries of the socialist community, in working out programmes for the transfer of equipment, technology and know-how to their partners in developing countries, strive to take as full account as possible of the new elements generated by the scientific and technological revolution for use in overcoming backwardness and in the division of labour between countries with different levels of

development. They hold the view that the strategy of the transfer of equipment, technologies and scientific and technological knowledge, which meets the changed conditions in the world and the ideals of the new international economic order, must be based on an integrated approach to the problems of the developing countries. Its aim should be to assist in shaping a modern economy and building territorial production (industrial and agro-industrial) complexes, aiming at the eventual establishment of a rational national economy complex in the developing nation, meeting its specific conditions.

Establishment of an integrated economy is a long process, requiring a maximum mobilization of the efforts of the entire nation. This presupposes the need for broadening the state sector and using the instruments of planning, since successful mastery of foreign scientific and technological experience and creation of a national scientific and technological potential in the conditions of the developing countries are possible only on the basis of a long-term state policy. The state is capable of assuring the consistent application of the national economy effectiveness criterion in borrowing foreign and developing national technologies, and using them in the interests of national rebirth and bringing the fruits of the scientific and technological progress to the broad masses of the people.

An effective transfer of technology and its adaptation to local conditions with the view to speeding up industrialization and industrial development are possible on condition that skilled cadres are trained at the same time. In the conditions of the scientific and technological revolution, the rates of expanded reproduction are increasingly determined not only by the level of capital formation, but also by a skilled labour force and the state of the system of general and specialized education. It would appear that in countries with a backward economy, a low level of general education and vocational training, with low skilled labour frequently combined with imported up-to-date technologies, the impact of this factor on economic life is all the greater.

A lasting solution to the problem can be found only through large-scale training of skilled specialists for the needs of industry, agriculture, science and culture, with the assistance from developed nations. An important characteristic of cooperation in this field is the recognition of its long-term basis, since the process of training a specialist with top skills may take 10 to 15 or even 20 years. And, finally, upon completion of their education, specialists must go back to their country in order to contribute to its national rebirth.

Background Documentation on the Industrialization Experience
in Specific Developing Countries

THE GENERAL THRUST OF DEVELOPMENT

Since the introduction of a democratic form of government in Venezuela in 1958, vigorous and uninterrupted support has been given to the country's industrialization process. The first step in this direction was the establishment, in December 1958, of the Central Office for Co-ordination and Planning under the Office of the President of the Republic (CORDIPLAN) and the approval, in July 1959, of a Declaration of Industrial Policy Principles, which, in the absence of a formal development plan, provided guidance for the measures taken to promote the industrial sector.

The guidelines established in this Declaration laid the basis for an import-substitution policy supported by a tariff protection policy which shielded national industry from foreign competition and contributed to the creation of favourable conditions for the establishment and development of new industries.

This tariff protection policy was accompanied by a policy of duty exemptions for raw materials and capital goods for the purpose of reducing the costs of the imported components needed for the production process, and by a financing policy designed to make funds available on preferential terms.

Along with the formulation of these basic policies, a set of industrial priority criteria were adopted, under which the following kinds of activities were to be promoted on a priority basis:

- industries which are directly or indirectly connected with basic Government projects;
- industries which make intensive use of domestically produced and labour-intensive agricultural and mining products;
- industries which make intensive and continuous use of unskilled labour;
- industries which directly generate or save foreign exchange;

* Ms. Eglée Iturbe de Blanco, Asesor del Presidente, Instituto de Comercio Exterior, Venezuela.

- industries which because of their relatively low production costs can compete with imported products without the need for strong tariff protection; and

- industries which are located at sites appropriate for promoting industrial decentralization.

These objectives, together with the development of the basic industries, represented Venezuela's industrial development strategy throughout the 1960s, the second half of which saw a stronger emphasis on the import-substitution process and the employment generating aspects of industry. At the same time, the first cautious recognition was given to the need to begin exporting non-traditional manufactured goods.

By the beginning of the 1970s, Venezuelan manufacturing industry had already achieved major advances in import-substitution in respect of consumer goods and was faced with the task of beginning the second phase of the import-substitution process, which was to include the manufacture of intermediate and capital goods and Venezuelan participation, with domestically manufactured products, in international markets. Economic integration was also beginning to become a factor in the country's industrialization process. Accordingly, for the first half of the decade, a more detailed development strategy was formulated, in the Fourth National Plan for 1970-1974, stressing the opening of the Venezuelan economy to the outside, the improvement of productivity and the consolidation of existing industries.

This strategy was pursued during the entire past decade. In the second half of the 1970s, under the Fifth National Plan for 1976-1980, emphasis was placed on the large-scale development of state-owned basic industries producing intermediate inputs such as steel, aluminium and petrochemicals, the intention being to utilize additional national revenue generated from 1973 by higher petroleum prices. The second half of the decade also saw this same source used to increase incentives (especially financial benefits) to the industrial sector, coupled with the introduction of export-promotion machinery.

With the adoption of the Sixth National Plan for 1981-1985, three important adjustments were introduced, beginning in 1980, in the import-substitution model: first, the rapid growth of the basic industries was curbed, and attention was concentrated on consolidation of the existing industries and improvement of their efficiency; second, greater emphasis was placed on the social aspects of industrial development; and, third, there were to be selective reductions in the level of protection accorded certain products for the purpose of improving the efficiency of the sector.

These adjustments were in response to the fact that, generally speaking, Venezuelan industry had been enjoying high levels of tariff protection which limited its efficiency and export potential, and at the same time permitted it to operate at low levels of productivity and with much of its installed capacity standing idle. Likewise, over the past decade the country's industry failed to maintain a rate of growth of sufficient to keep pace with the expansion of internal demand, thereby creating a widening gap that had to be bridged through imports.

To meet this situation, a strategy was designed for this period, which, while conforming to the same import-substitution model, would make it possible to redirect the industrialization process through changes in the fundamental policy levers which had been applied until that time, i.e. the tariff protection policy, the price policy and the setting of priorities for industry.

With a view to making the products of domestic industry better able to compete with imported goods, tariff protection was reduced on a large number of items by cutting the number of products requiring import licences to a minimum and lowering or eliminating the duties on other products.

The price-control policy was liberalized by sharply curtailing the list of regulated products. As a parallel measure, the subsidies for most industrial products were eliminated.

In the area of industrial priorities there was a shift of emphasis to the following sectors:

- agro-industry;
- textiles, clothing and footwear;
- pharmaceutical chemicals and drugs;
- construction materials;
- basic industry (iron and steel, aluminium, petrochemicals);
- capital goods;
- electronics and electrical appliances; and
- motor vehicles.

In the wake of the recent exchange-policy measures introduced by the Government in February 1983, which after 20 years of free convertibility established an exchange-control system coupled with a devaluation, we are now seeing a return to total protection of the internal market and to non-selective import substitution, as well as to a restrictive pricing policy indexed to the external component of every manufactured product.

Characteristics of the industrialization process in Venezuela

High rate of industrial growth

Until the end of the 1970s, industrialization was progressing rapidly in Venezuela. Between 1950 and 1978, the annual growth rate of the country's industrial product was 7.8%, higher than that of the total product over the same period which, according to the traditional indicators, reflected a satisfactory degree of industrialization. During the period 1979-1982, economic expansion in the country stagnated, as part of a downturn that also affected the manufacturing sector. Nevertheless, and despite the lack of growth in the Venezuelan gross domestic product, manufacturing industry did grow over those three years at rates of 4.9, 2.1 and 0.2%, respectively (see Tables 1 to 3).

High degree of production concentration at a small number of enterprises and in the most densely populated regions of the country

Both these factors spring from the fact that the pattern of import substitution for consumer goods has favoured the higher-income segment of the population, which is concentrated in the largest towns, and from a deliberate industrialization policy which has encouraged the gradual conversion of importers, with the foreign capital that was supplying the imports, into producers of the goods they had previously imported.

In 1961, when the industrialization process was first launched, there were 196 large firms, which accounted for 2.6% of the total number of enterprises in Venezuela and employed 58,500 persons. There were also 6,216 small businesses employing 57,500 persons, i.e., 10,000 persons fewer than the bigger companies. By 1978, these figures had changed in favour of big business, which now numbered 793 establishments and was employing four times as many people. Small industry was operating 6,753 establishments and, with only about 10,000 more persons on the payroll than in 1961, was maintaining an employment figure very close to that year's level.

We find this same pattern of concentration involving a few large units not only in employment, but also with regard to production, products and investment. Under all these headings, the large enterprises account for more than three-fourths of the totals (Table 4).

This kind of "industrial polarization", albeit in different degrees, can be observed in virtually all branches of industry and explains the existence in Venezuela of two parallel and relatively independent structures. Despite this differentiation, industrial policy is formulated on a production sector or production branch basis, and this often reveals the contradictions of the dual system. This is particularly relevant in the area of protection and price levels, where the criteria employed in determining the levels may exaggeratedly favour the larger producers or else disadvantage smaller enterprises to the extreme.

Heavy dependence on external sources for technology, capital goods and intermediate inputs

The open nature of the Venezuelan economy, the traditionally plentiful supply of foreign currency from petroleum, with which the requirements of the other sectors of the economy have been financed, and the import-substitution process which has been introduced in respect of consumer goods, are all factors which have made the country's industrial producers heavily dependent on external sources and, consequently, highly vulnerable to fluctuations in the country's foreign exchange earnings.

Over the past eight years, capital goods have accounted for between 24 and 32% of total imports. During the period 1976-1980, capital goods valued at around \$US 10 billion were imported into the country, the average annual growth rate for this period being 20.6% (Table 5). These imports represent about 80% of the apparent consumption of capital goods, with the approximately 20% remaining obtained from domestic manufacture.

Nearly all the technology used for industrial production comes from abroad. According to the 1981 figures from the Office of Foreign Investment, the industrial branches with the largest number of technology contracts were the chemical, pharmaceuticals, plastics, and rubber industries, followed in second place by the food, beverage and tobacco industries, and in third place by the electrical machinery and equipment industries.

As of 1981, accumulated foreign investment had reached US \$ 4.13 billion, distributed among the various branches of industry in much the same order of ranking as the technology contracts (Table 6).

Intermediate inputs for industrial production account for about 15% of the gross value of manufacturing production.

Inadequate linkages within the industrial production sector

Despite the advances achieved in the import-substitution process, as recently as 1980 traditional industry still accounted for 47.8% of the industrial product, intermediate industry for 35.6%, the engineering industries for 14.4% and the remainder for 2.2%, in terms of 1968 prices.

This industrial structure, which at the beginning of the 1970s was mostly concentrated in consumer goods, changed very slowly over that decade, as can be seen in Table 2, with the consequence that the vulnerability of the sector already mentioned was aggravated.

Declining productivity

Productivity in Venezuelan industry has grown at rates comparable with, and in many cases higher than, the rates in other developing countries.

In a 1979 study prepared by the author of this report and based on UNIDO documents, production, employment and productivity growth rates were compared for 14 developing countries, among them, Argentina, Brazil, Colombia, the Republic of Korea, Singapore and Mexico. This study showed that in six of the nine branches of industry surveyed the productivity growth rate in Venezuela was higher than in most of these countries.

By its very nature, the process of industrial growth in Venezuela was initially free of conflicts between employment and productivity. In fact, while the industrial product during the period 1961-1977 grew in real terms by 10.8%, employment rose by 6.3% and productivity by 4.2%, which meant that while the number of persons employed in factories increased from 157,000 in 1961 to 416,000 in 1977, production per employee doubled in real terms during the same period from an average of \$ US 6,500 to \$ US 12,800 (in 1968 prices).

However, this trend began to lose ground starting in 1979, since with the contraction of production activity there was, first, a reduction in productivity as the same number of employees produced smaller volumes of goods, and later on a drop in employment levels, especially in the areas which, like the metalworking and engineering sector, depend most heavily on investment (Tables 7 and 8).

Industrial development prospects and strategies for the 1980s

Venezuela is currently entering a new phase of its industrial development, a phase which must respond to the changes which have occurred in the domestic economy and in international market conditions.

The first phase of the industrialization process is now largely complete and already shows certain signs of exhaustion. Accordingly, the task in this new phase will be to correct the shortcomings which have come to light in the process by gradually redirecting its policies and approaches.

Moreover, the future development of industry in Venezuela must take into account the changes which are occurring in the developed countries and which will have a decisive influence in the developing countries. Some examples are the restructuring of industry in the developed countries, industrial redeployment, and the internationalization of trade in manufactured goods, all factors which make it incumbent on the developing countries to devise new, more competitive and specialized ways of sharing in international trade.

During this second phase, Venezuela will have to pursue an industrial development strategy which at the same time that it broadens the import-substitution process also achieves progress in the export sector.

The broadening of the import-substitution process will apply to all the products manufactured in the country today which contain

- substantial improvement in manpower skills at the management and production levels, with special emphasis on national engineering capacity, technology and technical competence;
- the formulation and implementation of an industrial strategy and policy to ensure a sustained investment and development programme; and
- the retention of the essential decision-making authority in the hands of Venezuelan nationals in order to ensure that foreign capital is channelled to those areas which are considered to be in the national interest, thereby reinforcing the actions of the national business community.

From the quantitative standpoint, industry must play a major role in sustaining a high rate of growth for the domestic economy and in generating a growing volume of foreign currency revenues from the petroleum sector. The principal elements here are:

- industrial growth at a higher rate than that of the product, resulting in a higher degree of industrialization;
- reduction of the net imported component in manufactured goods by speeding the import-substitution process and promoting the export programme; and
- raising of the rate of investment in manufacturing industry.

The strategic concepts discussed in a simplified way in this paper have been designed to provide continuity and stimulus to the Venezuelan manufacturing sector for the remainder of the present decade, at a time when structural conditions throughout the country's economy are undergoing unprecedented transformations caused by far-reaching changes in the principal areas of monetary and exchange policy and in the face

of the prospect of a reduction in national revenue owing to a possible decline in petroleum earnings beginning in 1983.

In the past, both these factors accounted for the traditional availability of foreign exchange with which to finance the country's development. Accordingly, it will henceforth be the task of the manufacturing sector to generate part of the external resources necessary to pay for its imported supplies and capital goods.

For its part, the devaluation of the Venezuelan bolivar will make for improved competitiveness in a number of sectors that have so far been greatly affected by petroleum costs. This should be reflected in incentives to industry to start exporting. Another reason for doing this, moreover, is to compensate for the expected stagnation in the internal market.

In the light of these facts, it would appear that, in the next two or three years, once the cost adjustments and the internal structural changes have been accepted, Venezuelan manufacturing industry is likely to resume its traditionally high rate of growth. This will depend mainly on whether the country adopts the proper policy measures to bring about the required reorientation of its industrialization process.

Table 1
Manufacturing industry product
1970-1981

| Industry | 1970 | 1975 | 1980 | 1981 |
|--|--------------|------------------------------|--------------|--------------|
| | | (millions of 1968 bolívares) | | |
| TOTAL (excluding petroleum refining) | 6 219 | 9 286 | 12 404 | 12 499 |
| | ===== | ===== | ===== | ===== |
| <u>Traditional Industries</u> | <u>3 274</u> | <u>4 695</u> | <u>5 926</u> | <u>6 080</u> |
| Foods | 1 280 | 1 807 | 2 228 | 2 269 |
| Beverages | 675 | 1 071 | 1 925 | 2 148 |
| Tobacco | 311 | 460 | 602 | 624 |
| Textiles | 495 | 652 | 473 | 410 |
| Clothing | 213 | 337 | 259 | 252 |
| Hides and skins | 29 | 44 | 35 | 36 |
| Footwear | 87 | 139 | 157 | 176 |
| Wood and cork | 67 | 53 | 51 | 56 |
| Furniture and accessories | 117 | 132 | 136 | 109 |
| <u>Intermediate Industries</u> | <u>1 880</u> | <u>2 862</u> | <u>4 418</u> | <u>4 306</u> |
| Paper and pulp | 274 | 396 | 471 | 535 |
| Chemical products | 536 | 853 | 1 696 | 1 517 |
| Petroleum and coal derivatives | 7 | 6 | 8 | 9 |
| Rubber and rubber products | 156 | 262 | 331 | 356 |
| Plastics | 86 | 158 | 164 | 158 |
| Non-metallic minerals | 411 | 560 | 607 | 612 |
| Basic metals | 410 | 627 | 1 141 | 1 119 |
| <u>Engineering Industries</u> | <u>840</u> | <u>1 489</u> | <u>1 798</u> | <u>1 846</u> |
| Metal products | 255 | 462 | 597 | 607 |
| Machinery and equipment | 67 | 87 | 84 | 70 |
| Electrical machinery and equipment | 205 | 373 | 442 | 419 |
| Professional equipment and instruments | 5 | 19 | 36 | 36 |
| Transport facilities | 308 | 548 | 630 | 684 |
| <u>Remaining Group</u> | <u>225</u> | <u>240</u> | <u>271</u> | <u>267</u> |
| Graphic arts | 180 | 187 | 182 | 184 |
| Miscellaneous | 45 | 53 | 89 | 83 |

Source: Central Bank of Venezuela, economic reports.

Table 2
Composition of industrial product
(percentages of value in constant 1968 prices)

| Industries | 1970 | 1975 | 1980 | 1981 ^{1/} |
|-----------------|------|------|------|--------------------|
| Traditional | 52.7 | 50.6 | 47.8 | 48.7 |
| Intermediate | 30.2 | 30.8 | 35.6 | 34.5 |
| Engineering | 13.4 | 16.0 | 14.4 | 14.8 |
| Remaining group | 3.7 | 2.6 | 2.2 | 2.0 |

Source: Central Bank of Venezuela, economic reports.

^{1/} Tentative figures.

Table 3
Degree of industrialization of Venezuela

| Year | GDP | Manufacturing industry product ^{1/} (millions of 1968 bolívares) | Petroleum refining | Total | <u>Industrial product</u> GDP |
|------|--------|--|--------------------|--------|----------------------------------|
| 1970 | 50 917 | 6 219 | 2 045 | 8 264 | 16.2 |
| 1975 | 64 590 | 9 286 | 1 348 | 10 634 | 16.5 |
| 1980 | 76 612 | 12 312 | 1 431 | 13 743 | 17.9 |
| 1981 | 77 369 | 12 337 | 1 344 | 13 681 | 17.7 |

Source: Central Bank of Venezuela, economic reports.

^{1/} Excluding petroleum refining.

Table 4

Distribution of Venezuelan manufacturing activity (%)
(1961-1977)

| | 1961 | 1966 | 1971 | 1974 | 1977 |
|--|--------------|--------------|--------------|--------------|--------------|
| 1. Number of establishments | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |
| Large-scale industry | 2.6 | 4.5 | 7.1 | 7.6 | 7.3 |
| Medium-sized industry | 14.9 | 18.4 | 23.8 | 27.2 | 24.4 |
| Small-scale industry | 82.5 | 77.1 | 69.1 | 65.2 | 68.0 |
| 2. Employment | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |
| Large-scale industry | 37.2 | 48.3 | 54.6 | 55.4 | 57.9 |
| Medium-sized industry | 26.2 | 26.4 | 26.2 | 28.1 | 25.0 |
| Small-scale industry | 36.6 | 25.3 | 19.2 | 16.5 | 17.1 |
| 3. Manufacturing production | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |
| Large-scale industry | 62.2 | 66.0 | 72.3 | 76.6 | 74.4 |
| Medium-sized industry | 18.9 | 21.4 | 18.0 | 17.0 | 17.3 |
| Small-scale industry | 18.9 | 12.6 | 9.7 | 6.4 | 8.3 |
| 4. Manufacturing product | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |
| Large-scale industry | 59.5 | 60.0 | 70.1 | 73.3 | 77.5 |
| Medium-sized industry | 20.7 | 23.1 | 19.5 | 19.6 | 15.5 |
| Small-scale industry | 19.8 | 16.9 | 10.4 | 7.1 | 7.0 |
| 5. Capital assets | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |
| Large-scale industry | 78.7 | 76.7 | 79.1 | 76.0 | 77.4 |
| Medium-sized industry | 13.3 | 15.1 | 14.0 | 17.1 | 15.3 |
| Small-scale industry | 8.0 | 8.2 | 6.9 | 6.9 | 7.3 |
| 6. Average number of persons employed per establishment | <u>21</u> | <u>27</u> | <u>38</u> | <u>41</u> | <u>41</u> |
| Large-scale industry | 298 | 297 | 292 | 296 | 322 |
| Medium-sized industry | 36 | 39 | 42 | 42 | 41 |
| Small-scale industry | 9 | 9 | 11 | 10 | 10 |

Source: Eglée Iturbe de Blanco, La Productividad en la Industria Fabril Venezolana.

Table 5

Venezuelan imports classified by product type (1973-1980)
(millions of U.S. dollars and percentages)

| Year | Imports | Capital goods | % | Consumer goods | % | Intermediate goods | % | Unclassified goods | % |
|------|------------|---------------|-------|----------------|-------|--------------------|-------|--------------------|------|
| 1973 | 2 501 347 | 644 177 | 25.75 | 238 846 | 9.54 | 1 606 161 | 64.21 | 12 223 | 0.49 |
| 1974 | 3 777 152 | 764 481 | 20.23 | 345 445 | 9.14 | 2 656 954 | 70.34 | 10 272 | 0.28 |
| 1975 | 5 309 084 | 1 385 997 | 26.10 | 560 067 | 10.54 | 3 361 385 | 63.31 | 1 635 | 0.02 |
| 1976 | 5 876 088 | 1 739 926 | 29.61 | 640 146 | 10.89 | 3 496 016 | 59.50 | -0- | -0- |
| 1977 | 9 760 641 | 3 135 087 | 32.12 | 1 093 951 | 11.21 | 5 531 603 | 56.67 | -0- | -0- |
| 1978 | 10 604 383 | 3 471 248 | 32.73 | 1 365 234 | 12.87 | 5 767 901 | 54.40 | -0- | -0- |
| 1979 | 9 609 940 | 2 621 994 | 27.28 | 1 296 464 | 13.49 | 5 691 482 | 59.22 | -0- | -0- |
| 1980 | 10 652 158 | 2 554 895 | 23.99 | 1 597 484 | 14.99 | 6 499 779 | 61.02 | -0- | -0- |

Source: Import Directorate, Foreign Trade Institute.

Table 6

Direct foreign investment recorded in manufacturing industry by area of activity
1975-1981

(millions of bolívares)

| Activity | Cumulative amount recorded for the years: | | | | | | |
|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
| <u>Manufacturing Industries</u> | <u>2 952.12</u> | <u>3 242.36</u> | <u>3 354.59</u> | <u>3 608.04</u> | <u>3 979.81</u> | <u>4 252.89</u> | <u>4 860.66</u> |
| - Food products, beverages and tobacco | 763.50 | 653.92 | 870.14 | 929.72 | 948.87 | 999.36 | 1 070.51 |
| - Textiles, clothing and leather goods | 77.02 | 190.01 | 188.83 | 78.35 | 89.30 | 90.24 | 88.28 |
| - Wood and wood products, including furniture | 15.72 | 16.84 | 15.79 | 17.51 | 19.18 | 15.72 | 15.89 |
| - Paper and paper products, printing and publishing | 158.87 | 162.23 | 182.20 | 189.26 | 183.14 | 195.53 | 204.96 |
| - Chemical substances and chemical products derived from petroleum and coal; also rubber and plastics | 796.55 | 1 020.67 | 839.69 | 1 005.92 | 1 103.25 | 1 144.76 | 1 264.05 |
| - Non-metallic mineral products, except for petroleum and coal derivatives | 211.53 | 210.69 | 235.01 | 244.75 | 238.25 | 311.88 | 316.69 |
| - Basic metal industries | 116.44 | 178.60 | 149.91 | 136.47 | 100.48 | 167.91 | 597.53 |
| - Metal products, machinery and equipment | 754.49 | 779.42 | 813.88 | 941.27 | 1 149.34 | 1 264.36 | 1 237.36 |
| - Other manufacturing industries | 58.00 | 29.98 | 59.14 | 64.79 | 58.00 | 63.13 | 65.39 |

Source: Office of Foreign Investment, annual report for 1981.

Table 7

Value added per employee and per worker (1966-1977)
(in 1968 bolívares)

| | 1961 | 1966 | 1971 | 1974 | 1977 | ----- Growth rates ----- | | |
|--|--------|--------|--------|--------|---------|--------------------------|---------------|---------------|
| | | | | | | 1961- 1977 | 1961- 1974 | 1974- 1977 |
| ----- p e r e m p l o y e e ----- | | | | | | | | |
| Total | 27 960 | 36 463 | 38 317 | 40 820 | 54 486 | 4.2 | 3.0 | 10.1 |
| I. Traditional industries | 26 060 | 31 647 | 29 583 | 32 548 | 36 059 | 2.1 | 1.7 | 3.5 |
| II. Intermediate industries | 39 694 | 48 417 | 58 744 | 57 288 | 97 256 | 5.8 | 2.9 | 19.3 |
| III. Engineering industries | 20 977 | 35 666 | 39 174 | 40 728 | 36 888 | 3.6 | 5.3 | (3.3) |
| IV. Remaining group | 19 865 | 28 687 | 22 305 | 26 877 | 28 177 | 2.2 | 2.3 | 1.6 |
| Total | 27 960 | 36 463 | 38 317 | 40 820 | 54 486 | 4.2 | 3.0 | 10.1 |
| I. Large-scale industry | 44 654 | 47 842 | 48 627 | 54 028 | 73 404 | 3.2 | 1.5 | 10.7 |
| II. Medium-sized industry (upper segment) | 28 657 | 33 492 | 34 026 | 35 208 | 34 313 | 1.2 | 1.6 | (0.9) |
| III. Medium-sized industry (lower segment) | 19 568 | 28 685 | 25 618 | 22 944 | 32 801 | 3.3 | 1.2 | 12.6 |
| IV. Small-scale industry | 15 134 | 21 147 | 21 410 | 17 635 | 21 291 | 2.2 | 1.2 | 6.5 |
| ----- p e r w o r k e r ----- | | | | | | | | |
| Total | 37 467 | 48 031 | 50 658 | 53 055 | 72 137 | 4.2 | 2.7 | 10.8 |
| Traditional industries | 33 939 | 40 038 | 37 802 | 40 659 | 45 391 | 1.8 | 1.4 | 3.7 |
| Intermediate industries | 55 948 | 68 755 | 77 600 | 80 309 | 141 778 | 6.0 | 2.8 | 20.8 |
| Engineering industries | 28 800 | 46 715 | 50 327 | 51 751 | 45 131 | 2.8 | 4.6 | (4.5) |
| Remaining group | 28 075 | 39 920 | 42 949 | 37 074 | 38 452 | 2.0 | 2.2 | 1.2 |
| Total | 37 467 | 48 031 | 50 658 | 53 055 | 72 137 | 4.2 | 2.7 | 10.8 |
| I. Large-scale industry | 59 554 | 63 333 | 66 072 | 72 480 | 101 389 | 3.4 | 1.5 | 11.8 |
| II. Medium-sized industry (upper segment) | 36 504 | 44 793 | 45 031 | 44 503 | 42 731 | 1.0 | 1.5 | (1.3) |
| III. Medium-sized industry (lower segment) | 26 147 | 36 960 | 31 328 | 27 677 | 40 095 | 2.7 | 0.5 | 13.1 |
| IV. Small-scale industry | 20 628 | 27 870 | 27 910 | 22 702 | 27 400 | 1.7 | 0.8 | 6.4 |

Source: Eglée Iturbe de Blanco, La Productividad en la Industria Fabril Venezolana.

Table 8

Productivity per worker by industrial branch
(in comparison to the manufacturing average)

| Code | | 1961 | 1966 | 1971 | 1974 | 1977 |
|---|---------------------------------------|-----------|-----------|------|-------|-----------|
| Above the manufacturing average for each year | | | | | | |
| 313 | Beverages | 2.23 | 2.35 | 2.7 | 2.97 | 2.37 |
| 314 | Tobacco | 4.02 | 3.33 | 1.7 | 2.06 | 1.72 |
| 323 | Hides and skins | | | | | 1.74 |
| 341 | Paper and pulp | | 1.04 | 1.38 | 1.03 | -- |
| 351 | Industrial chemicals | 1.82 | 1.57 | 1.03 | 1.47 | 1.67 |
| 352 | Other chemical products | <u>3/</u> | <u>3/</u> | 2.35 | 2.42 | 2.13 |
| 353-54 | Petroleum and coal derivatives | 3.16 | 5.12 | 5.43 | 17.92 | 3.27 |
| 355 | Rubber and rubber products | 1.23 | 1.34 | 1.16 | 1.38 | -- |
| 362 | Glass and glass products | | -- | 1.30 | 1.13 | -- |
| 371 | Basic iron and steel industries | | <u>2/</u> | 1.40 | 1.53 | <u>1/</u> |
| 372 | Basic metal industries | | | 1.16 | -- | <u>2/</u> |
| 383 | Electrical machinery and equipment | | 1.47 | 1.12 | 1.03 | |
| 384 | Transport material | | -- | 1.30 | 1.54 | |
| Below the manufacturing average for each year | | | | | | |
| 311-12 | Foods | 0.93 | 0.93 | 0.99 | 0.71 | 0.61 |
| 321 | Textiles | 0.58 | 0.50 | 0.76 | 0.76 | 0.48 |
| 322 | Clothing | 0.58 | 0.45 | 0.56 | 0.45 | 0.30 |
| 323 | Hides and skins | 0.58 | 0.62 | 0.69 | 0.44 | -- |
| 324 | Footwear | <u>1/</u> | -- | 0.38 | 0.31 | 0.26 |
| 331 | Wood and cork | 0.44 | 0.40 | 0.34 | 0.28 | 0.27 |
| 332 | Furniture and accessories | 0.44 | 0.48 | 0.40 | 0.34 | 0.26 |
| 341 | Paper and pulp | 0.95 | | | | 0.89 |
| 356 | Plastics | | -- | 0.73 | 0.85 | 0.66 |
| 361 | Clay, earthenware and porcelain items | 0.80 | 0.82 | 0.83 | 0.38 | 0.48 |
| 369 | Other non-metallic mineral products | <u>4/</u> | <u>4/</u> | 0.83 | 0.77 | 0.53 |
| 372 | Basic metal industries | 0.69 | 0.73 | | 0.62 | 0.71 |
| 381 | Metal products | 0.86 | 0.83 | 0.76 | 0.60 | 0.51 |
| 382 | Machinery (other than electrical) | 0.81 | 0.66 | 0.70 | 0.84 | 0.67 |
| 384 | Transport material | 0.70 | 0.96 | | | 0.80 |
| 342 | Graphic arts | 0.81 | 0.78 | 0.92 | 0.80 | 0.59 |
| 385-90 | Miscellaneous | 0.60 | 0.89 | 0.71 | 0.46 | 0.43 |
| 355 | Rubber and rubber products | | | | | 0.86 |
| 383 | Electrical machinery and equipment | 0.92 | | | | 0.73 |
| 362 | Glass and glass products | | | | | 0.52 |

Source: Eglée Iturbe de Blanco, La Productividad en la Industria Fabril Venezolana.

THE EVOLUTION OF INDUSTRIAL POLICY AND STRATEGIES ADOPTED BY THE DEVELOPING COUNTRIES WITH SPECIAL REFERENCE TO SRI LANKA by A.A. Justin Dias*

INTRODUCTION

The end of colonialism presented the world with a coterie of impoverished nations which, having been subjected to decades of subordination, faced the developed countries with defiance; and through sheer inexperience in independent development, sapped their meagre resources which unconsciously steered them to yet another era of economic dependence. These nations which qualified themselves to be commonly dubbed as the Third World by more affluent countries were left with vistas of possible avenues of development, most of which proved to be abandoned trails of exploitation of valuable raw materials tapped throughout the years by their conquerers.

The natural resources of these countries were depleted and in some cases availability was negligible. Lack of experience in management and virtual infiltration of political doctrines among some of these nations proved to be a perfect base for some of the powerful nations to have further exploitation by way of introducing technical guidance at a higher price.

The countries of the Third World stand today virtually dependent on affluent nations' technical aid. Some of these countries have made appreciable head-way by virtue of being guided by national leaders, while yet others are far behind.

In the economics of the Third World countries the basic development avenues of agriculture and industry are of paramount importance as agriculture and industry go hand in hand to build economic independence of any country. The guidelines of development in these two areas are in turn directly dependant on the evolution of policy pertaining to these two vital spheres of activity throughout the years.

An example signifying the evolution of policy pertaining to these two areas of activity and the resultant factors in the growth of a country's economy can be seen in the emergence of Sri Lanka's progress among the nations of the Third World. As this paper deals directly with the evolution of Sri Lanka's industrial policy, a brief resume of the more important stages in the progress of her industry is presented here.

* Mr. A.A. Justin Dias, Permanent Secretary, Ministry of Industries and Scientific Affairs

EARLY PERIOD OF INDUSTRIALIZATION

Sri Lanka's history pertaining to industry is quite young, although her credentials in agriculture date back to an epoch of over 2,000 years. Throughout the ages though Sri Lanka has had her experience in indigenous industry, although her relative modern experience at industrialization dates back to well within two decades or so prior to her independence. It is a noticeable fact that Sri Lanka initiated her modern industrial history with agro-based production lines. This has been so as her main agricultural products that reached international markets were initiated by her conquerors who spared no pains to develop these areas of production from their agricultural resources.

Hence, evidence of the pioneer attempts at industry in Sri Lanka emerges with the birth of the initial agro-based coffee, tea, rubber and coconut industries in the distant years. Other than these primary manufactures, no systematic or coordinated effort to originate industry in the land had been attempted until the 1930s.

During the later years of this decade, however, with the commencement of the Second World War, a 'rough plan' for the establishment of several factories was evolved, based on certain surveys which had been completed. The plan envisaged that industries should draw on indigenous raw materials and would not involve heavy capital expenditure. On this basis factories for the manufacture of consumer products such as plywood, leather, quinine, ceramics, acetic acid etc., were constructed during the Second World War. They were administered by the development of industries functioning within the Ministry of Commerce and Trade. These factories which offered the first glimpses of diversification of industry from the already existent agro-based counter-parts flourished in their lines of production only to encounter steep marketing problems and ultimate closure on the resumption of imports after the war.

The next attempt at a fixed industrial policy did not materialize until after independence in 1947. Endeavours to attract private investment into industry were made in the early 1950s with certain

amendments to tax laws. The income tax amendment Act No. 36 of 1951 exempted the profits of newly established private enterprises from income tax for a period of five years up to a limit of 5% of the capital employed. At this time, two reports referring to industrial development had influenced Government Policy regarding industry to a very high degree. These were the reports on the Economic Development of Ceylon by the International Bank for Reconstruction and Development issued in 1952. These reports attempted to create a favourable atmosphere for private industrial investment.

In the same year a white paper on foreign capital was issued with the intention of attracting foreign capital into industry. This document extended identical concessions to foreign investors as to local industries.

THE ADVENT OF PUBLIC CORPORATIONS

In 1955 the Government introduced the Government Sponsored Corporations Act No. 69 of 1955 by which Statutory Provision was vested in the Ministry of Industries to convert the existing state factories managed by the Industries Department into autonomous institutions to be run by boards appointed by the Minister. There was also provision for the transfer of such industries eventually to private ownership.

In 1957 the Government's policy in respect of industrial development provided for demarcation of industries into three large sectors, namely those reserved for the public sector, those open both for public and private sectors and those left for development solely by the private sector. Further provision was made in the policy to take over malfunctioning private sector industries and place them within the public sector.

The industries reserved for the public sector were iron, steel, cement, chemicals, fertilizer, salt and by-products, mineral sands, sugar, power, alcohol and rayon. In addition to the above measures in the public sector, the Government also extended extensive incentives to

the private sector, such as extension of the period for tax exemption and grant of enhanced depreciation allowances awarded on a lump sum basis on new industrial buildings, plant and machinery and protection by way of tariff and controls on importation of goods which were also locally produced.

The reaction to these special concessions was favourable, both in the private and public sector, investments in industry increased and a base for the build-up of a 'mixed' industrial sector began to emerge in the early 1960s.

OTHER DEVELOPING COUNTRIES

It is pertinent at this stage that one glances at development on a wider spectrum embracing all developing countries of the Third World.

During this decade the Government of Sri Lanka adopted policies parallel to those which were commonly observed among the developing countries so as to bring about certain criteria:

- to preserve economic stability by means of industry to whatever extent that was possible; and
- to reach the world markets in whatever ways possible.

These governments of the Third World countries initiated their strategies by adopting import substitution to a considerable extent, in order to conserve finances. They also gave high priority to the protection of local industries in order to serve indigenous markets as widely as possible. They initiated systems of administrative and exchange control at all levels.

This left the smaller countries of the Third World in a peculiar situation. They were hard pressed to reach export markets with their manufactured goods as some of their products did not reach international quality levels; and their production costs were high due to the fact that they lacked modern machinery and technology.

At the same time, in the developed nations manufactured goods were of a very high standard and were reaching their own markets on a scale which matched the income levels of the people. Another impediment to Third World products reaching their markets was the selective quota system these countries adopted in order to protect their own industries as well as to prevent imported goods getting a hold on their markets.

In reference to the low income countries, the trends in output and income growth is aptly summarized in the World Development Report 1982 when it states the slow growth of the low income countries is not explained by the fact that fast growing countries no longer belong to this group: although there were marked shifts in relative positions within groups, few countries, have moved from one income group to another over the past three decades.

Among developing countries with relatively low per capita income at the beginning of the period, the majority have achieved only slow growth since then. Most of the rapidly growing developing countries were in the middle income group in the 1950s and had the advantage of a long development history.

According to the World Development Report 1982, the problems faced by the less successful middle income countries - and particularly those still dependent on primary commodity exports and by poor groups in middle income countries - should not be underestimated. Nonetheless, it states that development assistance should be concentrated on the low income countries. The people of these countries have started the decade most vulnerable to failures in growth; but with enough aid to sustain the implementation of national policies they could now begin the transition to a rapid expansion in incomes.

The above statement is amply reflected in Sri Lanka's recent industrial history pertaining to the late 1970s. The progress of development induced by the policies of the governments which ruled Sri Lanka during

this decade bring forth a clear picture of the nature of advancement in the progress of the country and also of the aid programmes attracted by the policy makers of the Government.

SRI LANKA'S INDUSTRIAL POLICY AND STRATEGY BETWEEN 1972-1976

During the period 1972-1976 policy objectives were indicated in the general guidelines given by the Planning Ministry which was set out in the Five Year Plan. It envisaged that particular attention should be paid identifying new project proposals for the development and manufacturing sector during the five year period that followed. It was also indicated that as far as possible proposals should be based on the following priority considerations:

- projects based entirely on domestic raw materials;
- projects resulting in substantial employment generation;
- projects reaching production stage in the shortest time period;
- projects for which preliminary investigations have been completed; and
- projects identified for commencement during the Five Year Plan period of 1972-1976 which could not be taken up for lack of resources.

During this period the performance of the private sector was poor. The main cause for this situation was a severe restriction on resources. Foreign exchange allocations were restricted and a drastic quota system was adopted for importation of raw materials.

These conditions caused constant under-utilization of capacity. Factories geared for high production capacity were forced to adopt stringent production programmes. The smaller industrial units bore the brunt of these restrictions and often traded off their meagre quotas of raw material rather than run their factories for exceedingly short periods, thereby negating the very principles of industry.

These stifling conditions created a sense of insecurity among these industrialists, who were also subject to severe surveillance by the authorities, especially by a select high-powered striking force. This resulted in the inevitable erosion of the spirit of free enterprise.

During this period locally produced industrial products were marketed without difficulty even though some of them were below acceptable standards. Consumers were left with no alternative but to purchase essentials. Thus the conditions that prevailed among both the consumer and private sector industrialists left much to be desired.

The Five Year Plan of 1972-1976 had envisaged the development of agro-based industries at a faster rate, with the intention of developing an agricultural raw materials processing sector and thereby to reduce the heavy dependence of the industrial sector on imported raw materials.

However, in the context of high prices obtainable in the market for food products and the special emphasis given to the 'food drive' during these years, the production of agricultural raw materials for industries remained at a low level. There was also no control in authority to coordinate the development of agro-based industries. The inevitable result of both these factors was a major shortfall in this programme although it had been assigned high priority in the plan.

Between 1970 and 1976 government policy tended to regard the public sector as the main instrument of industrial growth. This is illustrated by the fact that capital investment in manufacturing industry for the public sector showed a steady rise from Rupees 645 million (54 million dollars) in 1970 to Rupees 1,445 million (about 97 million dollars) in 1976 showing an average annual increase to be Rupees 133 million. During this period, the public sector corporations became the sources not only for the supply of finished goods but imported raw materials as well. Raw materials were imported by the State Trading Corporation, Building Materials Corporation, Ceylon Steel Corporation, Ceylon Ceramics Corporation and National Paper Corporation for supplies to be effected to the private sector.

Some corporations also maintained controls on the quality and price at which raw materials were imported by the private sector. This trend was extended eventually to the acquisition of certain private sector industries for management by the public sector.

THE PRESENT ERA AMONG THE DEVELOPING COUNTRIES

Considering the developing countries as a group, policies that guided industry during the 1960s and 1970s were designed basically to earn as much foreign exchange as was possible in order to improve the balance-of-payment situation in the respective countries. The steps that were adopted to bring about foreign exchange savings were mainly import substitution and protection of indigenous industries by way of high tariffs on the imports of commodities for trade.

This type of planning affected the smaller countries and the larger nations differently. As industry developed in the smaller countries, development levels tapered off at the stage where they reached saturation of the small indigenous markets and the profits gained by reduction of 'per unit cost' halted. Hence, the industries of these countries assumed doubtful viability. However, in the larger countries like India, Indonesia and China these policies persist even today as room for expansion is unlimited and industrial products found numerous indigenous markets.

In the past certain countries, which produced basic raw materials such as rubber, minerals and other primary products, exported these to the developed countries. It has been seen more recently that products manufactured by developed countries out of raw material from the countries of the Third World could be marketed in developing countries as well. Therefore, it was realized by the policy makers of the Third World countries that they should not depend entirely on the availability of raw materials, but that they should also take into consideration the feasibility levels of industry even if they have to import basic raw materials in order to attain industrialization.

SRI LANKA IN THE PRESENT ERA

Since the present Government assumed office in mid-1977, well thought-out policy programmes have moulded a very confident pattern of development of the economy of Sri Lanka. The present Government, after a careful study of the then existing pattern of activity of the industrial sector, set about a major programme of re-organization. A constructive change of outlook and execution of varied activities emanated from the general policy structure originated by the present Government. This policy gave priority to:

- revitalizing the economy by ensuring efficiency within the public sector;
- helping the small and medium-sized investor so that they could make maximum contribution towards the development of the country;
- encouraging and expanding management training facilities;
- adopting strict measures to ensure quality control and cost control;
- adopting measures to protect the interests of local consumers as well as the local industrialists who are manufacturing acceptable quality goods; and
- encouraging export oriented industries.

The Government also encouraged foreign participation in joint enterprises and other entrepreneurial arrangements between local and foreign investors. Legislation was enacted enunciating the terms and conditions of foreign participation, safeguarding both national interest and the interests of foreign investors, making provision for arbitration in case of disputes through appropriate international agencies.

The reforms carried out after November 15, 1977 were directed towards the removal of basic structural anomalies. The institution of a new exchange policy to encourage export, the replacement of the high protective tariff system by a more realistic set of duties, and the freeing of more than 85% of imports from licence control were some of the more significant features of these reforms. They were accompanied by the establishment

of a Presidential Tariff Commission which was assigned the task of constantly keeping tariffs under review with a view to harmonising the interests of both producer and consumer.

These reforms opened a new strategy in the history of industrial development in the country. Inefficient industries incurring very high costs of production could not continue to exist. Recurring shortages of foreign exchange for the importation of industrial raw materials, spares and accessories ceased. Industry was made to look outward rather than inward, and to export their products in addition to selling them on the local market. Thus a favourable foundation for the development of the manufacturing sector was created.

Other new changes which were introduced mainly to the working of the public sector included emphasis on improved management and higher productivity through better capacity utilization and competition with little or no Government controls and protection. All expansion programmes are to be effected mainly through commercial financing in order to enforce a source of financial discipline. Government monopolies have been generally discouraged and several public sector industries are open to the inflow of private sector management, expertise and capital. Most imports which had been corporation monopolies have now been liberalized.

Regarding the private sector too, a comprehensive and continuing review was undertaken of the availability and prices of essential commodities and imports have been sanctioned where necessary. With the introduction of new policies and the availability of foreign exchange for import of industrial inputs, as well as the freeing of 85% of the items formerly under licence control and the dismantling of administrative apparatus for foreign exchange licencing, an increase in industrial output was achieved.

The private sector is now free to produce to capacity and to expand and modernize their industries without undue interference from any controls.

Steps were taken to liberalize the approval of new industries and available statistics indicate that there has been an improvement spurt in certain private sector industrial investment. Special regard has been paid to the development of small and medium-scale industries. A comprehensive incentive framework has been devised for the encouragement of such industries.

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INDUSTRIALIZATION IN EGYPT: LESSONS FROM THE RECENT PAST FOR OTHER COMPARABLE DEVELOPING COUNTRIES AND OUTLOOK FOR INDUSTRIAL DEVELOPMENT IN THE 1980s AND 1990s by Ms. Heba Ahmad Handoussa*

Over the past three decades, Egypt has experimented with many variants of an industrial strategy within the context of a basically mixed enterprise setting. Details of its experience are rich in implications for other medium-sized developing countries which share with Egypt the fundamental problem of a growing imbalance in the structure of resources of agricultural land, population and capital.

The first section of this paper gives a brief description of the evolution of Egypt's industrial structure, institutions and policies, with emphasis on developments over the last ten year period. The second part of the paper appraises the effectiveness of the various policy instruments used throughout the period. The third and concluding section draws some lessons from Egypt's record of successes and failures.

A policy of active protection and support for industrialization was first pursued by the government in the 1930s when Egypt first regained its tariff autonomy. Private investments were made in the traditional sectors of food processing, spinning and weaving based on domestic agricultural intermediates. During the Second World War, private enterprise received another booster and began to diversify its investments so as to take advantage of domestic shortages of imported manufactures and to cater for the special needs of the Allied forces stationed in Egypt. The government continued to provide credit facilities and gradually raised protective tariffs throughout the 1940s and 1950s.

The revolution of 1952 gave the state special responsibilities in actively promoting the growth of industry, and a first significant structural change was in fact achieved in the decade of the 1950s, the contribution of industry in GDP rising from 10% to 17%. The policies pursued included government support in institutionalizing project appraisal, in pledging supplementary finance for new projects, in guaranteeing government purchases of new products and in securing effective protection through a schedular tariff system and import licensing. Private enterprise continued to be the spearhead of industrial development throughout the 1950s. Several new import substituting industries were established, including large-scale capital intensive ventures in iron and steel, railway rolling stock, electric cables, paper, fertilizers and rubber tyres. Even those firms in which the government was a major shareholder

* Dr. H.A. Handoussa, Assistant Professor of Economics at the American University in Cairo.

were set up as fully autonomous private joint-stock companies subject to the same private law as that for other large corporations such as the "Bank Misr" group of enterprises.

The political crisis between Egypt and the West (culminating in the nationalization of the Suez Canal and the Suez War of 1956) led to a temporary disruption in trade because of the economic blockade by the West and to a significant reorientation of the market environment within which industry operated. The government seized the assets of British and French interests which were concentrated in Banking with the consequent shrinkage in the role of a hitherto highly developed and sophisticated capital market.

The stock exchange was soon closed and foreign trade activities were gradually monopolized by the state which turned increasingly to bilateral trade relations with countries of the Eastern Bloc which were also providing Egypt with substantial foreign aid. The drift in political orientation away from the West coincided with the introduction of comprehensive planning as a policy tool for managing the economy.

The first Five Year Plan for Industry was announced in 1957, and a Ministry of Industry was established. A long list of industrial projects which had been evaluated by the National Production Council (set up in 1954) was now implemented and supervised by a government holding company - The Economic Organization - to which were also assigned substantial French and British assets sequestered after the Suez War.

The process of confiscation of foreign holdings in Egypt was soon resumed with the nationalization of all large domestic enterprises in industry, construction, trade and finance. By 1964, the state was in control of the bulk of Egypt's modern industry which was reorganized by a process of merger into some 160 public enterprises supervised by eleven "General Organizations" according to sector of industrial activity. Centralized authority at the level of these organizations and the competent Ministries robbed enterprise management of sufficient autonomy for major and minor decisions on hiring, pricing, investment and finance. In addition, standardized statutory legislation on wage and salary scales and on the allocation of profit - across all public sectors - eliminated the opportunity for firms to respond with flexibility to the dynamics of growth, competition and comparative advantage. The brunt of the responsibility

for steering the economy was thrown on to planning and away from the market mechanism.

Between 1960 and 1965, industry attained record rates of growth with average annual rates of 12% and diversification continued with the introduction of new capacities for the production of consumer durables, pharmaceuticals, industrial chemicals and transport equipment as part of the continued strategy of import substitution. But important developments were also made to expand the traditional sectors and enter the export market with the result that the contribution of yarn and textiles to export earnings grew from less than 5% in the mid-fifties to close to 20% in the mid-sixties.

The structure of industry itself was transformed, with the share in industrial value added of consumer goods declining from 80% in 1950 to 55% in 1966, while that of intermediate goods rose from 20% to 38% in the same period (consumer durables and equipment accounted for 7% in 1966).

Egypt's involvement with the war of 1967 and its aftermath (the war of attrition) meant a reduction in real investment expenditure for industry which had hitherto received a generous 25% of rising total investment expenditure in the economy. There was a serious disruption in the production of the war afflicted Suez Canal cities and the sensitivity of overall industrial output to the import of intermediates was painfully displayed as a result of foreign exchange shortages. Output stagnated and even declined in some of the years leading up to 1973. Replacement and maintenance expenditure was totally neglected in existing enterprises and the limited investment resources were directed to a very few plants in basic metals and chemicals. Throughout the 1960s and 1970s the emphasis on heavy industry has continued to be pronounced, and the virtual absence of a capital goods industry has been equally conspicuous.

The decade of the 1970s has witnessed yet another radical shift in Egypt's development strategy, again in line with the reorientation of the political system towards the West. Immediately following the success of

the October 1973 War, an era of liberalization was inaugurated which has succeeded in reviving private sector activity in banking, trade, construction and - more cautiously - in industry. The state has at once introduced legislation (Law 43 of 1974) to provide incentives and guarantees for foreign and domestic private investment, it has discontinued all of the bilateral trade agreements which governed foreign trade until the mid-1970s, it has removed exchange controls on virtually all transactions affecting private sector activity, it has effected a series of devaluations of the Egyptian currency, and it has dismantled its centralized system of control over public sector enterprises. The transition to a market economy is far from complete however, and the state continues to intervene in three important areas affecting industrial performance: price policy, employment and wage policy, investment planning and control.

These three areas of control have seriously constrained the activity of both public and private enterprises. The state has on the one hand given extensive freedom for entrepreneurial initiative to respond to market opportunities with the setting up of a small but significant number of joint ventures under Law 43, while on the other hand it has prevented the main tool of a market mechanism - the system of relative prices - from performing its function of reflecting real scarcities in the economy. In its effort to protect the income of final consumers of basic commodities and with the alleged objective of containing inflationary pressures, the government has administered the price of all commodities over which it has control through its own output and distribution monopolies. Nominal prices for a whole range of intermediates utilized or output produced by the public sector have been frozen at their pre-1973 levels, including energy and energy-intensive products, cotton yarn, rationed cloth and processed foods.

The system of price controls is not only complex but increasingly inconsistent, involving implicit taxes on locally produced inputs, tariffs on imported intermediates, production subsidies on commodities sold at a fraction of their international price, together with high tariffs on competing imports. Effective protection has gradually become

negative to most domestic producers of basic consumer and intermediate goods as demonstrated by the most recent extensive study undertaken by the Ministry of Industry together with the World Bank. The result of these distortions has resulted in the most startling divergence between financial and economic rates of return for industrial firms, with adverse implications for investment allocation in a system where self-finance has always contributed the largest share in investment expenditure for expansion and renovation of existing enterprises.

In practical terms, the growing gap between the price of imported and that of domestically produced goods has also led to black market activity in the distribution of public sector output such as iron and steel products, cement, glass, a situation which only benefits a small group of middlemen. Fixed selling prices by the public sector for intermediate such as yarn, leather, semi-processed metals involve unnecessary implicit subsidies to private sector enterprises which sell their products at uncontrolled prices. The allocation of new private capital has thus been channelled - in line with distorted price signals - into areas where tariff protection is highest and output price controls are lowest, areas which are now being criticized as being the 'non-productive sectors'.

Another conspicuous problem arising from state intervention is in the wage structure and availability of skilled labour for industry. Socialist policies of guaranteed employment for masses of college graduates in the civil administration have persisted throughout the 1970s, side by side with the uncontrolled emigration of substantial numbers of skilled workers to neighbouring Arab countries. The repercussion has been a serious tightening of the labour market and rapid increases in real wages going to industrial workers, eroding part of Egypt's essential comparative advantage in an abundant, well-trained, low wage labour force. Private sector firms have responded with the adoption of more capital intensive techniques in the traditional sectors such as clothing, furniture and leather products. Public sector firms have found it extremely difficult to adjust to the exodus of their skilled labour which they were responsible for training over the past twenty years, especially in view of the statutory wage and salary structure which continues to be imposed by the government. This rigid structure gives too low a premium for skilled

as opposed to unskilled labour (which is better paid in the public sector), links promotion to seniority alone and has little scope for appropriate compensation of the scarce qualifications of experienced managers and technicians.

The dual wage structure between public and private sector industry is analogous to the dual price structure which also discriminates against the public sector. But what is of more serious concern is the apparent trend of increased scarcity of labour when it is clear that the underlying long-term factor proportions for Egypt are such that excess labour is bound to reappear in the near future, when emigration subsides and when the government's finances become tighter so that it can no longer continue to provide artificial jobs to perhaps one quarter of the total annual new entrants to the labour force.

The government has the hard choice to make between continuing in its policy of creating new jobs costing an additional LE 300 million per year in the government administration or allocating these funds to productive investment in labour intensive industries. Real wages need to rise as a result of increases in real productivity of labour, thus maintaining Egypt's competitive position vis-à-vis other developing countries which are rapidly industrializing, and not in response to exogeneous forces shifting supply and demand conditions in the labour market to the detriment of long run productive growth. The government must also review its educational policy which favours university education - in contrast to vocational training - and perpetuates the imbalance between job seekers and job availability.

The issue of investment planning and control is the third area which the government has not been able to tackle effectively in the context of its liberalized development strategy. Special legislation enacted soon after the Open Door Policy has expressly forbidden any reduction in the state's equity participation in public sector enterprises. Since most of these firms are 100% owned by the government, this has precluded the sale of old or newly issued shares to the public or the participation of existing establishments in joint ventures with foreign multinationals. At a time

where budget allocations for expansion and new investments have been limited, and where the possibility for self-finance from profits is gradually disappearing on account price controls, public sector industry has found itself in the difficult position of having to undertake very modest investments relative to the opportunities available for its growth.

At the same time however, it is a government controlled and public sector oriented institution, "the General Organization for Industrialization" which screens both private and public sector projects for economic viability, technical evaluation and coordination purposes. Although this institution does not have definitive power in rejecting private Law 43 proposals for investment projects, it has been effective in discouraging many would-be competitors from the private sector. The result is therefore an overall limitation on actual as opposed to potential investments by private and public sector enterprises - not because of any lack of initiative, dynamism, innovative spirit or the reluctance to take up risk - but simply because of the persistence of bureaucratic elements entrenched in the old system in refusing to accept that growth and development can in fact thrive in an environment of increased competition with more firms, more products, more output and employment, and hopefully, more exports.

In an effort to stimulate supply of savings from the general public and from specialized institutions, the government has gone a long way by taking steps to revive the stock market, it has also issued a new company law for all private non Law 43 joint stock companies which gives them complete freedom from the public sector legislation of compulsory participation of workers in management and profits. The Ministry of Finance has also substantially reduced the corporate income tax for industry in order to give it preferential treatment in contrast to the taxation of income from commerce and trade. Financing of public sector investments which are now evaluated by the newly established National Investment Bank is expected to become a lot more objective, specialized and streamlined than the previous system whereby various Ministries would compete for funds at the cost of serious incompetence, delays and administrative red tape. The Development Industrial Bank has been operating

for several years now and channels credit to the private sector, its budget having been expanded significantly with loans from foreign aid donors.

The role of planning industrial growth in the context of Egypt's liberalization strategy has hardly diminished. The state controls an overwhelming proportion of Egypt's resources and of its capacity to borrow internationally, the size of public sector assets in industry still accounts for more than 2/3 of the sector as a whole, and the responsibility for coordinating balanced growth and the provision of huge infrastructural investments all rest with the state. Moreover, it is clear that today's pattern of investment in industry will determine the future capacity of industry to absorb labour (via the choice of particular capital intensities), the future level of prices for industrial output and of wages (via the choice of economically viable and efficient projects) and the capacity for industry to generate sufficient foreign exchange not only to cover its own needs but also those of Egypt's growing food deficit (via export promotion).

One cannot build an industrial strategy without reference to other sectors of the economy. Until quite recently for instance, it was easy to expand industries based on the availability of cheap raw materials like sugar cane, cotton and its by-products, phosphates, hydroelectric power, but supply constraints are now being felt very sharply in several areas and it is not economically feasible to expand their supply without an integrated approach to project evaluation which accounts for opportunity costs and shadow prices. On the output side, it is again essential to realize that projected increases in the domestic market for many traditional products will limit the ability to continue much further in the import substitution direction.

A strategy of accelerated growth of manufacturing is implied by Egypt's most recent Five Year Plan from 1982-1987. Such a strategy can only be achieved through the expansion of manufactured exports. The plan envisages an expansion in the export of cement, fertilizer, phosphates, ready made clothing and artisanal products. Those products are expected to be competitive on the world market on account of utilizing local raw

materials including large supplies of natural gas for fertilizer production and cheap labour for clothing and craft products.

In the long-term however, Egypt's potential for exports is far more concentrated in the labour-intensive industries which are traditionally private, small scale, domestic market oriented such as furniture, leather goods and especially clothing. This would seem to be a viable pattern of industrialization following the example of countries like Japan, Brazil, the Republic of Korea and Mexico. As these countries experience rising costs of labour and have gradually shifted to more capital intensive industries it is perhaps most appropriate for Egypt to take advantage of its relatively low wages, highly skilled work force and long experience in these industries to make a significant entry into the free international market.

The role of foreign trade policies is crucial for Egypt to make the desired shift in its industrialization strategy from import substitution to export promotion. The existing pattern of protection, exchange rate policy and direct export controls have all contributed to making exports extremely unattractive to any industrial firm. Protection to domestic producers takes the form of either low-priced inputs which benefit producers for both the domestic and export market or it takes the form of tariffs on inputs which only benefit those producing for the local market, thereby discriminating against exports. It is significant to note that most labour-intensive products with potential for export enjoy very high rates of effective protection in the Egyptian market, whether traditional like leather, clothing and furniture, or modern like electrical apparatus and electronics.

Moreover, the absence of an efficient system of tax rebates makes exports uncompetitive because of very high tariffs on imported intermediates which average 25% of their c.i.f. value. The present drawback system is complicated, time consuming (sometimes taking up to two years) and is based on the separate determination for each applicant of the exact imports actually used in the production for export. This system needs reform whereby standard and automatic rebates would be available on the basis of products (valued in units or value), irrespective of whether raw materials were imported or locally purchased.

Another constraint on exporting is the institutional system of controls over export such that the authorities must not only license the export of any product but also determine its minimum price and inspect every batch before export to ascertain its quality. Such controls need to be abolished especially now that the motive for price control - to prevent capital flight - is no longer relevant since foreign exchange has become freely available in the own exchange market. The present system of export controls makes exporting almost impossible and must be dismantled to make way for an export-promoting system.

Most analysts will also agree that Egypt suffers from an overvalued exchange rate which has been sustained only because of the exogeneous growth in foreign currency receipts from sources that are neither related to the productive capacity of the 'real economy' nor likely to continue for very long. These receipts are from petroleum exports and emigrant remittances, flows which have also contributed to rising wages and other domestic costs to producers at home far above the rate of inflation in countries with which Egypt is trading. Every time the domestic rate of inflation is above the international rate, this implies that the exchange rate should correspondingly be devalued to restore the competitive position of Egyptian exporters. Moreover, the rate of exchange which exporters receive for their exports is lower (at LE 1.15 per dollar) because of the operation of a dual exchange rate system with the official price of the dollar well below the free market rate on the own exchange market. It is therefore essential to either undertake measures to equalize the exchange rates for all transactions or to devise a corrective formula to at least compensate exporters for the existing distortion.

It is now almost ten years since the adoption of the Open Door Policy and policy makers are proud of having undertaken so many of the changes needed in the organizational and institutional environment of the economy to meet the challenge of the 1980s with a clearly defined strategy of rapid growth and development based on the joint efforts of public and private enterprises in the productive sectors of the economy. They recognize that more changes are needed to promote an export oriented strategy and that only industry can hopefully achieve for Egypt the aim of rapid and self sustained expansion. The only real problem which they

can perceive but have not yet found the solution for is how to reconcile the objective of growth based on the market mechanism with the aim of preserving social justice and equity gains made in the socialist years of the 1960s.

There is a pressing need to address the issue of price distortions which undermines the entire strategy of liberalization because market prices can only be ignored if the state is either willing to take back the full responsibility for central planning and control or is willing to allow valuable resources to be simply drained away into waste. A more consistent alternative is to correct the system of relative prices so that each economic agent responds efficiently towards market signals and to allow for the equity objective to be served by a system of direct transfers or even rationing to be administered by the treasury. The most important lesson which Egypt's experience can teach us is that production sectors, least of all industry, cannot possibly be expected to fulfil the conflicting goals of being efficient - that is cost conscious and profit oriented - while at the same time serving the purpose of redistributing income by selling goods at a loss and providing jobs on a welfare basis.

Another useful lesson for developing countries is the essential complementarity between a strong public industrial sector engaged in those areas of production where externalities, economies of scale and bargaining position matter and a flexible private sector, both operating on sufficiently equal terms and responding to a carefully monitored environment providing the correct incentives in the light of what are perceived to be the priorities for the economy at every stage of its development. It is thus quite wrong to confuse means and ends by giving precedence to one sector over another in the name of rational economic judgement when it is most commonly the ideological bias which determines the ultimate mix of public and private.

A successful industrial strategy can contribute much to development in terms of providing employment, rising real incomes with productivity growth, surplus funds for the finance of further capital formation and much needed earnings of foreign exchange. For a country like Egypt, industry is the only sector which could fulfil all of these objectives.

INDUSTRIAL PRODUCTION IN THE SUDAN by El Karim Idris*

INTRODUCTION

The Sudan is the tenth largest country in the world and the largest country in Africa, with approximately one million square miles of territory. Its Northern frontier starts in an almost rainless zone on the edge of the Sahara desert. Its Southern frontier is in a tropical zone. Between these limits, the rainfall gradually increases from North to South, and this rainfall pattern has largely determined the way of human life there. The area available for economic utilization (i.e. forests, pastures and agriculture) is about 32.25% of the total area of the Sudan. Out of the 200 million feddans^{1/} of cultivable land, only 17 million (8.5%) are now under cultivation.

The total population is about 17,380,000 according to 1979 estimates. The density of population is rather low, but the distribution of population is quite uneven, due to the fact that a large part of the country is not favourable for human settlement. The annual demographic growth is around 2.5%. It is worth noticing that the work force in 1977 was around 5 millions, 68.5% of this figure being engaged in agriculture, fishing and forestry, 4.5% in industry and mining, 10.4% in the services and 5% in trade and finance.

General aspects of the economy

The main feature of the Sudan economy is the predominant role of agriculture in the total economic activities, and the heavy dependence on cotton as a cash crop.

Organization system

The existing organization system which controls the whole industrial sector - public and private - is the Ministry of Industry on the top of the pyramid and other assisting bodies. These assisting bodies are to provide the sector with technical, financial and training facilities.

* Mr. Awad El Karim Idris, Assistant to the Minister of Industry, Ministry of Industry, Sudan.

^{1/} A feddan is an Egyptian measure of land equal to rather more than one English acre.

Previously, there was a department of Industry within the Ministry of Commerce and Supply. In 1965, the Ministry of Industry has come into existence after the general consent that the industrial sector has grown in importance and size to a point which necessitated the creation of a separate Ministry for Industry.

The main functions of the Ministry of Industry could be summarized as follows:

- proper planning of the industrial sector, utilizing available potentialities and capacities with the intention of participating fully in the promotion of the national economy;
- proper supervision on existing productive units to ensure the availability of inputs and utilities; and
- supervision of quality control on products of productive units and estimating their cost of production.

A number of Investment Acts have been issued with the intention of encouraging and attracting potential investors, either local or foreign to participate in the execution of the industrial plans. The first of those Acts was the Approved Enterprises Act of 1956. According to the Act, an advisory committee was formed with the aim of evaluating projects offered by both the public and private sectors. The committee passed its recommendations to the Minister to take the final decision of approving and giving concessions to the enterprise or rejecting it. The licence and concessions were granted when the following requirements were satisfied:

- execution of the project is of public interest;
- there is some reasonable probability that its development would be a success;
- its sphere of activity in Sudan has not yet reached the level of sufficiency; and

- availability of sufficient capital and efficient administration to meet the various proposed activities.

For approved enterprises the Act exempts them from Business Profit Tax. This varies with the size of capital invested. The enterprise is exempted from this tax up to 5% for two years if the employed capital is less than 20,000 Sudanese pounds, and for three years if the capital invested is less than 100,000 Sudanese pounds. Over 100,000 Sudanese pounds capital, the exemption period is five years. As to profits that exceed 5%, the excess will be taxed by half the applicable rates if the provisions of this Act are not valid.

The Act provides that no discrimination between national and foreign enterprises should take place. In the event of nationalization of any foreign enterprise, a just compensation which is transferable outside Sudan is to be paid to the investor. This Act played an important role in attracting local and foreign capital to the field of industry and quite a number of basic industries have been established.

After the establishment of the Ministry of Industry and Mining, whose main concern is to plan and carry out the country's policy for industrialization, the Government decided to issue the Organization and Promotion of Investment Act for 1967. Its objective is to offer more concessions and to remove all handicaps that stand in the investor's way. This Act was followed by the regulations of the organization and promotion of industrial investment for 1968. These regulations specified in detail the procedures for appeals and cancellations of licence. They also dealt with specifications for product prices, organization of production and employment in the enterprise and procedure for submitting applications for import licences, visas for expatriates, transfer of their savings to their home countries and business trips abroad.

In 1974 some amendments to the Development and Promotion of Industrial Investment Act 1972 took place as regards to increase in granted concessions. Those concessions are as follows:

- business profit tax exemption for a period of five years, as from the start of production;
- business profit tax exemption for another five years, if the total amount of profits do not exceed 10% of enterprise capital and any increase - in profit - beyond that limit will be subject to the established rates of taxation; and
- business profit tax exemption for an additional five years for the enterprise which increased their capital in the first ten years, and exemption from profit tax to be of the same percentage by which the capital was increased in that period. If the rates of profit in this case are less than 10% of the whole capital after the increase, the exemption in this case shall be total.

This is in addition to the restriction of Government purchases to local product. This was granted total protection, provided that competition shall be local; and international tendering is prohibited.

As regards an industrial product which enjoys partial protection, it is possible that international tendering can be made for that part which is not available locally.

The Government's sole objective in issuing these acts and declaring its policy in this field, is to make available all facilities and guarantees possible for local and foreign capital to find an atmosphere conducive to industrial investment, which secures it a profitable return and encourages it to make an effective contribution to the economic development of the country.

In 1980, the Development and Promotion of Industrial Investment Act of 1974 was embodied in the encouragement of Investment Act, 1980. This was mainly done to centralize and coordinate investment in all sectors of the economy, regardless of whether it is initiated by private or public investors. This latest Act is under the authority of the Minister of Finance and Economic Planning.

Production units

The state owns many production units which constitute a very important industrial sector with a sizeable contribution to the whole economy of the Sudan. This public industrial sector has grown through the years to its present size. Thus, its organization system has gone through many changes since its establishment. These changes were governed, of course, by the size of the sector, the problems developed and the experience gained. The changes were intended to solve the problems and bottlenecks experienced and also to facilitate the nourishment and growth of the sector. The result of this process led to decentralization of authority to give much more freedom to the production units themselves rather than be controlled by the different corporations which until recently were responsible for the administration of those units.

Technical services: Industrial Research and Consultancy Institute

The objectives of the Institute are to assist in and promote the development of industry and the advancement of science and technology in Sudan by conducting and rendering research and technical services for the benefit of the Government or any department or agency thereof, for any public or private institution or financial body or for industry which is or shall be established in the Sudan. Services available by the Institute can be categorized by new and existing projects.

For new projects:

- the Institute undertakes economic and technical evaluation of projects, (pre-investment and feasibility studies). It evaluates offers submitted to the Government with the intention of establishing an industry.

For existing industries the Institute undertakes:

- production trouble shooting;
- production planning and control;
- process engineering;
- quality and cost control;
- purchasing and stock control;
- marketing research;
- training of plant personnel in operation and quality control;
- budgeting and financial control; and
- evaluation of existing plant.

The Institute performs tests, research investigations, analysis and investigates scientific and technical facts. It also assists in the preparation of standards and specifications and performs tests on raw material and finished products. Shambat Food Research Centre also carries out some of these functions in its own field of food and food products. In addition, there are various private Consultancy Houses in the Sudan dealing with consultation in the industrial field.

In the field of financing services, the Industrial Bank was established in 1962 as the main source of financing Sudanese industries and in particular the private sector. At the time the scarcity of financing sources for industry in the Sudan necessitated the establishment of this specialized bank. This bank lends up to one-third of the project cost with a preset ceiling.

An additional institution, the Sudan Development Corporation, was established in 1974 as an independent corporation to work as an advisor, promoter and partner. In virtue of its status, its foreign exchange availabilities and the quality of its management, it plays a central role in the commercial life of the country. This role extends from identification of projects to their final implementation via the intermediate stages of feasibility studies, official approval licence, contracting and mobilization of human and financial resources, whether local or foreign.

The Sudanese banking system was nationalized by an Act passed in 1970 and following the new thrust given to economic policy in 1972, has been considerably diversified. While commercial banks are still state-owned, they have been encouraged to expand their activities. Moreover, since 1974 the Government has authorized Western and Arab Banks to establish operation in Sudan under certain conditions. All these banks participate in financing industries.

Formal education in the Sudan has expanded tremendously since independence when illiteracy was 98%. The need for the qualified manpower to carry out the ambitious development plan was realized, however, and education in all its levels was expanded with especial emphasis on technical training. Two universities were established beside the existing two. The new universities emphasize more the technical and practical aspects in their training programme. This is to contribute to the qualified technical manpower needed for the development programme of the country. Also Khartoum Polytechnical Institute has expanded to graduate technicians covering various specializations. Various vocational training centres were established in different parts of the country. Also for managers the Khartoum Management and Development Centre offers management courses to all levels of responsibilities. The Industrial Research and Consultancy Institute also contributes in the training of engineers and technicians who work for industry. The Government of the Sudan offers scholarships for further training abroad.

The Textile Industry

Sudan is a major cotton growing country and thus has a relative advantage in the field of textile industry. Until recently this industry was solely in private hands. In 1972 the Government drew up a 15 year plan for development of cotton textiles in three phases, with the first phase aiming at satisfying the local demand for popular fabrics. The second phase in the plan aims at producing yarn for export while the last phase objective is the production of popular fabrics for export purposes.

The total investment in the spinning and weaving sector has reached about 1 billion dollars with a designed capacity of 345 million meters per annum. Efforts made in the spinning sector have resulted in a good number of factories with a total designed capacity of 26.8 thousand metric tonnes per annum. Work has also started to add another 20 thousand tonnes per annum. The share of the public sector in the textile industry amounts to an investment of 152 million Sudanese pounds which includes:

- Friendship Factory has an estimated cost of US \$ 11.5 million and a designed capacity of 16 million meters of popular fabrics annually;
- six weaving sheds are located in different parts of the country with a total cost of 29 million Sudanese pounds and an annual capacity of 40 million meters;
- Abu Nana Kenaf Factory, which cost 17 million Sudanese pounds, produces 10 million kenaf sacks annually;
- The Port Sudan Spinning Factory is still in the implementation phase. It is designed to produce 5.3 thousand tonnes of fine yarn for export and its total investment is about 23 million Sudanese pounds;
- Hag Abdalla Spinning Factory, which is under completion, aims at producing 7.7 thousand tonnes of coarse yarn to meet the local demand for all the factories within the country. It is estimated to cost 17 million Sudanese pounds. It is also designed to produce 2.5 thousand metric tonnes of fine yarn for export purposes;
- The Gado Textile Factory has faced lots of problems which have hindered its completion. The main problem was that the civil works were considerably delayed and the implementation programme went out of control;
- The Khartoum North Spinning Factory is also facing some difficulties which are hindering its implementation, and

- The Tonj Kenaf Factory is still facing implementation problems since some of its machinery was damaged during transportation.

It is worth mentioning that, despite all these efforts, due to technical, financial and scarcity of trained personnel, 1980 production figures stood at 77 million meters of fabrics produced by the public and private sectors (i.e. about 20% of designed capacity).

The private sector contributed much in the field of spinning and weaving industry, where its investment reached to about 250 million Sudanese pounds. In 1970 the production capacity of the private sector factories amounted to 90 million meters of cloth increased not to 296 million meters. Three of the spinning factories have already entered the sphere of export of yarn and a third one is expected to produce yarn for export during this year.

Table 1.

| Type of production | Unit | 1976/1977 | 1977/1978 | 1978/1979 | 1979/1980 |
|--------------------|----------------|-----------|-----------|-----------|-----------|
| Damouria | thousand meter | 2,987.5 | 3,533.7 | 3,641.2 | 3,305.6 |
| Poplin | " | 754.3 | 770.7 | 376.2 | 507.8 |
| Dabalan | " | 586.0 | 757.6 | 990.0 | 445.0 |
| Voil | " | 800.3 | 1,241.2 | 928.0 | 651.2 |
| Others | " | 70.8 | 128.3 | 10.7 | - |
| TOTAL | " | 5,198.9 | 6,431.5 | 5,946.1 | 4,909.6 |

Source: Spinning and Weaving Corporation.

Table 2.

| Factory | Unit | 1978/1979 | 1979/1980 |
|--------------------------|-----------------|----------------|----------------|
| Kosti Weaving Factory | Thousand meters | 2,476.4 | 2,031.0 |
| Shendi Weaving Factory | " | 2,114.5 | 1,712.4 |
| El Dueim Weaving Factory | " | 560.6 | 675.3 |
| Nyala Weaving Factory | " | - | 644.9 |
| Kadogli Weaving Factory | " | - | 465.9 |
| Mangala Weaving Factory | " | - | 108.5 |
| TOTAL PRODUCTION | " | 5,151.4 | 5,638.0 |

The Sugar industry

The sugar industry started in Sudan in 1962 when the Guneid Sugar Factory came into production. It is now picking up momentum at an appreciable pace, and it is possible that sugar could overtake cotton as Sudan's main export. Sudan possesses a relative advantage in this industry since it is blessed with vast cultivable land suitable for cane sugar plantation.

Sudan has at present five sugar factories - Guneid, New Halfa, Sennar, Kenana and Assalaya, with a total installed capacity of 690,000 tonnes a year, which is more than the country's annual consumption which reaches 450,000 tonnes. But due to technical, financial and infrastructural shortcomings the present production level is 280,000 tonnes. Two more factories, Melut and Mangalla, are under implementation. Studies are underway for two other factories in Renk-Gelhak and Seteit.

The Kenana Sugar Factory is the most important single factory in the sugar industry. Initial work was started in 1971 and it started production in 1979. It is a joint venture between the Sudan Government, the Sudan Development Corporation, Kuwait, Saudi Arabia and other Western companies. The total investment is about 600 million dollars, and its designed capacity is 360,000 tonnes - which could be increased to one million tonnes in the future.

The Sennar Sugar Factory is situated on the Western Bank of the Blue Nile, about 300 km South-East of Khartoum. The farm area is about 33,000 feddans. Work began on the project in April 1974 and was completed in October 1976. The project cost was estimated at 76 million dollars. The factory is designed to produce 110,000 tonnes of sugar annually. It employs 5,000 workers seasonally increasing to 20,000. The Kuwait Fund and U.K. sources have helped in financing.

The Hagar Assalaya Sugar Factory is similar in design to Sennar Sugar Factory, with a designed capacity of 110,000 tonnes annually. While the old factories Guneid and Kashm-ElGirba represent another family of 60,000 tonnes designed capacity each. Table 3 illustrates the sugar factories total production against the country's annual consumption for the period 1975/1976 - 1980/1981.

Table 3. Total production and consumption of sugar
during the period 1975/1976 - 1980/1981

| | (in metric tonnes) | | | | | |
|-------------------|--------------------|---------|---------|---------|---------|----------|
| | 1975/76 | 1976/77 | 1977/78 | 1978/79 | 1979/80 | 1980/81* |
| Guneid | 54155 | 55074 | 48336 | 36539 | 29693 | 40000 |
| New Halfa | 59794 | 57168 | 58214 | 64849 | 43653 | 52000 |
| Sennar | - | 26465 | 31659 | 18177 | 30001 | 35000 |
| Kenana | - | - | - | - | 19461 | 150000 |
| Assalaya | - | - | - | - | 7628 | 7000 |
| Total prod. | 113949 | 138707 | 138209 | 119565 | 129842 | 372902 |
| Local consumption | 274149 | 295915 | 314981 | 330678 | 372902 | 400000 |
| Percentage | 42 | 47 | 34 | 36 | 35 | 71 |

Source: Public Corporation for Sugar Trade

Note: * estimates

The other food industries sector is rapidly developing and expanding to meet the local demand and then exporting the surplus of Sudan's processed agricultural products from fruits, vegetables and oil seeds.

In fruits and vegetables, there are five main public sector and two private sector canning factories in the Sudan producing a variety of food products, i.e. tomato paste, different types of fruits, dates, onions and ready meals.

Table 4. Production of public sector canning factories
for the period 1975/1976 - 1979/1980

| Factory | Unit | 1975/76 | 1976/77 | 1977/78 | 1978/79 | 1979/80 |
|----------------|---------------|---------|---------|---------|---------|---------|
| Karima Canning | thousand tins | 15202 | 10773 | 10277 | 7245 | 9391 |
| Karima Dates | metric tonnes | 125 | 145 | 111 | 23 | 70 |
| Kau Canning | thousand tins | 2876 | 1262 | 886 | - | - |
| Kasala Onion | metric tonnes | 329 | 444 | 353 | 418 | 265 |

The private sector investment in the edible oils field represents 95% of the total investment. The crushing capacity of the oil mills increased from 750,000 tonnes in 1970 to 5 million tonnes in 1980. The private sector has been able to establish two solvent extraction units for edible oil which is directed for export.

The private sector has the leading role in the production of laundry and toilet soap.

In the field of production of flour the private sector was able to establish many production units spread all over the country. The production capacity of the flour mills raised from 170,000 tonnes in 1969 to reach

450,000 tonnes in 1980. In order to meet the ever increasing demand for flour, licences for the establishment of new flour mills by the private sector together with extensions in the already existing units have been issued to raise the capacity to one million tonnes.

Tanneries and leather industry

Sudan has a sizeable animal wealth namely, cattle, sheep, camels and wild life animals. It has established three tanneries to process cattle and sheep skins.

Khartoum Tannery is designed to process 150 thousand hides (cow) and 450 thousand sheepskins annually. It was built at a total cost of one million Sudanese pounds. White Nile Tannery is designed to produce 250 thousand hides (cows) and 450 thousand sheepskins annually. The total cost was 1.3 million Sudanese pounds. Wad Medani Tannery is the newest tannery built in collaboration with a French company to process 300 thousand hides (cow) and 750 thousand sheepskins annually. The total investment reached 2.8 million Sudanese pounds.

Tables 5 - 7 show the production of the three tanneries.

Table 5. Khartoum Tannery production
during the period 1975/1976 - 1979/1980

| Type of product | Unit | 1975/76 | 1976/77 | 1977/78 | 1978/79 | 1979/80 |
|------------------------|-------------|---------|---------|---------|---------|---------|
| Upper leather | 000's Sq.ft | 1,648.0 | 1,875.1 | 1,298.7 | 1,700.0 | 1,365.5 |
| Sole leather | " kilos | 36.3 | 105.0 | 111.6 | 62.0 | 70.8 |
| Pickled skins | " pieces | 83.3 | 105.3 | 83.1 | 13.0 | 104.2 |
| Semi finished Skins | " Sq.ft | - | - | - | - | 379.2 |
| Suede skins | " pieces | 71.1 | 154.5 | 81.2 | 38.2 | 27.3 |
| Reptile | " pieces | 6.8 | 6.9 | 5.3 | 7.9 | 3.9 |

Source: Khartoum Tannery.

Table 6. White Nile Tannery production
during the period 1975/1976 - 1979/1980

| Type of product | Unit | 1975/76 | 1976/77 | 1977/78 | 1978/79 | 1979/80 |
|---------------------|-------------|---------|---------|---------|---------|---------|
| Upper leather | 000's Sq.ft | 1,280.9 | 2,259.8 | 929.0 | 850.0 | 813.7 |
| Sole leather | " kilos | 100.5 | 73.7 | 37.9 | 20.0 | 16.0 |
| Semi finished Skins | " Sq.ft | 155.4 | 125.8 | 131.8 | 41.5 | 251.6 |
| Pickled skins | " pieces | 93.8 | 49.7 | 52.4 | 36.7 | 85.6 |

Table 7. Gezira Tannery production
during the period 1977/1978 - 1979/1980

| Type of product | Unit | 1977/78 | 1978/79 | 1979/80 |
|--------------------------|--------------|---------|---------|---------|
| Upper leather | 000's Sq.ft | 630.0 | 950.0 | 901.4 |
| Semi finished and suede | 000's pieces | 120.0 | 140.0 | 133.8 |
| Chrome and Crust leather | 000's Sq.ft | 1,190.0 | 1,800.0 | 1,398.9 |

At present Sudan has two cement factories, Alaspio Factory built near Atbara town and Rabak Factory (White Nile Province). Atbara Cement Factory is the oldest factory, over 30 years of age, yet it can produce up to 75% of its designed capacity. A new expansion of Atbara Cement Factory is underway to raise the capacity from 220 thousand tonnes to 450 thousand tonnes annually at an extra investment of about 21.8 million Sudanese pounds. Rabak Cement Factory is also under a rehabilitation programme to raise its capacity from 50 thousand tonnes to 100 thousand tonnes per annum.

A new cement factory in Durdaib (Red Sea Province) is underway with a capacity of 500,000 tonnes per annum, 60% of its production intended for export. At the same time, brick production is still confined to the traditional artisan kilns. Studies are initiated to set up twenty medium-scale brick factories of 10 million bricks per year capacity to meet the local demand.

The production of cement by the two factories for the last five years is illustrated in Table 8.

Table 8. Production of cement
during the period 1975/1976 - 1979/1980

| | (thousand metric tonnes) | | | | |
|-----------------------|--------------------------|----------------|----------------|----------------|----------------|
| <u>Factory</u> | <u>1975/76</u> | <u>1976/77</u> | <u>1977/78</u> | <u>1978/79</u> | <u>1979/80</u> |
| Atbara Cement Factory | 130.0 | 140.0 | 85.8 | 132.3 | 103.3 |
| Rabak Cement Factory | 37.0 | 37.0 | 55.7 | 52.7 | 43.0 |
| TOTAL | 167.0 | 177.0 | 141.5 | 185.0 | 173.3 |

In the engineering and electrical industries there are three local factories manufacturing refrigerators, air coolers, air conditioners, water coolers, all three being private sector industries. These factories are able to satisfy the local demand especially for refrigerators, air coolers and water coolers. The only two existing factories for production of liquid batteries, which are private, are covering the local demand. The local demand for dry cell batteries is met by the production of a local private factory.

The contribution of the private sector in industry covers many other fields of activity. A big factory for the manufacturing of tyres and tubes with an investment of 68 million dollars was established with the aim to

cover the local needs and to export the surplus. A factory for the production of yeast from molasses was recently established. The private investment in industry covers the fields of leather and plastic shoes, ready made clothes, knitwear, blankets, plastic products, household utensils, packaging materials, perfumes and cosmetics, drugs, metal and wood furniture, etc.

It can be concluded that the different investment acts played a significant role in encouraging and attracting both local and foreign capital to invest in industry by granting industrial enterprises every possible assistance and concessions needed.

Table 9. Industrial production
during the period 1975/1976 - 1979/1980

| Commodity | Unit | 1975/76 | 1976/77 | 1977/78 | 1978/79 | 1979/80 |
|-------------------|---------------------------|---------|---------|---------|--------------------|---------|
| Cement | thousand metric tonnes | 167.0 | 177.0 | 141.5 | 18 ^e .0 | 173.3 |
| Flour | " | 237.3 | 266.8 | 275.0 | 269.7 | 243.3 |
| Sugar | " | 113.9 | 138.7 | 138.2 | 119.6 | 129.8 |
| Toilet Soap | " | 3.0 | 2.6 | 2.6 | 2.5 | 3.1 |
| Laundry Soap | " | 40.1 | 48.1 | 46.1 | 43.2 | 52.0 |
| Cigarettes | " kilos | 894.9 | 728.1 | 819.5 | 1115.0 | 1065.1 |
| Shoes | million pairs | 14.4 | 12.4 | 13.6 | 13.6 | 9.6 |
| Vegetable Oils | thousand metric tonnes | 78.1 | 70.1 | 73.4 | 72.8 | 82.5 |
| Textiles | million yards | 117.7 | 102.2 | 87.5 | 92.0 | 102.0 |

Source: Customs Department and Industrial Production Corporation.

Sudan industry is marked to play a major role as exporter of food industries and textile products after satisfying the local demand. This could be achieved when the present problems jeopardising the production and hindering the optimum utilization of factories capacities are solved. It is estimated that industry is running at only 30% of capacity. Shortage in imported inputs, obsolete and inefficient machinery, transportation and communications problems, electric power failures and high labour turnover are the main problems behind the under-utilization of capacity in most factories.

INDUSTRIAL DEVELOPMENT STRATEGIES AND POLICIES OF THE KINGDOM OF SAUDI ARABIA
by Abdulaziz A. Khathlan*

INTRODUCTION

The present industrial development strategies and policies evolved as an important element in the overall economic strategy of the Kingdom for the diversification and restructuring of the economy, so as to reduce dependence on the production of crude oil as the primary source of national income.

Since the late 1960s the Kingdom of Saudi Arabia, through a comprehensive system of development planning and effective implementation of the planned strategies and policies, has endeavoured to speed up the process of societal growth, to raise the living standards and to promote equity and human welfare. The implementation of the development programmes during this period has significantly strengthened the country's economy, diversified its productive potential, and accelerated development of human resources.

Large public investment programmes have vastly expanded the physical infrastructure of transport, communications, power, irrigation, etc. The output of agriculture and industry has registered a reasonable increase. Wider education and health services have been provided, a variety of measures have been taken to protect the more vulnerable sectors of the society from the adverse effects of the rapid process of change.

Therefore, the policies and strategies designed for the development of the industrial sector have to be viewed as an integral part of this continuing and consistent framework of strategies and policy measures initiated during the first plan period 1970-1975, and further reinforced and elaborated from 1975 onwards, designed primarily to diversify the economic base by expanding the agricultural, industrial and service sectors.

The restructuring and diversification of the economy - to be attained by the growth of the non-oil sectors relative to the oil sectors through such broad diversification strategies - is to result in, according to the

* Mr. Abdulaziz A. Khathlan, Vice President, Economic and Industrial Consultancy Service Department, Saudi Consulting House, Saudi Arabia.

projections in the Third Development Plan (1980-1985), an increase in the relative contribution of the non-oil sectors to GDP from 38% in 1979/1980 to 44% in 1984/1985, and a corresponding reduction in contribution of the oil sector from 62% to 56%, during the same period.

The industrial sector is expected to play a major role in restructuring the economy. Specifically, by developing the industrial sector, Saudi Arabia wishes to achieve the following major objectives:

- decrease dependence on oil income;
- increase contribution of the industrial sector to the growth of GDP;
- substitute some imports;
- produce commodities that better suit local as well as regional needs and tastes;
- provide employment opportunities; and
- achieve balanced social and regional development through implementation of industrial programmes.

To achieve these objectives the industrial strategy of Saudi Arabia has been formulated to consist of a judicious mix of the following components:

- first, industries that expand the export base are to be sponsored by the Government or encouraged to be implemented by the private sector;
- second, industries that substitute imports by utilizing local raw materials or which have some cost advantages or which will generate external economies are to be encouraged; and
- third, other industries which will provide the forward and backward linkages required for the economy should also be encouraged.

These are discussed in greater details in the following paragraphs.

DISTINGUISHING FEATURES OF THE SAUDI ARABIAN ECONOMY AND RELATED INDUSTRIAL STRATEGY

It is necessary to identify several distinguishing features in the Saudi Arabian economy in relation to those of most other developing countries to understand the background and the rationale for the Kingdom's industrial strategy. These features demonstrate that there are major differences as well as similarities between the Saudi Arabian economy and most other developing countries which are frequently overlooked.

First, it is useful to look at the differences between Saudi Arabia and the majority of other developing and newly industrializing countries. Possibly the most outstanding contrast is that Saudi Arabia has not been constrained by a shortage of capital and foreign exchange since the first few years of the 1970s. This means that the strategy of industrialization is not influenced by the needs to earn foreign exchange and to conserve on foreign expenditures. Saudi Arabia is not caught in the trap of having insufficient foreign currency necessary to buy vital materials to sustain the very industries which earn the foreign currency and is not dependent on foreign aid for capital investment. Hence the Kingdom is in the very fortunate position of being able to plan for long-term industrial strength, without excessive concern for short-term remedial needs.

The second major contrast is that Saudi Arabia is sparsely populated and has no unemployment - instead there is a shortage of manpower which requires the import of very large numbers of expatriate workers. This has provided employment to workers from many less developed (and industrial) countries whose remittances have augmented their foreign exchange earnings. Thus Saudi Arabia has had a significant indirect role in the development of other countries.

A third feature is that Saudi Arabia has not inherited any strong industrial and trading links based on colonial relations with any single industrial country. This means that there has not been a predetermined industrial system, and the Kingdom has developed its own commercial laws, practices, standards and specifications, and institutions.

Fourth, the country has managed to raise all sections of the population above the poverty level. The per capita income rose substantially within a short period and closely approached the per capita incomes of the developed countries. The availability of capital permitted social development programmes to be successfully completed without diverting resources from the industrial, agricultural and urban development programmes.

Despite these contrasts with other less developed countries and despite these features which are the very opposite of the conventional model of a less developed country, it can be argued that the basic underlying structure of the Saudi Arabian economy is that of a developing country.

First and foremost, it is still a traditional one-commodity (oil) economy, which is still subject to external fluctuations of demand and price despite the achievements of OPEC in gaining a more stable market for this commodity.

Secondly, the economic structure is still very unbalanced, with the oil sector constituting over 62% of the total GDP. The balance, 38% constitutes the non-oil GDP. Its composition is also skewed. In 1980, the service sectors account for 57%, construction 34% and the productive sectors of industry, agriculture, mining and utilities only 9%. The economy is by no means self-sustaining, and the short and medium-term priorities of development may further accentuate the imbalances.

Thirdly, there is a shortage of skilled national manpower. Temporary dependence on foreign professional, technical, semi-skilled and manual workers is likely to continue for some time until national skill formation programmes are fully implemented.

Fourthly, although poverty is no longer a major worry, there is still some lack of educational, health and welfare services. The levels of literacy and education, the standards of health and of health care are insufficient and lower than those of some industrial countries.

Fifthly, in addition to oil and gas, there are numerous other natural resources with great potential which are currently unexploited. Saudi Arabia is rich in minerals and fishery resources. Additional resources in the form of livestock and crops are likely to be available from agriculture. Serious efforts are required to exploit these resources.

Performance of the Industrial Sector

In a review of the development of the non-oil manufacturing sector, it is seen that prior to 1970 this sector was insignificant. Substantial development of the non-oil manufacturing sector took place as a result of the strategies and policy measures introduced during the First and Second Development Plan periods. The main focus of the development efforts during the first plan period 1970-1975 (in the light of stringent financial constraints during that time) was the development of human resources through extensive investments in education and training, and infrastructure development.

During the second plan period 1975-1980 (under conditions of financial independence provided by increased oil revenues) the main focus was heavy investments for developing the physical infrastructure and raising the absorptive capacity of the economy. Substantial development and growth of the manufacturing sector also took place during these periods after introduction of the current strategies and policies. It was also during this period that the initial steps were taken for the establishment of the hydrocarbon-based industries, a medium and long-term strategy to maximise the conservation of these resources and to promote energy intensive industries with higher export values which is to be the main thrust of the industrial development strategies of the 1980s.

A brief reference to the performance of the industrial sector (other than oil refining) up to 1980 shows that though industrial manufacturing represents only 5% of the non-oil economy component of the GDP in 1979-1980, the total value of its output has increased from SR 3,303 million in 1974-1975 to SR 6,753 million in 1979-1980 (in terms

of 1979-1980 prices).^{1/} This represents an annual growth rate of 15.4% compared to a targeted rate of 14% for this period. This rate has also exceeded the annual growth rate of 15.1% of the total non-oil economy and 8% of the entire economy for this period.

The main elements of the industrial strategies and policies

The broad strategy consists of two main elements, namely the development of:

- hydrocarbon-based and basic heavy industries; and
- non-hydrocarbon-based manufacturing.

The development of the hydrocarbon-based industries takes priority for numerous reasons. Firstly, it increases significantly the value-added resulting from more effective utilization of the Saudi Arabian crude oil and natural gas resources. Secondly, it takes advantage of the availability of the low cost energy and low cost feedstock for these industries.

The hydrocarbon-based industries are developed on two policy approaches. First, the primary industries, for the manufacture of primary petrochemical products and the basic heavy industries, are to be undertaken by the public sector in view of their close connection with the oil sector and therefore being of critical importance to the Kingdom. These industries have large capital requirements, long gestation periods and occupy central roles in the rest of the industrialization programme. A wholly owned public sector organization, the Saudi Basic Industries Corporation (SABIC) is implementing this programme in close coordination with, two other public sector organizations: the General Organization for Petroleum and Minerals (Petromin) is responsible for gathering, treating and distributing the associated gas used as feedstock and energy and the Royal Commission for Jubail and Yanbu, responsible for building the physical infrastructure

^{1/} SR 3.444 = US \$ 1.00

at Jubail and Yanbu, the two sites selected to locate the primary industries. These three organizations cooperate with each other very closely.

The secondary petrochemical downstream industries that are to employ the output of these primary industries for the manufacture of a whole range of chemical based consumer products, are to be undertaken mainly by the private sector and in few cases jointly with SABIC.

In view of the fact that a proportion of the products of the primary industries, and also of some secondary industries are earmarked for international markets, the policy approach was for the primary industries to be established as joint ventures with leading international corporations. This policy was designed to obtain the most up-to-date technology for these major industries and also as an effective means for penetrating international markets for these products through joint efforts with such foreign partners.

The strategy for the development of the non-hydrocarbon-based industries has been to implement it exclusively through the private sector by provision of a range of attractive incentives. This strategy fitted well with the Kingdom's overall commitment to an economic system where a substantial part of the production and services are left to the private sector, and wherein market demand and financial viability were to be the main criteria for the successful establishment and operation of these industries.

In view of the need to encourage these industries to be competitive, viable and to be able to obtain the most up-to-date technology the policy orientation was for provision of incentives and subsidies instead of protective tariff barriers. These incentives include financial assistance on concessionary terms for capital costs, well developed land with infrastructure at very nominal rent, low cost services and utilities, and generous tax exemptions.

The substantial import substitution potential in the economy no doubt justifies such a strategy. Such a strategy also ensures that in view of the liberal import policy of the country only viable industries which are able to compete with imported products would be able to survive. In addition, it would also enable the industries to develop capability for competing in international markets.

Another important policy measure has been the encouragement given for foreign participation with technical know-how, either to form joint ventures with limited equity participation, or to have other collaborative arrangements. This was to expand the technological base required for a concerted industrialization programme, since it was more advantageous to acquire available and developed technology on commercial terms, if the country could afford it, rather than through the elaborate process of developing it locally. Secondly, since most of the industries have to be capital intensive rather than labour intensive (due to manpower shortages) joint ventures with foreign investors from developed countries would have ready access to such technology.

The rationale and implications for the current industrial strategy

It is a fundamental principle of Saudi Arabian industrial strategy that all projects should be economically and financially viable, and be based on the comparative advantages of the country's natural resources and market demands. Hence industrialization will concentrate very largely on hydrocarbon and downstream petrochemicals industries, and on processing of minerals. In addition, there will naturally be great scope for local entrepreneurs to establish factories to produce certain consumer goods to satisfy local demand, when such goods can be produced at competitive prices and quality. Such factories will produce consumer goods such as household durables and similar products for which high transport costs have to be paid during importation.

Finally, Saudi Arabia has no choice other than to industrialize. The Kingdom's oil resources are exhaustible and evolving energy technology will alter the market for oil. Hence dependence on this single mainstay of the economy and of the present capital surplus will have to come to an end at some time in the future. Hence there is no alternative than to process the national resources within the country, to manufacture goods derived from these resources, and to retain the value-added potential of the Kingdom's resources.

The programme for implementation of the strategy discussed above may have the following major policy components:

- rapid development of the raw material base within the country. For Saudi Arabia, it implies for example, raw materials from hydrocarbon sources and their by-products, minerals, fish and poultry, crops, etc;
- develop the agricultural sector at a rapid pace by developing capital intensive technologies so that the agricultural sector is able to release some manpower for the industrial sector in addition to supplying, increasingly, the basic needs of the people and raw materials for the industrial sector;
- reliance on market forces in a planned environment to allow free play to private initiatives;
- improve minimum import controls or tariff barriers or price controls to allow foreign products to compete with local products with a view to raising efficiency of local industries;
- continue the present system of incentives and subsidies as well as other measures for encouraging new investments and optimize production capacity of existing plants;
- allow maximum foreign investment in desirable fields;

- accelerate national skill creation;
- create, strengthen and maintain suitable financial, technological, institutional and physical infrastructure facilities;
- encourage greater investments in intermediate and capital goods industries. Engineering industries may be specially considered at the present stage of development; and
- adopt and implement other policy measures as and when required.

Emerging issues, strategies and policies for the 1980s

When viewing the emerging issues, strategies and policies for the 1980s, it is apparent that most of the main issues are continuities from previous decades.

From the perspective of the Saudi Arabian industrial strategy, the major issue will always be to attain and maintain efficient production methods, management and technology to ensure the highest standards of industrial efficiency. These will be achieved through extensive educational and training programmes, joint ventures with qualified foreign companies, and manpower development to give early responsibilities to citizens, so as to build up a cadre of managers and a skilled labour force fully capable of running the nation's industries in the medium and long-term. Manpower development is a constant factor which does not alter with changes in the world economic situations.

Furthermore, the penetration of world markets by Saudi Arabian manufactured and semi-manufactured petrochemical products will continue to be a cardinal issue which is, in structural terms, similar to the penetration of the rich markets of the world by processed agricultural goods and textiles from the developing countries in the 1960s and 1970s. This will require strategies of marketing and distribution arrangements between the Saudi Arabian petrochemical producers and the foreign joint venture partners. It will also require free trade among all countries of

the world, so that the worldwide distribution of Saudi Arabian petro-chemical products, which are manufactured on a firm basis of international comparative advantage, will be able to satisfy international demand without restriction by high tariff protection or informal trade barriers.

The issue of free trade extends to the development of non-hydrocarbon industries to satisfy local demand within Saudi Arabia. Saudi Arabia has consistently followed a policy of very low tariff barriers and free and fair market competition, which ensures that local industries are efficient. However, the most efficient industries can not compete against unfair competition and dumping, hence it is necessary to form internal policies and also international arrangements which ensure free and fair trade.

In the past there has been a clear trend towards the formation of regional free trade areas and common markets. The European Community has led the way in 1958, followed by the Andean Pact, the Association of South East Asian Nations, and most recently by the Gulf Cooperation Council. Such "common trading areas" are undoubtedly of great benefit to the member countries and help to overcome the problems of market fragmentation which have constrained development in the past. But the challenges will be to ensure that the "common trading areas" do not evolve as massive trading blocks which restrict the free flow of trade among all regions and countries of the world. The real challenge is to ensure there will be real opportunities for economic growth and free trade - especially among the countries and the regions of the developing world.

The emergence of "common trading areas" will also bring forth the old dilemma of balancing each country's own internal interests with its international responsibilities and its need for international cooperation. Each country needs free trade. Yet each country also needs a measure of protection for its own industries, particularly for the infant industries of a developing country.

In the past decade, Saudi Arabia has had a special role with major international responsibilities as the main exporter of crude petroleum, as one of the major exporters of every type of product and service from all parts of the world, as a major source of development aid. These are heavy responsibilities for any country, and it is important to place the Kingdom's resources and potential in a truly global perspective. Even though Saudi Arabia is classified as a capital surplus oil exporting country, the size of the national economy is still small compared to the industrialized countries of the world.

The decade of the 1980s is likely to be marked by uncertainty. The 1960s were marked by steady economic growth, increasing prosperity and wider international trade. The 1970s demonstrated that many of the conditions which allowed this growth (such as cheap energy) were severely detrimental to the long-term interests and hopes of development of the developing countries. Some of these conditions have now been fundamentally altered (such as the levels of oil price). Others (such as the Generalized Scheme of Preferences) have not been implemented or maintained in entirety as originally hoped for by the developing countries; while still others such as the extension of credit to many countries are still causing difficulties.

At this moment, in early 1983, the world is still in the grip of recession, and there is uncertainty whether there will be a pattern of even growth in the future, or a cycle of boom and recession as countries try to balance the needs for growth and full employment against tolerable levels of inflation. From the perspective of Saudi Arabia, this uncertainty only makes more certain the need and the urgency to move ahead with the programme of industrialization, within the framework of the strategies and policies outlined by the Council in Saudi Arabia.

INDUSTRIAL STRATEGIES AND POLICIES OF THE REPUBLIC OF KOREA FOR THE 1980s by
Jongsik Koak*

The past development of the Republic of Korea

Through successful implementation of past four development plans the Republic of Korea's economy has achieved rapid growth. Not only has the size of the economy expanded markedly, but the economic structure has been modernized and improved qualitatively.

Table 1. The performance of the economy

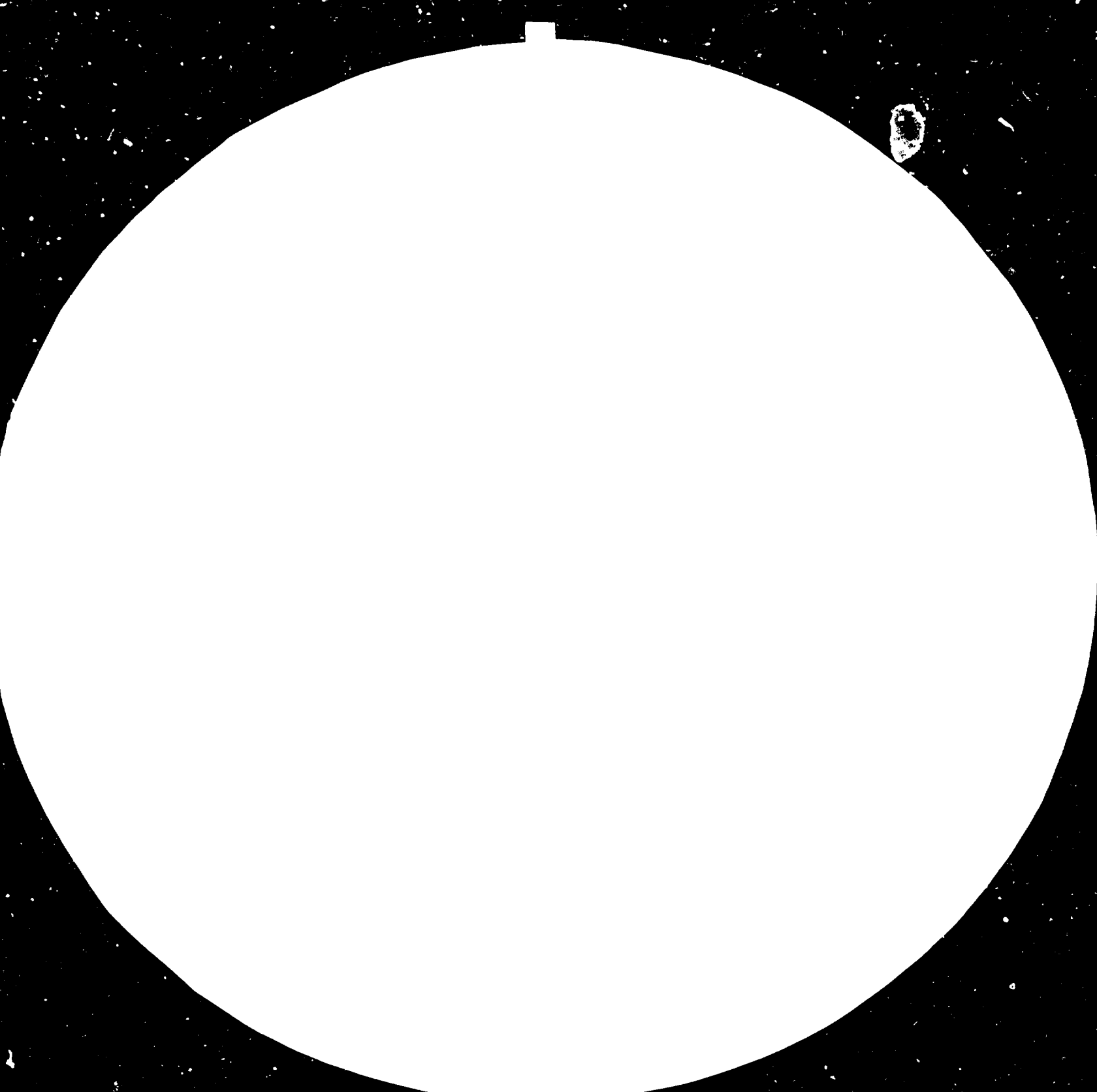
| | Unit | 1962(A) | 1980(B) | B/A |
|----------------------|-----------------------------------|---------|---------|-----|
| GNP | US billion \$ (1980 Prices) | 12.7 | 57.4 | 4.5 |
| Per capita | US \$ (1980 prices) | 477 | 1,506 | 3 |
| | (current prices) | 87 | 1,506 | 17 |
| Commodity Exports | US billion \$ (current prices) | 0.5 | 172 | 315 |

Since the mid-1960s the Republic of Korea has put a policy of export-led industrialization into effect with the aim of increasing exports of labour-intensive, light industrial products such as textiles, plywood and footwear. This approach was adopted because the Republic of Korea has abundant human resources. This policy has shown great success, partly due to the global trend toward free trade within the GATT and IMF system.

Since the 1970s, large-scale investment projects have been undertaken in the steel, ship building, petrochemical and the machinery industries in order to deepen the industrial structure, which has paved the way to a more effective industrial structure. In order to fill the gap in financing the ever increasing investment requirements, there was no alternative but to actively induce foreign capital.

* Mr. Jongsik Koak, Assistant Director, Overseas Cooperation Council, the Republic of Korea.

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MICROSCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A
10X MICROSCOPY, 1.5 LINE PAIRS PER MM.
U.S. GOVERNMENT PRINTING OFFICE: 1963

Table 2. Foreign Capital¹

(Current Prices: mil. \$)

| | 1st Plan (1962-66) | 2nd Plan (1967-71) | 3rd Plan (1972-76) | 4th Plan (1977-80) |
|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Loans | 291 | 2,166 | 5,432 | 10,256 |
| Public | 116 | 811 | 2,389 | 4,084 |
| Commercial | 175 | 1,355 | 3,043 | 6,172 |
| Direct Investment | 17 | 96 | 557 | 425 |
| Total | 308 | 2,262 | 5,989 | 10,681 |

Note: 1. Short-term capital and bank loans are excluded.

However, the two oil shocks and the subsequent world-wide recession have aggravated the external economic environment of the country. Most of the industrialized countries have imposed some kind of import restrictions on the products made in the developing countries. Even worse, the Republic of Korea has been losing her international competitiveness based on low labour costs. Moreover, in the early 1980s, the international monetary and trade order has fallen into disarray. The world economy of the coming decade will, therefore, feature unprecedented uncertainties and fierce competition.

Also, the overly rapid growth policy of industry has caused several structural problems. In the first place, excessive investment in capital-intensive heavy and chemical industries has created an imbalance in investment between light and heavy industries. Secondly, continuous investments in excess of domestic savings capacity during the latter half of the 1970s have rendered the subsequent high levels of inflation unavoidable. Thirdly, although promotion of large-scale projects facilitated the growth of large firms, small and medium firms were

allowed to stagnate. Lastly, most of the investment took the form of tangible physical facilities while technological and manpower development were neglected.

INDUSTRIAL POLICIES AND STRATEGIES FOR THE 1980S

Industrial policies and structural changes

In the course of industrialization manufacturing industries have expanded substantially and contributed extensively to the Republic of Korea's economic growth. Since the mid-1970s, the industrial structure has been remarkably deepened. This leaves an important task for the country in the 1980s: to maintain the growth rate and in particular to enhance the efficiency of the manufacturing sector. During the Fifth Plan period, the government intends to change its industrial policies to allow industries to develop in line with the shifting comparative advantages in the world market. The policy will encourage the expansion of sectors that have comparative advantages and induce innovations in technology and business management.

The basic direction of the investment policy during the 1980s will be to expedite more balanced growth and to prepare the economy for further exposure to international competition. The industrial incentive system will be realigned, so that investment resources will be allocated more rationally in accordance with the principle of international comparative advantage. In addition, investments for enhancing productivity and international competitiveness will be expanded across all sectors of the economy.

Sectoral Plans: Objectives and policy tools

Machinery Industry

The growth of the machinery industry is closely related to three factors: stable demand for its products; development of small firms producing parts and components; and technological improvement. To promote domestic

demand, the current system of producers credit will be changed to a buyer's credit system. And, at the same time, tax incentives will also be provided to increase the domestic demand for machinery.

The Government will also expand credit for exporting ships, machinery and industrial plants on deferred payments. Small firms producing parts and components will receive Government support to promote growth. Production specialization among these small producers will be strongly encouraged. As part of the efforts to promote technological advancement and innovation, private and Government-funded research institutes will be utilized, and financial and tax incentives will be provided to induce private investment in research and development.

Shipbuilding Industry

The long-range prospects for the shipbuilding industry are good considering the steady decline of production capacity in the developed countries. During the plan period, shipbuilding capacity will be increased substantially. To enhance competitiveness, technology and the parts industry will be promoted. Moreover, the export value of ships will be increased from 440 million dollars in 1980 to 5.4 billion dollars by 1986. This increase will be made by exporting high value added ships and by upgrading the quality of exported ships. Shipbuilding capacity will be increased to meet the rising domestic and export demand, and in 1986 total production capacity will reach 6 million G/T. Also the Government will increase financial resources available for exporting ships on a deferred payment basis and, in addition, in order to reduce production costs, standardization and volume production will be pursued.

Automotive Industry

The world automobile market is restructuring itself and making rapid technological innovations. Accordingly, in order to increase its economic efficiency and compete in overseas markets, the Republic of Korea's auto industry must also be advanced. Present production capacity of automobiles exceeds the domestic demand. In the future overall automobile production capacity will be carefully forecasted to take into

account all aspects of prospective demand, which is expected to rise significantly. It is believed that the optimal level of increase in the capacity for passenger cars 's approximately 300 thousand units per year.

Further, specialization in automobile production will be pursued to raise the capacity utilization rate. Imports of foreign technology and domestic development of new technology will be encouraged. Local products must improve with respect to weight, fuel efficiency, safety, and anti-pollution devices. Within the industry special emphasis will be placed on the parts industry. To increase productivity, the plan will promote specialization, standardization, and mass production of automobile parts and components.

Electronics Industry

The international electronics industry has grown rapidly during the last decade, but the technology and production facilities of the country's electronics industry have not kept pace. However, the industry consumes relatively less energy and natural resources, and most electronic products require labour-intensive technology in production. More importantly, the industry is becoming increasingly relevant to the growth of other industries such as machinery and shipbuilding. Thus its growth will be a key to the advancement of the country's industrial structure.

During the plan period, the composition of electronics products will be shifted from consumer electronics and the assembly of components to high value added and technology-intensive products such as semi-conductors, computers and communications equipment. Research institutes will lead the development of key technologies and expand the base for absorbing foreign technologies. As an incentive to induce imports of new, developing technologies, semi-conductors, for example, foreign firms will be permitted majority ownership.

Concurrently, through enlargement of the domestic telecommunications system and computerization of both Government administration and business management, sources of domestic demand will be reinforced. Some overseas investment will also be undertaken to exploit the experiences of the

Republic of Korea which has accumulated through export of consumer electronics during the past decade.

The steel and non-ferrous metals industries

The development of the steel and non-ferrous metals industries will be promoted primarily to fulfill domestic market demand and to ensure a stable supply of raw materials to the interrelated domestic industries. An unreasonable drive to achieve self-sufficiency in these industries will not be attempted. Obsolete and superannuated production facilities will be replaced by modern integrated productive facilities. A stable supply system for raw materials such as iron, ore, bituminous coal and copper will be established through participating in the development of overseas raw materials and entering into long-term supply contracts.

Petrochemical industry

The domestic petrochemical industry is in a weak position in terms of international competitiveness. Consequently, good orchestration between investment policies to expand domestic production facilities and import policy to stabilize the supply and prices of raw materials are needed during the plan period.

New construction and/or expansion of petrochemical industry facilities will be determined after close evaluation of the size of projected future demand, the prospects for acquiring an adequate supply of raw materials and international competitiveness. In other words, development of the petrochemical industry will be induced and propelled step by step, and plant by plant according to the marketability of the products in the country and overseas.

To cope with external changes in raw material supplies, joint investments in resource-rich countries will be supported and encouraged. To ameliorate the shortage of petrochemical raw materials, natural gas will be gradually substituted for naphtha and the expansion of naphtha-cracking facilities will be undertaken, but only to the extent that raw materials can be secured.

Textile industry

In the past, the textile industry has been the main source of the country's exports. However, it currently suffers from weakened competitiveness: the rate of wage increases is relatively high domestically and competition in the international market has recently intensified. Furthermore, many advanced countries regulate imports of textiles from developing countries. Nevertheless, the textile industry is still expected to play a large role as an export industry during the plan period, but this can only be accomplished by exploiting new production technologies and improving product quality.

To encourage stable growth and development of the textile industry, improvement of the production structure is needed in order to encourage more high value added production. A positive policy to exploit the international market is needed in response to import regulations by advanced countries. The Government will also expand the Textile Facilities Modernization Fund for facilitating modernization of facilities through equipment automation and replacement of superannuated facilities.

Moreover, development of the dyeing industry is essential to improve the quality of textile products. The dyeing industry in the country is obsolete and is a bottleneck in the process of improving the quality of textile products. Consequently, the Government will emphasize the development of fine chemical technology to help improve the quality of dyestuffs during the plan period.

Small and medium industries

Small and medium industry is one of the less developed sectors in the economy; these enterprises have not been able to gain easy access to new production technology, and the linkage with large enterprises is not well established. However, the development of small and medium industries is emphasized in the fifth plan. During the plan period, the Government will lay emphasis on voluntary structural improvements of small and medium enterprises, instead of excessive protection and assistance to them.

Specifically, the Government is going to support the activities of small and medium enterprises through an equitable tax policy, and give them opportunities equal to large enterprises in gaining access to bank loans. This will be achieved by giving autonomy to banking institutions. In doing this, small and medium enterprises will be able to improve the quality of their products, increase productivity and enhance their international competitiveness.

Furthermore, the Government is going to expand technical and management extension service by better utilizing the resources of the Small and Medium Industry Promotion Corporation and the Korea Production Technology Service Corporation. For that purpose, the functions of those two organizations will be reviewed and restructured so that they may cooperate effectively in collecting and distributing information, and expand their management guidance and consulting services. As a means to support the development of technology-intensive small enterprises, a venture capital system will be introduced and operated.

Conclusion

As mentioned above, the industrial strategies and policies of the developing countries should be executed in line with those of the industrialized countries. Under circumstances of world economic recession, it is more difficult a time than ever before for the developing countries to meet their goals.

Thus, the Government of the Republic of Korea would like to propose that now is the time when the developing countries should help each other through industrial cooperation in such fields as natural resources, technology transfer and exchange of development techniques. And it is also necessary that international organizations such as UNIDO, UNCTAD and ESCAP should play a leading role in strengthening mutual cooperation among developing countries.

Moreover, concerning the present world economic recession the developing countries should adopt a common approach to the industrialized countries so that they do greater efforts in order to ease their protectionism or import restrictions on the products of the developing countries. In short, without the help and goodwill of the industrialized countries, any effort by UNIDO will be ineffective.

ANNEX TABLES

1. Major Indicators for the Fifth Plan

| | Unit | 1982 | 1983 | 1986 | |
|-------------------------|-----------------|--------|--------|---------|----------|
| | | | | Revised | Original |
| Real Growth of GNP | % | 5.8 | 7.5 | 7.5 | 7.5 |
| Export | \$ U.S. Billion | 21.0 | 23.5 | 37.2 | 53.0 |
| Imports | " | 23.4 | 25.5 | 36.3 | 55.5 |
| Current Account | " | -2.5 | -2.0 | -0.2 | -3.6 |
| (Ratio to GNP) | % | (3.8) | (2.7) | (0.2) | (2.5) |
| External Debt | \$ U.S. Billion | 37.2 | 40.9 | 49.0 | 64.5 |
| External Assets | " | 8.6 | 9.6 | 14.5 | 18.6 |
| Net External Debt | " | 28.6 | 31.3 | 34.5 | 45.9 |
| (Ratio to GNP) | % | (43.2) | (42.7) | (32.3) | (31.6) |
| Debt Service Ratio | % | 15.5 | 14.2 | 13.7 | 11.1 |
| Gross Investment Ratio | % | 27.5 | 28.1 | 30.9 | 32.5 |
| Domestic Savings Ratio | " | 21.9 | 24.6 | 29.7 | 29.6 |
| Foreign Savings Ratio | " | 4.6 | 3.4 | 0.7 | 2.9 |
| Statistical Discrepancy | " | 1.0 | 0.1 | 0.5 | 0 |

2. External Debt and Assets

\$ U.S. Million

| | 1980 | 1981 | 1982 | 1983 | 1986 |
|---------------------------|--------|--------|--------|--------|--------|
| External Debt | 27,365 | 32,490 | 37,234 | 40,901 | 49,008 |
| Medium & Long-Term | 16,754 | 20,750 | 23,159 | 25,433 | 31,010 |
| Loans | 12,827 | 14,349 | 15,728 | 16,748 | 1,900 |
| Bank Loan | 2,309 | 4,174 | 5,298 | 6,308 | 7,268 |
| IMF Credit | 723 | 1,246 | 1,529 | 1,221 | 191 |
| Bond | 288 | 358 | 341 | 523 | 1,950 |
| Trade Credit | 576 | 564 | 463 | 563 | 813 |
| Others | 41 | 59 | 70 | 70 | 70 |
| Short-Term | 7,575 | 8,465 | 10,163 | 11,056 | 12,086 |
| Non-Bank | 4,158 | 4,089 | 3,884 | 4,034 | 4,184 |
| Bank | 3,417 | 4,376 | 6,279 | 7,022 | 7,902 |
| Foreign Bank "A" Account | 3,036 | 3,275 | 3,912 | 4,412 | 5,912 |
| External Assets | 7,331 | 8,183 | 8,628 | 9,598 | 14,548 |
| Foreign Exchange Reserves | 6,571 | 6,891 | 6,980 | 7,300 | 9,100 |
| Exports-on-Credit | 426 | 861 | 1,230 | 1,880 | 5,030 |
| Other Financial Assets | 334 | 431 | 418 | 418 | 418 |
| Net External Debt | 19,892 | 24,307 | 28,606 | 31,303 | 34,460 |
| (% of GNP) | (35.3) | (39.1) | (43.2) | (42.7) | (32.2) |

EXPERIENCES OF NIGERIA IN THE AREA OF INDUSTRIAL DEVELOPMENT STRATEGIES AND POLICIES WITH A PARTICULAR EMPHASIS ON FUTURE PERSPECTIVES by A.O. Oluwunmi*

INTRODUCTION

In broad sectoral classification, the industrial sector is made up of mining and quarrying, manufacturing, and utility. However, industrialization is generally regarded as synonymous with the growth of the manufacturing sector, and this paper will, therefore, be concerned with the manufacturing sector of the Nigerian economy.

The manufacturing sector in Nigeria has been developing steadily since the mid-1960s. The sector grew at the rate of 15.6% per annum at 1973-1974 constant prices between 1974-1975 and 1977-1978. It is projected that it will grow by no less than 15% per annum during the current National Plan period (1980-1984).

In spite of this growth, the contribution of the manufacturing sector to Nigeria's GDP has tended to fluctuate and has remained very low. In 1960, the share of manufacturing in GDP was 3.32%; in 1980 it had not grown beyond 7.4% at 1977 factor cost; and it is projected to reach about 10.5% by 1985. This percentage share of GDP is still quite low compared with 15-20% already recorded in many countries at a similar stage of development but with less endowment of natural resources. The local input content of manufacturing value-added (MVA) during the same period is most unsatisfactory. In 1960, it was 1.35% and had only managed to grow to 3.4% in 1975. This level of contribution to GDP is made more glaring by comparing it with corresponding figures for other more developed, developing countries as shown in Table 1.

Table 1. Local input content of MVA

| Country | 1960 | 1975 |
|-------------------|-------|-------|
| NIGERIA | 1.35 | 3.41 |
| BRAZIL | 21.45 | 24.86 |
| INDIA | 12.43 | 15.22 |
| MEXICO | 19.03 | 23.03 |
| REPUBLIC OF KOREA | 11.10 | 32.31 |
| TURKEY | 12.88 | 21.53 |

* Mr. A.O. Oluwunmi, Director, Policy and Planning, Federal Ministry of Industries, Nigeria.

The output structure of the sector today, after more than two decades or national efforts, is still characterized by the preponderance of light industries, such as food, beverages, textiles, tobacco, footwear, soaps and detergents and livestock feeds, all involving relatively simple technology. Attention has, however, begun to shift to basic metal and engineering industries, ranging from the elementary sub-groups such as metal furniture, fixtures, and structural metal products to machine tools, iron and steel, motor vehicle assembly, and petro-chemical industries.

The basic engineering industries are just beginning to be established. Its contribution is estimated at only about 12.9% of the total value added in the manufacturing sector, whereas the average for comparable developing countries is already about 16.4%. Moreover, the vital industries in the sub-sector, such as those manufacturing household electrical apparatus, agricultural machinery and equipment, transport equipment etc., account for only 2.2% of the value-added in the sector.

The output structure shows an almost total absence of the production of intermediate and capital goods, especially in the high technology areas. For example, basic industrial chemicals, such as fertilizers and pesticides, account for only about 0.2% of total value-added in the sector, while consumer oriented chemicals such as toileteries and household detergents account for as much as 8.2%. With regard to the input structure, the manufacturing sector is at present dominated by assembly-type activities. In general, industrial costs are too high in relation to value-added. The import content of the manufacturing sector is still very high. On the average, over 60% of the raw materials is imported. As for the high technology groups, the percentage is even much higher than the basic industrial chemicals (87.3%), glass products (92.9%) and textile goods (91.9%).

STRATEGIES AND POLICIES

Earlier Strategies and Policies

Having given an overview of the performance and characteristics of the manufacturing sector of the Nigerian economy, it will appear pertinent to state briefly the various strategies that have been applied in the course

of Nigeria's industrialization efforts. The history of Nigerian industrial development shows that Nigeria, like other developing countries, has applied at various stages a combination of the following strategies:

- manufacture of simple goods for export;
- semi-processing of primary products; and
- import substitution.

Manufacture of simple goods for exports

The emphasis here is on the word "simple". The rationale is that Nigeria has abundant labour and scarce capital and so it could find out and produce simple manufactured goods which use more labour and less capital and export them e.g. textiles, leather shoes, etc.

Semi-processing of primary products:

The rationale for this is that Nigeria, like other developing countries, is a producer of primary products; if it semi-processed them before exporting, their values could be increased. As reflected in Table 2, the value of Nigeria's exports of manufactured goods has been dominated largely by simple processing of agricultural products which accounted for 83% of total value of manufactured export in 1970, falling to 78% in 1974, but rising even more dramatically to 94% in 1978. Most of Nigeria's manufactured exports are semi-processed products such as cocoa butter, cocoa cake and cocoa powder.

Import substitution

The colonial powers did not provide any basis for industrialization, as neither the infrastructure nor the trained manpower for industrialization was developed. Nigeria was seen as a market for industrial goods from the

Table 2. Export of Manufactured Products 1970-1978

| Products | 1970 | | 1974 | | 1978 | |
|------------------|---------------|--------|---------------|--------|---------------|--------|
| | Value (Nm) | % | Value (Nm) | % | Value (Nm) | % |
| Agricultural | 26.6 | 83.1 | 31.7 | 78.1 | 31.4 | 94.0 |
| - cocoa butter | (15.6) | (48.8) | (26.9) | (66.3) | (31.4) | (94.0) |
| - others | (11.0) | (34.3) | (4.8) | (11.8) | - | - |
| Non agricultural | 5.4 | 16.9 | 8.9 | 21.9 | 33.4 | 100.0 |
| TOTAL | 32.0 | 100.0 | 40.6 | 100.0 | 64.5 | 100.0 |

Source: Central Bank of Nigeria, Annual Report.

industrialized countries. For Nigeria, therefore, import substitution became a very attractive strategy for industrialization immediately after independence. Given the low base for industrialization in the country and the existing demand for imported consumer goods, it was, therefore, simple and logical to base the rationale for industrialization on the domestic replacement of these finished goods by importing the components or semi-finished materials and engaging in the final assembly process.

Using the strategy of import substitution, Nigeria has come to produce a range of products including textiles, food, beverages, tobacco, footwear, soaps and detergents and livestock feeds. There are now about 23 air conditioner, 11 refrigerator and 20 combined air conditioner/refrigerator plants; 12 autoparts, 12 metal furniture, 16 cable manufacturing industries, as well as 93 building materials industries. In the chemical sub-sector there are industries producing pharmaceuticals, paints, and cosmetics. There are also 19 soap and detergents, 18 chemical products, and 12 plastic factories. In the sphere of electronics, the requirements for radio and television sets are being met by 89 local electronics industries where some degree of manufacturing is also being undertaken.

Nigeria also has 65 feedmills, 464 bakeries, and 20 watch assembling factories. In addition, the country now has 2 car assembly plants with a combined capacity for 90,000 cars per annum and 4 commercial vehicle assembly plants with a combined capacity for 35,000 trucks and 6,000 agricultural tractors. The soft drink bottling companies and 15 breweries are attempting to meet the requirements for beer and soft drinks in the domestic market and the bottles they use are locally manufactured. There is absolutely no need for the importation of safety matches, candles, furniture, and carpets into Nigeria, as these are being competently manufactured locally.

As a result of this strategy, the level of dependence on imports as at 1973/1975 in the following areas, according to the current Development Plan document, were as follows:

| | |
|---|-------|
| - vegetable oil milling | 10.3% |
| - saw milling | 8.0% |
| - spirits, distillery and brewing | 12.5% |
| - tyres and tubes | 17.7% |
| - soap, perfumes and other cleansing preparations | 16.1% |

The worst areas are those related to the supply of industrial and agricultural machinery and equipment where the degree of dependence for the same period is about 98.8% and 93.9% respectively. The other areas of heavy dependence on imports are household electrical apparatus and other electrical supplies (93.6%), motor body building (92.7%), shipbuilding (89.4%), basic industrial chemicals, fertilizers and pesticides (89.2%), weaving apparels (88.9%), radio, television and communication equipment (87.5%), drugs and medicines (83.8%).

Also, Table 3 reveals that domestic production of soft drinks, beer and stout and cotton textiles represents about 95% of total supply. Similarly over 90% of total supply of roofing sheets, soap and detergents are locally produced. The country's import-substitution strategy of industrialization together with the associated incentive system is presumably responsible for these laudable results.

Table 3. Domestic and Foreign Components of Supply for Selected Manufactured Products

| Products | Units | 1973 | | 1974 | | 1975 | | 1976 | |
|----------------------------|-------------------|--------------|-------------------------|--------------|-------------------------|--------------|-------------------------|--------------|-------------------------|
| | | Total Supply | % Domestically Produced | Total Supply | % Domestically Produced | Total Supply | % Domestically Produced | Total Supply | % Domestically Produced |
| Soft drinks | million litres | 102.6 | 99.1 | 87.4 | 99.6 | 142.9 | 99.0 | 204.7 | 99.5 |
| Beer and stout | million litres | 218.1 | 98.5 | 237.7 | 97.3 | 374.2 | 78.5 | 515.4 | 71.3 |
| Cement | million tonnes | 2.2 | 56.8 | 2.3 | 53.8 | 3.3 | 38.4 | 3.4 | 37.2 |
| Cotton textiles | million sq.meters | 307.7 | 95.5 | 287.1 | 96.4 | 353.3 | 94.6 | 334.8 | 91.9 |
| Footwear | million pairs | 21.1 | 79.4 | 21.9 | 89.4 | 28.6 | 84.6 | 27.4 | 71.9 |
| Paints and allied products | million litres | 17.6 | 85.9 | 18.9 | 80.0 | 27.7 | 7.9 | 30.4 | 70.7 |
| Roofing sheets | '000 tonnes | 95.3 | 95.8 | 75.3 | 90.1 | 115.1 | 5.8 | 113.3 | 94.6 |
| Soap and detergents | '000 tonnes | 76.5 | 90.3 | 81.0 | 93.9 | 85.0 | 89.6 | 103.1 | 93.7 |
| Sugar | '000 tonnes | n.a. | - | n.a. | - | 156.6 | 34.7 | 172.7 | 27.7 |

Source: Central Bank of Nigeria, Annual Report, various years.

Defects of the strategies

The strategy of manufacturing simple goods for export entails heavy competition, especially from the more developed of the developing countries. Goods exported under this strategy also fall an easy prey to protectionist policies in the export markets. The semi-processing of primary products suffers from the low income earned by many tropical agricultural products; it also suffers from price elasticity of demand. Moreover, the developed countries frequently prefer to undertake processing from the primary products, unless the semi-processed goods are considerably higher in weight than the primary products.

As regards the import substitution strategy, it has tended to create an illusion of industrialization: the physical appearance of a large number of industrial establishments makes one believe that industrialization has really advanced, whereas in truth very little has been accomplished in terms of local value added. Nigerian manufacturing industries still depend on heavy imported inputs, especially capital goods and raw materials. Table 4 shows that the bulk of the country's foreign exchange outflow is expended on these two import groups.

Table 4. Imports by Major Groups (1970-1978)

| Import Group | 1970 | | 1974 | | 1980 | |
|----------------|------------|-------|------------|-------|------------|-------|
| | Value (Nm) | % | Value (Nm) | % | Value (Nm) | % |
| Consumer goods | 218.2 | 28.8 | 506.5 | 29.2 | 2291.1 | 27.9 |
| Capital goods | 285.2 | 37.7 | 646.5 | 37.2 | 3982.7 | 48.5 |
| Raw materials | 234.4 | 31.0 | 573.7 | 33.0 | 1929.7 | 23.5 |
| Miscellaneous | 18.6 | 2.5 | 10.6 | 0.6 | 8.2 | 0.1 |
| TOTAL | 756.4 | 100.0 | 1737.3 | 100.0 | 8211.7 | 100.0 |

Source: Central Bank of Nigeria, Annual Report.

New industrial policy and strategy

In 1980, the Federal Government of Nigeria published a blueprint on its industrial policy and strategy, the "Nigerian Industrial Policy and Strategy: Guidelines to Investors". In it, the objectives of industrialization, of course, include the harnessing of the human and material resources of the nation for the production of goods and services required for domestic consumption and international trade. In the process, gainful employment is created for a large number of people, a high degree of national self-reliance is achieved, and the standard of living of the people generally is raised. The strategy for achieving the objectives of industrialization are also set out. The package of industrial incentives is the kingpin of the strategy.

The establishment of the Industrial Development Coordination Committee is of great importance in that it is intended to help minimize if not totally eliminate the complaints of investors, especially foreign investors, that the procedure and processes to be followed to set up an industry in Nigeria is too cumbersome and time consuming. The Secretariat of the IDCC will be the one-point contact the entrepreneur need make with Government agencies charged with responsibilities for processing applications of the various permits, approvals and licences required for an industry. The committee is also to advise the Minister of Industries from time to time on matters of Industrial policy. Certain other establishments and measures are also being used as part and parcel of the strategy for achieving Government's industrial policy objectives, and these are briefly outlined below.

The Nigerian Standards Organization was established by law and charged with responsibility for prescribing and monitoring standards for industrial products in Nigeria. Its role is to ensure that, quality-wise, the products of Nigerian manufacturing industries compare favourably with their foreign counterparts. This is to ensure that Nigerian industrial products can compete well in international markets, and that the Nigerian consumer enjoys good value for money.

The Industrial Inspectorate Division was also established by law and charged with responsibility for checking claims of capital expenditure with a view to ascertaining that what an industrialist claims to have spent on machinery and equipment for his industry was actually spent, and that the prices of such machinery and equipment have not been inflated. The Division carries out physical inspection of plant and machinery in factories to check sharp practices.

The Nigerian Enterprises Promotion Board was set up by law as an instrument of implementation of Government policy decision that Nigerians should be closely involved in the industrialization process and ascend to the commanding heights of the national economy. Under the Nigerian Enterprises Promotion Act, all business enterprises are grouped into three schedules. Those classified in Schedule I are reserved exclusively for Nigerians. They are relatively simple enterprises in terms of technology and capital investment. Foreigners can participate in Schedules II and III enterprises up to 40% and 60% of equity respectively. The Board is to ensure compliance with this requirement by all business enterprises in the country.

The National Office of Industrial Property was also established by law principally to oversee the licensing and technical agreements between Nigerians and their foreign business associates. The aim is to ensure that the terms and conditions of cooperation are equitable and that there are no obnoxious clauses in these agreements which could be prejudicial to the interests of the Nigerians involved and the national economy.

The Export Promotion Council is, as its name implies, charged with responsibility to encourage export of Nigerian goods and services to other countries by helping to remove any disincentives in this regard and positively encouraging Nigerian entrepreneurs to sell their products in foreign markets.

The Industrial Training Fund is a statutory organization concerned to promote on-the-job training of industrial personnel and create training and industrial attachment facilities for technology students. It helps with the funding of such training and organizes training courses for various categories of the country's labour force.

The N.I.D.B. and the N.B.C.I. The Nigerian Industrial Development Bank (N.I.D.B.) and the Nigerian Bank for Commerce and Industry (N.B.C.I.) are the two financial institutions set up by the Government as part of its efforts to solve the problems of industrial financing. The Government makes funds available to these banks for on-lending to deserving industrial ventures. As development institutions, their terms are less stringent than those of commercial banks. In addition, the guidelines issued by the Central Bank of Nigeria to the financial institutions in the country provide for preferential lending to industry, especially small-scale industries. There are other financial arrangements to enhance availability of funds for small-scale industrial development throughout the country.

Small-scale Industries. This sub-sector enjoys high priority rating with the Government because of its potentiality in helping to develop the rural areas and thereby checking the migration of rural population to the urban centers. The establishment of Industrial Development Centres (IDCs) is the most pragmatic measure by the Federal Government to speed up and streamline small-scale industrial development. The IDCs render extension services to small industrial entrepreneurs and help them with various problems, including the preparation of feasibility reports which could be used to secure bank loans, choice of appropriate technology, machinery and equipment, plant lay-out, modern business practices, staff training and minor repairs to plant and machinery. The Government is to establish an IDC in each of the States of the Federation; thirteen are already functional.

Industrial Incentives. The entire package of industrial incentives is currently under review to streamline it more effectively with the policy objectives of Government and to establish an appropriate machinery for administering and monitoring the effectiveness of each incentive.

Infrastructural Facilities. In spite of heavy investments by Government in the development of industrial infrastructures, supply has tended to limp behind demand, especially the supply of electric power and water. However, several projects are being executed to improve the supply

of these vital facilities, including transport and telecommunication facilities. In addition active thought has begun to be given to the establishment of industrial estates which will be well provided with all the basic industrial infrastructures.

Basic Industries. As a matter of policy, the role of Government should, as much as possible, be limited to providing a regulatory environment conducive to profitable industrial entrepreneurship. However, the Government has had to be more directly involved not only in industries which have bearings on national security but also other industries which entail heavy capital investments, sophisticated technology and long gestation periods. Iron and steel, machine tools, refined petroleum, cement, fertilizer, sugar, pulp and paper, transportation, telecommunication, and petrochemicals are some industries in which direct public sector investment has been deemed necessary to avoid total and indefinite dependence on imports.

Investment Information and Promotion. There is, in the Federal Ministry of Industries, an Investment Information and Promotion Centre which is concerned to furnish both existing and prospective industrialists with the information they require for sound investment decisions. The Centre also assists investors in other ways, such as linking them with joint venture partners and rendering advice on sources of machinery and equipment. A branch office of the Centre has recently been established in New York; it is proposed to establish other branch offices in other business centres of the world. An industrial data bank is being established to facilitate the process of finding and providing information on the Nigerian industrial sector which planners, investors, consultants and researchers would from time to time require.

Cooperation with other African countries. The Nigerian Government is committed to a policy of encouraging inter-African cooperation. It is in this spirit of cooperation that Nigeria played a leading role in the establishment of the Economic Community of West African States, the Nigeria-Niger Joint Commission, the Lake Chad Commission, and the African Regional Centre for Engineering Design and Manufacturing, to mention some

organs for mutually beneficial economic cooperation. Nigeria is participating in the Save Sugar and Onigbolo Cement Projects in the Republic of Benin, Zwaziland Sugar, the Mifergui Nimba Iron Ore project in Guinea, a fertilizer project in Senegal, and a Copper Extrusion Project to be jointly implemented by Nigeria and Zambia. Further avenues for cooperation are being explored.

Conclusion

Nigeria's blueprint on industrialization is barely over three years old. Most of the underlying consideration and parameters on which the policy prescriptions and strategies were based are still valid today. Many aspects of the blueprint, the institutions and measures described above, are therefore likely to remain relevant in the immediate future. However, certain facts about the industrial sector of the Nigerian economy have presented themselves more forcefully than before; they have underscored the need to upgrade the priority ratings hitherto accorded some aspects of Nigeria's industrialization strategy. The preponderant dependence on imported inputs could cripple industries, especially in the face of dwindling foreign reserves without which imports are impossible.

Nigeria must, therefore, explore all avenues for rapidly developing sources of local raw materials for her industries. The capacity for producing intermediate and capital goods must also be developed and nourished. With the success being achieved in the Green Revolution programme of the Federal Government, the drain on the country's foreign reserves should be reversed before long if the industrial sector also becomes less dependent on foreign products. Linkages within the industrial sector and between the manufacturing and the agricultural sectors should go a long way in enhancing the self-reliance of the economy. Facilities for research and development will need to be seriously developed and used to develop domestic sources of raw materials as well as improve product quality and operational efficiency.

It could be said that very considerable groundwork has been done for the industrialization of the Nigerian economy, but in order to reap the fruits of what has been done some further work is urgently necessary. Paramount among these are the provision of infrastructural facilities, reduction of imported inputs to the minimum possible proportion, and effective linkages throughout the productive sectors of the national economy.

PERUVIAN INDUSTRIAL POLICY: PAST AND PRESENT by Ivan Rivera Flores*

INTRODUCTION

Peru is a country of intermediate development; it has 18 million inhabitants and its per capita GDP is US\$1.180. Its industry accounts for 25% of GDP and employs 12% of the working population. Export industry accounts for 12.7% of total industrial output.

Peruvian industrial policy over the past 12 years has had two phases, clearly differentiated in respect of fundamental aspects such as industrial structure, the role of the State, the area of industrial growth and the role of labour, property and management within the industrial enterprise. The first period, marked by the implementation of the military government's Industries Act, takes us up to the year 1976. The second period begins in 1977 with substantial amendments to the Industries Act and with considerable emphasis on export industry; it continues with the beginning of the process of trade liberalization in 1979, to be consolidated with the new Industries Act adopted in May 1982.

INDUSTRIALIZATION ON THE BASIS OF BASIC INDUSTRY

Principal characteristics of the industrial model

The main objective of the Industries Act promulgated by the Military Government in July 1970 was to secure accelerated and stable growth within a framework of economic independence and distributive justice.

In order to achieve this objective the Government established an import substitution model with certain variants to permit the attainment of economic independence and distributive justice.

Thus a policy of closed markets to protect industrial products manufactured within the country was established through the National Register of Manufactures, a mechanism by means of which imports of products manufactured within the country were prohibited. This Register was instituted under the 1970 Act and maintained until 1979.

Simultaneously, with a view to attaining economic independence and passing on to a "second" stage in import substitution - i.e. passing from the

* Mr. Ivan Rivera Flores, Secretary General, Ministry of Industry, Tourism and Integration (MITI), Peru.

substitution of consumer goods to that of capital goods and inputs - a system of priority industrial sectors was established, whereby differential tax credits for reinvestment and differential reductions in customs tariffs on imports of capital good and inputs, among other advantages were granted according to the degree of priority given to the industrial activity concerned. Thus top priority was given to basic industries producing fundamental inputs for productive activities - such as iron and steel, basic chemicals, fertilizers, cements, paper, etc. - and to industries producing capital goods - machine tools, heavy transport equipment, aeronautical equipment, shipbuilding, etc. These were followed in order of priority by traditional Peruvian industries, mainly food, textiles and small-scale metalworking industries producing inputs for other productive activities.

Together with the establishment of priorities, the production and marketing of basic industrial goods were brought under State control, with industrial planning replacing market forces. Thus heavy industry, a field involving large initial outlays which had traditionally been covered by foreign investment, became the monopoly of the State. To promote distributive justice the State established the system of "comunidad industrial" (industrial co-ownership), an arrangement whereby the worker was given a share in the ownership and management of existing private enterprises as well as in their distributed profits. The original plan provided for workers to be able to acquire up to 50% of the ownership of an enterprise, but this ceiling was lowered to 33% in 1977.

In parallel with these measures the Government, at the beginning of the decade, promulgated an Employment Protection Act under which the worker was guaranteed permanency in his job. It also established a new system of industrial ownership - "social ownership", in which the workers were granted the collective ownership of the means of production along the lines of the Yugoslav model; this system being declared by the Government to have priority.

The results of industrialization on the basis of basic and State industry

Industrial production increased by 7% per annum in the first five years of the new policy, and investment in machinery and equipment by 15% per annum. In this period the industrial sector doubled its capital stock, but output

increased by only 40%. The system of industrial protection generated considerable shortfalls in production; it also led to a reduction in the use of installed industrial capacity owing to an over-valuation of the national currency; to the granting of loans at subsidized rates and to the establishment of the "comunidad industrial" system which encouraged businessmen to plough back profits so as to prevent the workers from attaining a 50 per cent share in the ownership of the enterprise. It must be pointed out that the growth achieved over this five-year period was also partly due to the expansionist macro-economic policies pursued.

The existing productive structure, which was basically geared to import substitution, was accentuated as a result of the massive ploughing back of profits in the private sector. Simultaneously, in a context of "complete" protection and of great uncertainty regarding the future of private enterprise, only those activities which, being highly protected, yielded a rapid return and could easily be automated were developed. Thus an unexpected twist was given to the proposed industrialization strategy.

In the field of investment, private capital accumulation was concentrated in the first five years and in reinvestment in existing enterprises. The State spent a large part of its financial resources on nationalizing basic industrial enterprises and contributed little to the development of the sector reserved for it. Its major investment effort was concentrated on increasing iron and steel and paper production, with negative results because new technologies were introduced without sufficient preliminary testing with the result that operating costs were very high. The State also participated in "joint ventures" in the metalworking field and in chemicals; in both cases the degree to which activities were integrated on a national scale was very low and the results were by no means positive if measured by international standards.

The most disappointing results were those obtained in the field of employment. The over-evaluation of the sol, combined with subsidized credit for the industrial sector and the selective lowering of customs tariffs on capital goods and inputs, cheapened these items in relation to labour. The proposed industrial structure, which gave priority to capital-intensive heavy

industry, discriminated against unskilled labour, which is the country's most abundant asset. The Industrial Co-ownership Act paralysed investment in new industrial activities and caused such activities as were nevertheless launched to be increasingly automated. Similar effects on employment were produced by the Employment Protection Act.

An important corollary of this extreme form of import substitution was the complete lack of incentive to develop an export industry. The banning of imports coupled with unlimited protection for the tiny, monopoly-prone domestic market resulted in the manufacture of high price, low quality products which were most unlikely to prove internationally competitive.

Another important result was the spatial concentration of production. The closed-market policy led to industry being sited mainly near its market outlets and in areas equipped with an adequate industrial infrastructure. Lima is the principal domestic market for industrial products and the one which has the best infrastructure; the result of this was a greater centralization of industrial activity.

In short, import substitution in its second stage, with closed markets, achieved an industrial growth which was transitory, inefficient, not very absorbent of labour, having little inter-industry integration, centralized and exclusively geared to the domestic market.

INDUSTRIALIZATION ON THE BASIS OF COMPARATIVE ADVANTAGES

Background

The exhaustion of the import substitution model was confirmed in the second half of the past decade. The economic crisis of that period, which particularly affected the external sector, forced a drastic policy of fiscal austerity with a heavy devaluation of the currency. These factors, in conjunction with specific incentives for export industry, succeeded in increasing industrial exports to a significant degree, thus marking the beginning of a change of course in the industrial development model.

During 1979 a start was made with the process of liberalizing industrial imports by withdrawing the principal protectionist measure, the National Register of Manufactures. At the same time there was a drastic reduction of the prohibitive para-tariff mechanisms, with a freeing or lowering of tariff rates and the abolition of their application by locality, type of producer, type of product and product destination. Before this reform the arrangements for industrial protection were so complex and were subject to so many exceptions that it was impossible to calculate what the effective protection of each activity was; paradoxically, greater theoretical protection tended to bring with it an increase in the customs exemptions accorded on the basis of quotas or licences to the various groups able to exert pressure.

During 1980 almost all para-tariff mechanisms were abolished and a maximum customs tariff of 60% was instituted. Early in 1981 the system of incentives for industrial exports was standardized. The attainment of a uniform tariff was adopted as a long-term objective. Recently additional tariff measures have been adopted for the dual purpose of making the tariff more uniform and of generating more tax revenue.

All these measures have helped to make the protection of industry more transparent and to develop it in a context of markets open to international trade.

It must also be pointed out that, as part of the policy of combating inflation and achieving external equilibrium, a system of mini-devaluations of the currency has been adopted so as to maintain the equilibrium value of the currency in the presence of inflation; soles interest rates have likewise been readjusted to bring them into equilibrium with inflation.

Industrial policy and the current industrialization strategy

The reorientation of industrial policy, marked by the opening-up of trade, tariff standardization, the elimination of para-tariff mechanisms and the uniform promotion of industrial exports was consolidated in a new Industries Act adopted by the Congress of the Republic in May 1982.

The central objective of industrial policy is to achieve an accelerated, efficient and stable growth of industrial production. This growth must satisfy two conditions: it must be extremely labour-intensive and it must be decentralized.

In a country with a small market like Peru, it is indispensable to have an open industrial development model, since world markets are the natural outlet for an accelerated and stable expansion of national industrial production. Opening the country up to imports of industrial products is the most efficient and economical way of promoting exports of them, since it improves the relative profitability of exporting, while the fierce competition improves the price and quality of national products.

The opening up of trade, together with tariff standardization, is the necessary prerequisite for the long-term adaptation of the industrial production structure to make the most of the comparative advantages, whether national or regional, which the country possesses in relation to the rest of the world. After a decade of extreme protection, sufficient time has elapsed for nascent industries to mature and for dynamic medium-term comparative advantages to emerge.

The re-arrangement of the industrial structure on the basis of comparative advantages implies that those factors of production which are relatively abundant in the country will be used with greater intensity. This guarantees a more extensive utilization of the enormous pool of unskilled labour and a rational exploitation of regional natural resources.

An important corollary of this pattern of industrial development is that it encourages decentralization, since industrial sites are chosen on the basis of their proximity to ports providing export market outlets and to the natural resources to be processed, with the result that the enormous Lima market is not such an important consideration when industrial sites are selected. The spatial distribution of export-oriented factories producing yarn and textiles from natural fibres furnishes an interesting example of this.

Another important corollary of the proposed pattern of industrial development is the development of labour-intensive industrial enterprises

using little capital. This implies that special emphasis must be placed on the development of small-scale industries, which require little fixed capital - a scarce resource in Peru - and are highly labour-intensive.

The system of incentives offered under the new Industries Act has basically three objectives: industrial growth, decentralization, and the development of small-scale industry. The tax credit for reinvestment, which is the main incentive for industrial growth, does not distinguish between industrial sectors; it does, however, make distinctions in respect of geographical location, being higher for areas farther away from Lima. Small-scale industry is promoted through the elimination of specific taxes and directly through the promotion of small-scale activities.

Thus a substantial change-over is under way from the sectoral priorities established by the previous Act to priorities in terms of size and siting established by the present Act.

In short, the industrial development strategy consists in promoting export industry and exploiting comparative advantages in different regions. In this way it will help to generate productive employment on a massive scale and a rational and balanced exploitation of natural resources. This basically labour-intensive industrialization process will generate an expansion of the domestic market which will eventually lead to more balanced industrial growth.

The adjustment process: structural adaptation to open industrial development

In the previous section an attempt was made to delineate a long-term industrial structure consistent with rapid, efficient, labour-intensive and decentralized growth. We now go on to study the transitional process leading to this structure, starting from a position of extreme import substitution.

The best moment for initiating and/or intensifying the transition towards open industrial development is a time of accelerated growth of production and expanded demand, combined with a solid balance-of-payments situation and a foreign exchange policy which maintains the rate of exchange at its real value. This is what occurred in the country during 1979, when the economy was recovering from a deep recession, raw material exports were flourishing and a realistic foreign exchange policy had been adopted.

The liberalization process accordingly began in 1979: the market was opened up, tariffs were relatively standardized and export incentives were instituted, all within 20 months. The change was drastic and was concentrated in the market for industrial products and inputs; at the time, however, it had few negative side effects, owing to the favourable economic conditions in which it was carried out.

Shortly after the completion of this stage of liberalization the economic environment became unfavourable, the international situation deteriorated, and the GDP growth rate fell. An external imbalance accompanied by a recession appeared in 1981 and became more acute in 1982. This was drastically reflected in industrial growth, which passed from an increase of 5.2% in 1980 to stagnation in 1981 and to a decrease of 2.5% in 1982 (see annexes, Table 2).

This industrial performance in an open market context is partly explained by the domestic and external recession, but certain policy factors also helped to make it more acute.

In the first place we must point out that, at the beginning of the liberalization process, the market for industrial products was not the only closed market. The financial market was severely restricted, the labour market was subject to considerable distortions, and the investment market was hampered by a heavy tax burden and by management difficulties derived from the industrial co-ownership system, which made straightforward operations extremely difficult. We must further add that taxation, especially direct taxation, was theoretically very high and was also subject to a series of exemptions in all the above-mentioned markets. Nothing, however, was done and liberalization was concentrated exclusively in the market for industrial products and inputs, with the financial, labour and investment markets remaining distorted. Direct taxation underwent only a few cosmetic changes. This situation obviously raised the costs of adjusting to the new situation of international competition.

In parallel, the foreign exchange policy pursued was also not very sound. There was an appreciable readjustment lag, especially during 1981 precisely at a time when macro-economic conditions were deteriorating and when what was

most required was a real increase in the exchange rate in order to make effective provision for the adjustment process at the beginning of a domestic recession.

The impact on employment and on the utilization of installed industrial capacity was significant, especially during 1982. The impact on private investment was also extremely negative, with repercussions on medium-term investment expectations.

This brief experience of an open market policy suggests a few reflections which we will set out below.

First, given the cyclic nature of economic evolution, it is appropriate to begin the process in times of economic expansion, but it is at the same time necessary to be flexible in its application in times of recession.

Second, the process of opening up the industrial market cannot be isolated from a process of general liberalization of the economy. An efficient structural adaptation in industry requires balanced exchange rates and credit at real interest rates that are positive but at the same time low (competitive); it also requires a labour market with extensive mobility and a drastic reduction in taxation on investment, as well as freedom of business management.

Third, the process of opening up trade requires reciprocity on the part of the industrialized countries. The latter are the immediate potential markets for Peruvian industrial exports; they are industrially mature countries. So it is essential that they should eliminate restrictions on imports of manufactures from the developing countries.

Fourth, structural adaptation needs a very big investment effort, since it requires investment for the adaptation of existing industries and new investment in those areas in which comparative advantages are available. To obtain such investment from private sources is difficult because liberalization implies a fall in the profitability of a large part of established industry, which represents the bulk of historical investment.

This situation calls for an active participation of the State to promote investment. In this context it is possible to act effectively and simultaneously at three levels. First, full support must be given to investment in small-scale industry, formalizing its links with large-scale national and international industry and developing efficient technologies appropriate to its scale of production without neglecting to provide full support and advisory services for small businessmen. Second, decisive support should be given to existing industry requiring structural adaptation by providing it with financial and tax facilities, by supplying technological information and by helping it to win external markets for its products. Then intensive steps must be taken to attract foreign investment by exploring new markets for foreign investors, especially those from medium-scale industries in the industrialized countries. In this context industrial redeployment and joint ventures are nimble and effective mechanisms which help to redefine the international division of labour in a context of changing international conditions.

Finally, it must be emphasized that the attainment of an efficient adaptation at minimum social cost in terms of non-utilization of resources requires that the State should play a role that is very active but radically different from that in which the State is the principal entrepreneur and at the same time the principal controller and overseer of private enterprise. The State must basically promote private investment in general, without intervening in decisions relating to production, investment and pricing; it must lay down simple, stable and uniform rules in the field of taxation and establish equitable rules for the functioning of the labour markets. The State should also play a very active role in creating the industrial infrastructure in accordance with siting policies designed to achieve a spatially balanced industrial development.

Peruvian industry is in a very good position to exploit the country's comparative advantages, despite the persistent attempts to go against them. Industrial development, however, does not occur by spontaneous generation; it ultimately needs substantial State support.

TABLE 1. PERU: INDEX OF PHYSICAL VOLUME OF MANUFACTURING OUTPUT
(1973 = 100.0)

| | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TOTAL MANUFACTURING SECTOR | <u>86.1</u> | <u>93.1</u> | <u>100.0</u> | <u>111.7</u> | <u>117.2</u> | <u>122.7</u> | <u>118.0</u> | <u>113.9</u> | <u>118.2</u> | <u>124.4</u> | <u>124.0</u> | <u>120.9</u> |
| MINI MANUFACTURING SECTOR | <u>81.3</u> | <u>91.7</u> | <u>100.0</u> | <u>110.0</u> | <u>117.8</u> | <u>121.7</u> | <u>112.0</u> | <u>105.7</u> | <u>106.6</u> | <u>115.7</u> | <u>116.3</u> | <u>111.7</u> |
| FISH MEAL INDUSTRY | <u>456.5</u> | <u>212.9</u> | <u>100.0</u> | <u>213.9</u> | <u>167.3</u> | <u>206.6</u> | <u>114.8</u> | <u>154.5</u> | <u>161.6</u> | <u>108.5</u> | <u>113.2</u> | <u>152.5</u> |
| 31. FOOD, BEVERAGES AND TOBACCO | <u>88.3</u> | <u>92.7</u> | <u>100.0</u> | <u>112.6</u> | <u>117.5</u> | <u>121.4</u> | <u>116.8</u> | <u>108.3</u> | <u>113.3</u> | <u>119.5</u> | <u>119.6</u> | <u>119.9</u> |
| 311-12 Food products | 88.9 | 95.4 | 100.0 | 106.4 | 107.9 | 105.8 | 105.5 | 101.2 | 101.3 | 101.7 | 101.1 | 98.5 |
| 313 Beverages | 83.6 | 88.7 | 100.0 | 121.3 | 132.6 | 147.3 | 134.9 | 120.1 | 131.3 | 145.2 | 143.5 | 147.3 |
| 314 Tobacco | 81.9 | 92.0 | 100.0 | 116.5 | 117.9 | 117.2 | 116.3 | 106.1 | 116.7 | 128.4 | 137.5 | 141.7 |
| 32. TEXTILES, CLOTHING AND LEATHER | <u>99.5</u> | <u>98.8</u> | <u>100.0</u> | <u>103.7</u> | <u>104.1</u> | <u>111.3</u> | <u>95.1</u> | <u>98.3</u> | <u>102.2</u> | <u>100.5</u> | <u>96.2</u> | <u>88.4</u> |
| 321 Textiles | 101.5 | 98.5 | 100.0 | 101.4 | 102.5 | 110.3 | 97.8 | 106.4 | 113.4 | 108.0 | 107.8 | 100.2 |
| 322 Clothing | 90.1 | 101.1 | 100.0 | 111.7 | 110.8 | 102.5 | 92.2 | 73.4 | 68.2 | 72.2 | 51.8 | - |
| 323 Leather and hides | 104.7 | 95.0 | 100.0 | 102.1 | 120.8 | 120.0 | 91.1 | 88.9 | 85.1 | 102.3 | 96.7 | - |
| 324 Leather footwear | 95.6 | 99.3 | 100.0 | 110.4 | 101.4 | 126.7 | 81.0 | 76.0 | 72.1 | 80.4 | 73.6 | 57.1 |
| 33. TIMBER AND FURNITURE | <u>88.0</u> | <u>91.1</u> | <u>100.0</u> | <u>103.9</u> | <u>113.0</u> | <u>122.8</u> | <u>108.2</u> | <u>101.9</u> | <u>97.4</u> | <u>95.2</u> | <u>88.5</u> | - |
| 331 Timber (excluding furniture) | 97.7 | 109.7 | 100.0 | 103.1 | 97.9 | 152.2 | 140.7 | 138.4 | 133.2 | 122.1 | 122.8 | - |
| 332 Furniture | 77.3 | 70.4 | 100.0 | 104.7 | 129.7 | 89.0 | 72.1 | 61.4 | 57.7 | 65.3 | 50.5 | - |
| 34. PAPER AND PRINTING | <u>85.4</u> | <u>93.4</u> | <u>100.0</u> | <u>109.1</u> | <u>98.5</u> | <u>102.3</u> | <u>93.9</u> | <u>83.1</u> | <u>72.3</u> | <u>37.3</u> | <u>90.6</u> | <u>78.9</u> |
| 341 Paper and paper products | 100.9 | 99.7 | 100.0 | 124.1 | 103.7 | 117.4 | 124.1 | 105.4 | 99.6 | 121.2 | 112.4 | 81.7 |
| 342 Printing and publishing | 75.5 | 89. | 100.0 | 99.5 | 95.1 | 92.5 | 74.5 | 68.7 | 54.7 | 65.5 | 76.6 | 77.1 |
| 35. CHEMICALS | <u>72.9</u> | <u>89.3</u> | <u>100.0</u> | <u>109.5</u> | <u>123.2</u> | <u>132.3</u> | <u>126.1</u> | <u>126.9</u> | <u>130.1</u> | <u>143.9</u> | <u>147.1</u> | <u>150.1</u> |
| 351 Industrial chemicals | 62.0 | 86.6 | 100.0 | 115.8 | 130.9 | 143.2 | 156.0 | 167.8 | 175.5 | 184.9 | 184.5 | 200.0 |
| 352 Miscellaneous chemical products | 70.5 | 80.0 | 100.0 | 107.0 | 126.1 | 137.6 | 123.1 | 126.7 | 113.8 | 134.4 | 138.7 | 136.7 |
| 353 Oil refining | 83.9 | 92.0 | 100.0 | 108.4 | 114.9 | 115.0 | 115.9 | 114.0 | 132.2 | 136.1 | 138.8 | 141.3 |
| 355 Rubber products | 80.0 | 91.3 | 100.0 | 102.1 | 112.8 | 140.0 | 116.8 | 101.4 | 109.5 | 132.8 | 129.8 | 123.7 |
| 356 Plastic products | 74.9 | 94.9 | 100.0 | 113.5 | 123.3 | 121.0 | 109.2 | 99.6 | 114.2 | 124.9 | 136.5 | 141.2 |

TABLE 1. PERU: INDEX OF PHYSICAL VOLUME OF MANUFACTURING OUTPUT (continued)
(1973 = 100.0)

| | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|------------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 36. NON-METAL MINERALS | 85.2 | 93.3 | 100.0 | 118.2 | 126.0 | 130.0 | 121.6 | 112.8 | 115.0 | 124.6 | 127.9 | 120.7 |
| 361 Earthenware and porcelain | 58.2 | 86.8 | 100.0 | 110.8 | 116.7 | 133.6 | 148.0 | 140.3 | 121.9 | 114.0 | 137.4 | 127.3 |
| 362 Glass and glass products | 85.8 | 98.4 | 100.0 | 105.0 | 121.8 | 134.4 | 120.6 | 96.2 | 114.0 | 117.6 | 117.8 | 132.4 |
| 369 Non-metal mineral products | 89.5 | 92.7 | 100.0 | 123.8 | 129.0 | 127.9 | 117.4 | 113.2 | 114.3 | 128.7 | 129.7 | 115.7 |
| 37. BASIC METAL INDUSTRIES | 81.3 | 103.1 | 100.0 | 100.6 | 101.2 | 104.3 | 168.9 | 168.6 | 193.4 | 189.1 | 177.2 | 175.5 |
| 371 Iron and steel | 38.8 | 73.2 | 100.0 | 122.4 | 124.7 | 104.4 | 123.3 | 131.2 | 138.9 | 156.0 | 141.0 | 112.3 |
| 372 Non-ferrous metals | 96.5 | 113.8 | 100.0 | 92.9 | 92.8 | 104.2 | 185.1 | 182.0 | 212.8 | 200.9 | 190.1 | 198.1 |
| 38. METALWORKING AND MACHINERY | 69.2 | 84.8 | 100.0 | 109.3 | 129.3 | 127.2 | 112.2 | 93.5 | 92.4 | 114.5 | 118.4 | 101.4 |
| 381 Metal products | 90.6 | 92.7 | 100.0 | 108.0 | 115.3 | 109.2 | 103.6 | 97.0 | 92.0 | 110.8 | 100.5 | 94.9 |
| 382 Non-electrical machinery | 65.1 | 92.4 | 100.0 | 118.9 | 150.6 | 151.7 | 142.1 | 122.3 | 134.6 | 163.1 | 175.7 | 136.5 |
| 383 Electrical machinery | 62.7 | 80.8 | 100.0 | 123.9 | 149.7 | 145.7 | 140.9 | 125.7 | 115.1 | 135.4 | 153.1 | 122.1 |
| 384 Transport equipment | 58.1 | 77.2 | 100.0 | 89.1 | 109.1 | 109.7 | 72.2 | 38.4 | 43.4 | 67.1 | 63.4 | 58.8 |
| 385 Metering and control equipment | 82.0 | 83.8 | 100.0 | 92.5 | 107.0 | 127.3 | 109.6 | 112.6 | 98.1 | 110.5 | 138.8 | - |
| 39. MISCELLANEOUS MANUFACTURING | 71.9 | 83.6 | 100.0 | 93.9 | 110.7 | 106.4 | 92.7 | 84.8 | 81.3 | 89.4 | 83.5 | - |

1/ Estimate of results of Manufacturing Sector Output Index based on a sub-sample.

Compiled by: MITI Industrial Statistics Office.

TABLE 2: PERU: GROWTH RATES

| | 71/70 | 72/71 | 73/72 | 74/73 | 75/74 | 76/75 | 77/76 | 78/77 | 79/78 | 80/79 | 81/80 | 82/81 |
|-------------------------------------|--------------|--------------|--------------|-------------|--------------|-------------|---------------|--------------|--------------|--------------|--------------|--------------|
| TOTAL GROSS DOMESTIC PRODUCT | <u>5.03</u> | <u>1.66</u> | <u>4.27</u> | <u>7.48</u> | <u>4.54</u> | <u>2.02</u> | <u>- 0.06</u> | <u>0.50</u> | <u>4.13</u> | <u>3.84</u> | <u>3.95</u> | <u>0.23</u> |
| TOTAL MANUFACTURING SECTOR | <u>9.8</u> | <u>8.1</u> | <u>7.4</u> | <u>11.7</u> | <u>4.9</u> | <u>4.7</u> | <u>- 3.8</u> | <u>- 3.5</u> | <u>3.8</u> | <u>5.9</u> | <u>- 0.3</u> | <u>- 2.5</u> |
| MITI MANUFACTURING SECTOR | <u>15.0</u> | <u>12.8</u> | <u>9.1</u> | <u>10.0</u> | <u>7.1</u> | <u>3.3</u> | <u>- 8.8</u> | <u>- 5.6</u> | <u>0.9</u> | <u>8.5</u> | <u>0.5</u> | <u>- 4.0</u> |
| FISH MEAL INDUSTRY | <u>-14.5</u> | <u>-53.4</u> | <u>-53.0</u> | <u>2.1</u> | <u>-21.8</u> | <u>23.5</u> | <u>-44.4</u> | <u>34.6</u> | <u>4.6</u> | <u>-34.9</u> | <u>4.3</u> | <u>34.7</u> |
| 31. FOOD, BEVERAGES AND TOBACCO | <u>17.0</u> | <u>5.0</u> | <u>7.9</u> | <u>12.6</u> | <u>4.4</u> | <u>3.3</u> | <u>- 3.8</u> | <u>- 7.3</u> | <u>4.6</u> | <u>8.5</u> | <u>0.1</u> | <u>0.3</u> |
| 311-12 Food products | 13.5 | 7.3 | 4.8 | 6.4 | 1.4 | - 1.9 | - 0.3 | - 4.1 | 0.1 | 6.3 | - 0.5 | - 2.6 |
| 313 Beverages | 17.9 | 6.1 | 12.7 | 21.3 | 9.3 | 11.1 | - 8.4 | -11.0 | 9.3 | 10.6 | - 1.2 | 2.6 |
| 314 Tobacco | 8.2 | 12.3 | 8.7 | 16.5 | 1.2 | - 0.6 | - 0.8 | - 8.8 | 10.0 | 10.0 | 7.1 | 3.1 |
| 32. TEXTILES, CLOTHING AND LEATHER | <u>12.7</u> | <u>- 0.7</u> | <u>1.2</u> | <u>3.7</u> | <u>0.4</u> | <u>6.9</u> | <u>-14.6</u> | <u>3.4</u> | <u>4.0</u> | <u>- 1.7</u> | <u>- 4.3</u> | <u>- 8.1</u> |
| 321 Textiles | 14.4 | - 3.0 | 1.5 | 1.4 | 1.1 | 7.6 | -11.3 | 8.8 | 6.6 | - 4.8 | - 0.2 | - 7.1 |
| 322 Clothing | 14.9 | 12.2 | - 1.1 | 11.7 | - 0.8 | - 7.5 | -10.0 | -20.4 | - 7.1 | 5.9 | -28.3 | - |
| 323 Leather and hides | 10.6 | - 9.3 | 5.3 | 2.1 | 18.3 | - 0.7 | -24.1 | - 2.4 | - 4.3 | 20.2 | - 5.5 | - |
| 324 Leather footwear | - 0.5 | 3.9 | 0.7 | 10.4 | - 8.2 | 25.0 | -36.1 | - 6.2 | - 5.1 | 15.0 | - 8.5 | -22.4 |
| 33. TIMBER AND FURNITURE | <u>15.8</u> | <u>3.5</u> | <u>9.8</u> | <u>3.9</u> | <u>8.8</u> | <u>8.1</u> | <u>-11.5</u> | <u>- 5.8</u> | <u>- 4.4</u> | <u>- 2.3</u> | <u>- 7.0</u> | <u>-</u> |
| 331 Timber (excluding furniture) | 25.6 | 12.3 | - 8.8 | 3.1 | - 5.0 | 55.5 | - 7.6 | - 1.6 | - 3.8 | - 8.3 | 0.6 | - |
| 332 Furniture | 4.6 | - 8.9 | 42.0 | 4.7 | 23.9 | -31.4 | -19.0 | -14.8 | - 6.0 | 13.2 | -22.7 | - |
| 34. PAPER AND PRINTING | <u>0.5</u> | <u>9.4</u> | <u>7.1</u> | <u>9.1</u> | <u>- 9.7</u> | <u>3.9</u> | <u>- 8.2</u> | <u>-11.5</u> | <u>-13.0</u> | <u>20.7</u> | <u>3.8</u> | <u>-12.9</u> |
| 341 Paper and paper products | 1.5 | - 1.2 | 0.3 | 24.1 | -16.4 | 13.2 | 5.7 | -15.1 | - 5.5 | 21.7 | - 7.3 | -27.3 |
| 342 Printing and publishing | - 0.4 | 18.4 | 11.9 | - 0.5 | - 4.4 | - 2.7 | -19.5 | - 7.8 | -20.4 | 19.7 | 16.9 | 0.7 |
| 35. CHEMICALS | <u>15.0</u> | <u>22.5</u> | <u>12.0</u> | <u>9.5</u> | <u>12.5</u> | <u>7.4</u> | <u>- 4.7</u> | <u>0.6</u> | <u>2.5</u> | <u>10.6</u> | <u>2.2</u> | <u>2.0</u> |
| 351 Industrial chemicals | 16.3 | 39.7 | 15.5 | 15.8 | 13.0 | 9.4 | 8.9 | 7.6 | 4.6 | 5.4 | - 0.2 | 8.4 |
| 352 Miscellaneous chemical products | 21.1 | 23.1 | 15.2 | 7.0 | 17.9 | 9.1 | -10.5 | 2.9 | -10.2 | 18.1 | 3.2 | - 1.4 |
| 353 Oil refining | 9.1 | 9.7 | 8.7 | 8.4 | 6.0 | 0.1 | 0.8 | - 1.6 | 16.0 | 3.0 | 2.0 | 1.8 |
| 355 Rubber products | 0.4 | 14.1 | 9.5 | 2.1 | 10.5 | 24.1 | -16.6 | -13.2 | 8.0 | 21.3 | - 2.3 | - 4.7 |
| 356 Plastic products | 22.6 | 26.7 | 5.4 | 13.5 | 8.6 | - 1.9 | - 9.8 | - 8.8 | 14.7 | 9.4 | 9.3 | 3.4 |

TABLE 2: PERU: GROWTH RATES (continued)

| | 71/70 | 72/71 | 73/72 | 74/73 | 75/74 | 76/75 | 77/76 | 78/77 | 79/78 | 80/79 | 81/80 | 82/81 |
|------------------------------------|---------------|-------------|--------------|--------------|-------------|--------------|---------------|---------------|--------------|--------------|--------------|---------------|
| 36. NON-METAL MINERALS | <u>22.2</u> | <u>9.5</u> | <u>7.2</u> | <u>18.2</u> | <u>6.6</u> | <u>3.2</u> | - <u>6.5</u> | - <u>7.2</u> | <u>2.0</u> | <u>8.3</u> | <u>2.6</u> | - <u>5.6</u> |
| 361 Earthenware and porcelain | -13.8 | 49.1 | 15.2 | 10.8 | 5.3 | 14.5 | 10.8 | - 5.2 | -13.1 | - 6.5 | 20.5 | - 7.4 |
| 362 Glass and glass products | 45.2 | 14.7 | 1.8 | 5.0 | 16.0 | 10.3 | -10.3 | -20.2 | 18.5 | 3.2 | 0.2 | 12.4 |
| 369 Non-metal mineral products | 21.6 | 3.6 | 7.9 | 23.8 | 4.2 | - 0.9 | - 8.2 | - 3.2 | 0.5 | 12.6 | 0.8 | -10.8 |
| 37. BASIC METAL INDUSTRIES | - <u>17.8</u> | <u>26.8</u> | - <u>3.1</u> | <u>0.6</u> | <u>0.6</u> | <u>3.1</u> | <u>61.9</u> | - <u>0.2</u> | <u>14.7</u> | - <u>2.2</u> | - <u>6.3</u> | - <u>1.0</u> |
| 371 Iron and steel | 43.2 | 88.7 | 36.6 | 22.4 | 1.9 | -16.3 | 18.1 | 6.4 | 5.9 | 12.3 | - 9.6 | -20.4 |
| 372 Non-ferrous metals | -22.6 | 17.9 | -12.1 | - 7.1 | - 0.1 | 12.3 | 77.6 | - 1.7 | 16.9 | - 5.6 | - 5.4 | 4.2 |
| 38. METALWORKING AND MACHINERY | <u>15.3</u> | <u>22.5</u> | <u>17.9</u> | <u>9.3</u> | <u>18.3</u> | - <u>1.6</u> | - <u>11.8</u> | - <u>16.7</u> | - <u>1.2</u> | <u>23.9</u> | <u>3.4</u> | - <u>14.4</u> |
| 381 Metal products | 17.8 | 2.3 | 7.9 | 8.0 | 6.8 | - 5.3 | - 5.1 | - 6.4 | - 5.2 | 20.4 | - 9.3 | - 5.6 |
| 382 Non-electrical machinery | 18.6 | 41.9 | 8.2 | 18.9 | 26.7 | - 0.7 | - 6.3 | -13.9 | 10.1 | 21.2 | 7.7 | -22.3 |
| 383 Electrical machinery | 10.6 | 28.9 | 23.8 | 23.9 | 20.8 | - 2.7 | - 3.3 | -10.8 | - 8.4 | 17.6 | 13.1 | -20.2 |
| 384 Transport equipment | 14.4 | 32.9 | 29.5 | -10.9 | 22.4 | 0.5 | -34.2 | -46.8 | 13.0 | 54.6 | - 5.5 | - 7.3 |
| 385 Metering and control equipment | 28.3 | 2.2 | 19.3 | - 7.5 | 15.7 | 19.0 | -13.9 | 2.7 | -12.9 | 12.6 | 25.6 | - |
| 39. MISCELLANEOUS MANUFACTURING | <u>23.1</u> | <u>16.3</u> | <u>19.6</u> | - <u>6.1</u> | <u>17.9</u> | - <u>3.9</u> | - <u>12.9</u> | - <u>8.5</u> | - <u>4.1</u> | <u>10.0</u> | - <u>6.6</u> | - |

1/ Year 1982: Estimate of results of Manufacturing Output Index based on a sub-sample.

Compiled by: MITI Industrial Statistics Office.

A VIEW OF ECUADORIAN INDUSTRIAL DEVELOPMENT STRATEGIES AND POLICIES by
Marcelo Rovayo*

For all practical purposes, the beginnings of industrial planning in Ecuador date back to the period 1954-1960, when a number of concrete steps were taken, the most important of which were the following:

- 1954: the first analysis of the industrial sector, making it possible to evaluate its behaviour in qualitative and quantitative terms; and
- 1957: the enactment of the Industrial Promotion Act (Ley de Fomento Industrial), which defined measures, policies and concepts in this area, and which replaced the old Industrial Protection Act of 1921.

Through a series of amendments to the 1957 Act, the decade of the 1960s saw the emergence in Ecuador of a climate that encouraged the allocation of investment capital and other national and foreign resources to the industrial sector, and which led to reforms that were strengthened in the 1970s, through legal instruments and institutions designed to support and sustain the rapid industrial growth achieved over the previous two decades by providing a framework within which to plan and decentralize the work of industrial development and establish the relevant priorities in that effort.

On the basis of the problems identified in this way, policies were formulated through a "Development Plan for the Immediate Future" in 1961, followed in 1963 by the "General Development Plan" for the period 1964-1973, the country's first major effort at comprehensive planning. The implementation of these plans provided the basis for the establishment of a legal and institutional framework in support of industrial development.

Subsequently, in the Comprehensive Plan for Transformation and Development for the period 1973-1977, the Government adopted a more clearly defined and comprehensive approach that stressed industrial development policy for its socio-political economic objectives and as a technical instrument reflecting the political will of the dictatorial Government.

Later, in the democratic Government's National Development Plan for the period 1980-1984, there was a further consolidation of the policies of industrial development, with the legal and institutional system improved and

* Mr. Marcelo Rovayo, Sub-Director, Direccion Nacional de Desarrollo Industrial, Quito, Ecuador.

brought into alignment with the increasing requirements and prospects of Ecuadorian industrial development in the light of the socio-economic situation which had characterized the period 1980-1983, and which was mainly the result of external factors. At the present time, this plan has been modified, with certain new objectives incorporated into it and a number of overly ambitious goals deferred.

Results of the General Development Plan (1963-1973)

During this ten-year period, overall economic growth was 7% in comparison with an average annual growth rate of 28.3% for the mining and petroleum sectors, 8.2% for the manufacturing and service sectors, and barely 2% for agriculture and fisheries.

Noteworthy in this pattern of growth is, on the one hand, the impulse generated in the final years of the plan (1972-1973) by the petroleum sector and, on the other, the virtual stagnation of agriculture, which failed even to keep pace with the natural growth of the population, which in Ecuador has been expanding at the rate of 3.2% a year. Manufacturing industry's contribution to the country's economic development over this period rose gradually but steadily.

Especially since 1963, the Ecuadorian economy has found a new source of momentum in the manufacturing sector, particularly in factory industry. Within the manufacturing sector, factory industry (defined as consisting of establishments employing seven or more persons and having a gross annual production value of over US \$ 4,000) grew more rapidly than did craft production and set the pace for manufacturing sector growth during the period 1963-1973. The target of 10.5% set for factory industry in the sectoral programme of the General Development Plan was in fact surpassed.

Encouraged by the liberal provisions of the industrial promotion legislation enacted, the industrial growth achieved during this period required more equipment and machinery as well as larger quantities of materials and supplies, since the industrial enterprises in question operate with imported inputs.

As early as 1973, the favourable effects of the Cartagena Agreement began to make themselves felt on Ecuadorian exports as the country significantly stepped up its exports to the markets of Colombia, Peru and Chile. In 1970, export revenue scarcely totalled \$ 481,000, but in 1971, with the start of the liberalization programme, this figure rose to \$ 2,361,000, thereafter virtually doubling every year until, in 1976 it had increased by 2,100% over the 1970 level. In 1973, the estimated work-force in the manufacturing sector was put at 267,800 persons, representing 13.1% of the total employed population. The growth of Ecuadorian industry was for all practical purposes concentrated at two development poles, so that in 1973, 77.8% of the manufacturing establishments, 77.8% of the jobs and 81.6% of the production value were concentrated in two provinces.

In a development linked to this process of industrialization, industry was incorporating new and, in many cases, modern technology, almost all of which, it has been observed, was imported from the industrially advanced nations, with virtually no adaptation to our conditions and with no thought given to the existing ratio of production factors in Ecuadorian industry, especially with regard to labour.

COMPREHENSIVE PLAN OF TRANSFORMATION AND DEVELOPMENT (1973-1977)

Situation of the Economy

The annual increase in the GDP was 10.5%, contrasting with the annual figure of scarcely 5.2% for the previous decade, which means that within a far shorter period the GDP had doubled its growth rate.

In decreasing order, the most important contributors to GDP were: agriculture, forestry, hunting, and fisheries, which contributed an average of 22.7%, growing at a rate of 5.3% annually; manufacturing industry, with an average contribution of 16.8% and an annual growth rate of 11.9%; and trade and tourism, with an average contribution of 12.2% and an annual growth rate of 9.1%.

During the first two years of the plan, petroleum accounted for an increasing share of GDP, rising from 8.2% in 1973 to 14% in 1974, after which it declined to 9.9% by 1979. This development put petroleum in fourth place with an average share of 9.4% of GDP over the period.

Industry and its evolution

Despite the problems which it still continues to face - namely, a limited market, inadequate assimilation of technology, substandard worker training, the undersupply of raw materials, poor physical infrastructure, and insufficient financing - the manufacturing sector evolved satisfactorily during this period. This was reflected in the growth of the manufacturing GDP which at 11.9% was higher than that of the economy's overall GDP at 10.5%.

STRATEGIES AND POLICIES FOR THE INDUSTRIAL SECTOR

Strategies

The growth of the economy achieved during the decade of the 1970s was the greatest in the history of the country. The industrial sector played a major role in this success thanks to its stable, sound and well-defined goals, objectives and policies.

The strategy adopted called for the following measures:

- exploitation and processing of natural resources;
- creation of new jobs;
- sectoral complementarity through activities integrated among themselves and with the rest of the economy;
- multipolar development;
- contribution to self-sufficiency and a stronger balance-of-payments;
- accumulation of production capital and national wealth;
- development of exportable industrial products;
- general improvement of productivity at the enterprise and sectoral level; and
- incorporation of new technologies.

These were carried out by the following policies:

- Promotion of a new image of Ecuador abroad;
- participation by Ecuador in the Cartagena Agreement;
- development of basic industries;
- the use of credit as an industrial promotion tool;
- the entrepreneurial mechanism for the promotion of projects in basic industry;
- multipolar national development;
- administrative decentralization;
- promotion of exports of manufactured goods;
- assistance to small-scale industry and crafts; and
- a United Nations assistance project on behalf of the Ecuadorian industrial sector.

The institutional and legal mechanisms for the application of policy developed were:

- industrial promotion legislation;
- regional development legislation;
- regional Finance Company Act; and
- other legal provisions.

Situation in 1980

After reaching 7.1% in real terms in 1976, the growth rate of GDP began to decrease, falling to 6% in 1977 and 5.3% in the subsequent years. This slow-down was due mainly to a decline in the exports of goods and services, a development to which the stagnation of petroleum deliveries abroad also contributed. Meanwhile, growing demand compensated in part for the reduced dynamism of the export sector, but at the cost of increasing external indebtedness, the public sector deficit and the current-account deficit in the balance-of-payments.

In 1980, GDP increased at a rate of 4.3%, which was lower than the figure for the previous year and below the National Development Plan's target of 5.6%.

The expansion of internal demand also decelerated because of the slower expansion of gross internal investment, which grew by 6.5% in 1980, down from 8.6% in 1979 and lower than the increase called for in the Plan. Consumption, on the other hand, maintained its 6% growth rate of the previous year, reflecting the effects of wage increases. Export volume in 1980 increased by only 0.8%, while imports declined by 1.8%, resulting in a favourable trade balance. Nevertheless, balance-of-payments deficits in the public sector and current account remained at unacceptably high levels.

Sectoral development

Throughout the 1970s, the agricultural sector continued to be the main source of employment in the Ecuadorian economy, absorbing a proportion of the economically active population which fluctuated between 53.6% in 1975 and 49.8% in 1980.

In 1980, agricultural production increased by only 3%, but even this was more than the 2% growth of 1979 or the average of 2.1% achieved during the period 1976-1978. This development was due mainly to the prolonged drought which began in 1976.

Coffee and cacao production was below the 1979 levels because of the precarious conditions at the plantations brought about by the irregular rainfall of the previous years.

The industrial sector carried over into 1980 the momentum of the year before, despite problems in the supply of raw materials for certain manufacturing groups. Output in the sector continued growing at the rate of 10%, slightly down from the 10.5% annual growth recorded in the period 1976-1978.

The adoption of new wage scales and the introduction, from October 1980, of the 40-hour working week led to a reaction on the part of small businesses in the form of the intensive use of labour.

Petroleum production in 1980 was 74.7 million barrels, 4.5% below the 1979 figure but above the levels recorded for the period 1976-1978, when output did not exceed 73.8 million barrels.

Fiscal situation

The year 1980 saw a deepening dependence of public sector income on foreign trade performance, that is, on the production and sale of petroleum, the coffee export tax, and import duties.

On 17 February 1981, the Government enacted a package of financial and fiscal measures designed to increase the level of public revenue and make possible the implementation of the country's programmes of economic and social development and national defence. The principal provision of these measures included:

- new prices for petroleum derivatives, public transport, and freight transport within and between cities;
- bills to increase taxes and duties on motor vehicles and cigarettes;
- monetary measures to contain inflation;
- the freezing of prices for essential items; and
- the introduction of the savings and loan co-operatives within the national financial system.

Foreign trade

Among the country's main export products, there were increases in the export value of bananas, sea products, and petroleum and petroleum derivatives; conversely, coffee, cacao and cacao products showed sharp declines. Petroleum continued as the principal export item, accounting for about 62.8% of the total value of sales abroad, in comparison with 54.2% in 1979 and an annual average of 44.5% during the period 1976-1978.

The National Development Plan (1980-1984)

The growth of Ecuadorian industry, one of the most rapidly expanding in Latin America, has begun to reveal the serious limitations of its underlying basis. Principal among these are the following: excessive dependence on foreign sources for raw materials, capital goods, and other inputs; a high degree of underutilization of the installed capacity at industrial plants; lack of co-ordination between the different branches producing intermediate, consumer, and capital goods; a pattern of industrial supply which has in large measure been directed at satisfying the consumption wishes of an elite social class and has, in many cases, been highly diversified; the closed family structure of most of the country's industrial enterprises, a situation which has blocked the democratization of industrial capital; and, finally, the failure to mount a sufficient technological research effort to bring the nation at least a minimum of independence in this area.

STRATEGIES

Conditions of the strategy:

- redistribution of income;
- the Andean Pact (strengthening of the process);
- financing expectations for the industrialization process; and
- behaviour of the rural sector.

Strategic promotions:

- redirection of the domestic supply of manufactured goods;
- selective intensification of the import substitution process, especially with regard to intermediate and capital goods, and the diversification of exports;
- promotion of small-scale industry and crafts; and
- promotion and development of industries linked to the rural sector.

Orientation of the strategy. Policies and instruments of industrial development:

- price regulation and quality control;
- development of basic industry;
- technological development;
- foreign investment; and
- industrial promotion legislation.

Steps will be taken to enact a new Industrial Promotion Act designed to reform radically the present law in the following areas:

- selection criteria;
- systematization and rationalization of the protection of domestic industrial products in the face of the competition of similar foreign products;
- principle of the temporary nature of benefits and incentives;
- special incentives for agro-industrial activities;
- co-ordination of the system of benefits and incentives with the work of the Ecuadorian Capital Goods Commission;
- making the granting of benefits and incentives conditional on compliance with quality standards and the efficient use of the production factors;
- strengthening the mechanisms for channelling internal savings to the financing of industrial activity;
- organizing assembly operations, subjecting them to clear and precise rules aimed at gradually turning assembly operations into manufacturing operations;
- creating machinery to provide incentives for the development of technological research and for personnel training in technical areas at the enterprise level;
- small-scale Industry and Crafts Promotion Act;
- reform of the Consultancy Act; and
- reform of the Competitive Bidding and Tenders Act.

- Sectoral commissions on industrial affairs;
- credit policies;
- industrial dispersal;
- training;
- exports;
- monetary and financial policy;
- tariff policy; and
- environmental protection policy.

The original goals contained in the Operation Plan for 1981 were affected by the border conflict in which Ecuador became involved. This conflict led to a reallocation of resources in favour of national defence. Nevertheless, the Government held to its purpose of vigorously pursuing the programmes and projects of the National Development Plan for the period 1980-1984.

EXPERIENCE IN THE APPLICATION OF INDUSTRIAL PLANNING

Ecuador's relatively dynamic industrial growth, with its legal and institutional framework and the protection afforded by a closed market, has included some positive experience in regard to import substitution; unfortunately, this stimulates other imports, such as capital goods, raw materials, capital and technology, etc., which in turn help to raise the level of industry. Of Ecuador's total volume of imports, some 15% go to the manufacturing sector. This questionable process of development has nevertheless allowed some experiments in the export of manufactured goods which in some cases have been successful (25% of total exports), while in other cases the situation continues to be difficult as a result of world economic conditions.

Despite its growth, Ecuadorian industry exhibits the sectoral structure typical of an economy in its earliest stages, in which the production of food, beverages, tobacco, textiles, clothing printing paper and wood accounts for 62.7% of the total.

The extraordinarily rapid increase in the purchasing power of the Ecuadorian population during the 1970s as a result of oil earnings and the possibilities of the Andean Group market acted as a stimulus to industrial growth, which towards the middle of the last decade ranged between 15 and 20% of total annual growth at a time when the country's population grew by some 3.2% and its economy by 7-8%. This industrial growth, with its specific characteristics, inefficiencies, projections and limitations, was enough to satisfy the requirements of the internal market.

The share of industrial output in the GDP of recent years has fluctuated between 15 and 20%. The period 1982-1983, however, has been one of economic depression with clearly recessive characteristics.

So far, the efforts to consolidate and diversify the production system have not succeeded in bringing about inter-industry and inter-sectoral relationships appropriate to our economy's resource endowment or ensuring the benefits aimed at in the objectives of the nation's various development plans.

The Ecuadorian production establishment is highly dependent on external factors, in addition to which it faces certain inherent difficulties arising from the nature of the domestic market, namely - the smallness of the market: of a total population of approximately 9 million inhabitants, 30% are economically active and some 44% live in the towns; high prices and a high percentage of idle production capacity; and an uncompetitive production structure, etc.

Although the State has created conditions favourable for industrial development, its efforts in the area of exports and in terms of integrating the country's resources within the production system have so far not produced the hope for results.

Evaluations of the implementation of the industrial development plans have revealed instances of major failures to meet the targeted goals, due mainly to the limited political support - a situation which is gradually being overcome as certain additional mechanisms are applied and improved in the democratic climate in which the country is now moving forward.

Industrial development planning in the country is still in its infancy. As practical experience is gained, planning is gradually becoming more effective and a sound development process is being consolidated.

FUTURE EXPECTATIONS WITHIN THE COUNTRY

The 1980-1984 National Development Plan is being adjusted through the introduction of corrective factors to take into account current problems, due to events which dictate a change in the direction of development strategy and a fresh definition of policies and objectives.

The principal elements at work in this new situation are:

- the hold-up in the integration process, the effect of which, in some cases, has been to curb intrazonal trade;
- the fall in the prices of Ecuadorian export products (petroleum, coffee, cacao, and industrial goods), plus the restrictive measures introduced because of the worldwide recession;
- the deterioration of the balance of payments to such critical levels that, because of the lack of dollars, the country is unable to pay its outstanding foreign debt and has been forced, twice in the space of 12 months, to devalue the currency, thereby aggravating even further the private sector's external debt and weakening its ability to pay;
- unprecedented levels of fiscal deficit, requiring cuts in current spending and investment; and

- the catastrophic consequences of the unusual flooding of the Coast, which destroyed extensive areas of crops and severely damaged the country's road system.

Nevertheless, despite these unfortunate events, levels of demand have been generated which challenge the country's industrial sector to achieve higher levels of output to meet the explosive demand in neighbouring countries for Ecuadorian goods which because of the devaluations have become competitive, reversing traditional trade patterns.

In the knowledge that this crisis can be overcome through increased production and work, the aim is to establish supporting mechanisms to enable industry to direct its products at international markets.

CURRENT SITUATIONS AND EXPECTATIONS OF THE DEVELOPING COUNTRIES

The situation is growing worse and becoming dangerously protracted. The impossibility of financing growing budgetary deficits has paralysed a number of important projects and postponed social programmes essential to the welfare of the people of the developing countries.

The lack of external financing, the sinking of the prices of basic commodities to the lowest levels in the last 30 years, protectionism and trade restrictions have paralysed important production activities in both the public and private sectors.

In all developing societies, underemployment has become a common phenomenon affecting nearly half the population. For decades, the elimination of underemployment has been one of the goals of economic policy, but today not only is this phenomenon still in evidence and growing, but it has been joined by mushrooming unemployment which in some countries has struck at one in every four workers.

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Inflation was never a generalized occurrence in the developing world; until quite recently many countries had no experience of this scourge. Today, however, all these nations are facing a continuous escalation in prices, especially for essential items, while those countries which previously had faced some inflation are today suffering from hyperinflation which is eating away at the income of their workers and exacerbating the imbalances in their economies.

These facts have made it clear that we are currently facing an economic crisis of extreme gravity whose ruinous effects may well be even worse than those of the great depression of the 1930s, from which these countries took so long to recover.

The fact is that recovery today is an extremely difficult and complicated task. In the 1930s recourse was had to the expedient of breaking off or at least greatly reducing ties with the external world. Today that expedient is no longer possible as the result of the development of economies and industries which are highly dependent on capital and inputs from abroad.

Governments are pledged to rebalance their economies through what are known as adjustment policies. These policies presuppose the substitution of internal savings for the external savings which were the basis for the development of recent years.

The present crisis cannot be resolved internally through the exclusive efforts of each country. The steps that Governments are taking today to restore balance to their economies will surely fail unless there is international co-operation. This requires:

- the resumption of financing by the private banking institutions;
- the granting by the industrialized nations of contingency credits to help overcome the current lack of liquidity, and of long-term "soft" loans to guarantee the future development of the region;

- the revitalization of today's stagnant trade flows and the improvement of commodity prices;
- the elimination of the protectionist barriers and trade restrictions to which the industrialized nations of the North are resorting with increasing frequency;
- the maintenance of reasonable interest rates;
- the building up of the resources of the multilateral financing institutions; and
- changes in the co-operation on guidelines and arrangements of the international organizations, particularly the International Monetary Fund.

GROWTH AND STRUCTURAL CHANGE

Thailand is a medium-sized country with the area of 514,000 square kilometers and the population of 49 million. With a per capita income of US \$ 720 in 1981, the country is classified by the World Bank as a middle-income economy.

Thailand is traditionally an agricultural economy where the agricultural sector contributes significantly to the country's gross domestic product, employment and export earnings. In the past two decades, however, the Thai economy has experienced rapid expansion with significant changes in the economic structure, and the share of agriculture in GDP and export earnings has significantly declined. The annual growth of GDP at constant price from 1960 to 1980 was over 7%, with a particular high growth rate in manufacturing, public utility, banking, and other services. As a result, the share of agriculture in GDP has decreased from 40.5% in 1960 to 25.2% in 1980, despite its respectable annual growth rate of 4.9% (see Table 1).

The growth in the manufacturing sector has contributed significantly to the GDP growth over the past two decades. The share of manufacturing in GDP was 11.7% in 1960, and increased to 15.5% in 1970, and 20.8% in 1980. With a higher growth rate, it is expected that by the end of this decade, the share of manufacturing will outpace that of agriculture in the Thai economy.

In terms of employment, however, the agricultural sector is still absorbing a predominant share of the country's total labour force. In 1980, labour force engaged in agriculture, forestry, and fishery comprised of 70.6% of the country's total labour force, while manufacturing, commerce, and other services occupied 7.9%, 8.5% and 8.4%, respectively. It should be noted, however, that manufacturing employment was only 3.4% in 1960 and 4.0% in 1970. The employment share of manufacturing was thus raised significantly in the past decade and the growth in manufacturing employment during 1971-1980, at 10.3% per annum, was the highest among various economic sectors (see Table 2).

* Mr. Somsak Taembunlertchai, Associate Professor, Faculty of Economics
Thammasat University.

Besides the impressive growth performance, there has also been a significant structural change within the manufacturing sector. Processed food, beverage, and tobacco heavily dominated the sector in the early 1960s. With the emergence of modern import substitution industries, including petroleum refining, transport equipment, electrical goods, and other non-durable consumer goods, and the expansion of non-traditional manufactured exports, including textiles, garment, and electronic products in the 1970s, the share of food, beverage, and tobacco has been significantly diminished (see Table 3).

As an open economy, the change in the structure of production in Thailand has been accompanied by the change in the country's foreign trade structure. In imports, the share of consumer goods has constantly been reduced and that of capital goods, intermediate products and raw materials, and other imports (which comprised mainly of oil, and motor vehicles and parts) has increased significantly over time (see Table 4).

In sub-category, the share of non-durable consumer goods in total imports decreased steadily from 32.2% in 1961 to 6.3% in 1980. For consumer durables, the share in total imports decreased rapidly only during the 1970s. For intermediate products and raw materials, those chiefly used for the production of consumer goods increased during the 1960s, and the share decreased somewhat in the 1970s; while those chiefly used for capital goods remained relatively stable over the 1970s. The same trend can also be observed in capital goods imports, where the share increased in the 1960s and decreased somewhat in the last decade. The change in relative share of imports in different categories has obviously been influenced by the increase in oil import bills since 1973. The change in the import structure, however, tends to indicate that import substitution in consumer nondurables was achieved first together with the increase in imports of capital goods and intermediate products. It was then followed by import substitution of consumer durables and some backward-linkage import substitution in producer goods over the last decade.

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The structure of exports has also changed much during the course of industrialization. In the early 1960s, primary products comprised over 80% of the country's total merchandise export value. During the past decade, manufactured exports have grown rapidly and the share of manufactures in export value reached 35.8% in 1981 (see Table 5).

The export expansion in manufactures has been accompanied by increasing diversification of exported commodities. Besides traditional primary products, a number of manufactured products have emerged as the country's principal exports over the past decade. Among these are textiles, garments, jewelry, and integrated circuits, which are labour-intensive in nature. There are also a significant number of minor export items with very high growth rates during the past years. Among them are various resource-based and labour intensive items such as different types of food products, footwear, wood products and furniture, and other consumer items. By and large, resource-based and labour intensive industries have occupied significant shares in industrial exports, and have also achieved high growth rates. We can thus say that the expansion of manufactured exports from Thailand has so far been achieved along the line of the country's comparative advantage in abundant natural resources and labour.

INDUSTRIAL DEVELOPMENT POLICY

The industrialization process in Thailand in many ways resembles that of other development countries. Social overhead facilities were built and capital equipment was imported using the foreign exchange acquired from foreign aids and loans, direct investment, and from the earnings of agricultural exports. The First Economic Development Plan, started in 1961, emphasized the role of industrial investment by private enterprises with the government providing incentives and supporting facilities. A policy of import substitution, facilitated by protective tariffs and investment incentives under the industrial investment promotion scheme, was adopted in the early 1960s. After a decade of import substitution, attempts were made on the promotion of manufactured exports during the 1970s.

The tariff structure in Thailand was revised several times since 1960. Tariff rates on imported consumer and intermediate goods which could be produced locally were appraised to give protection to domestic industries. The official investment promotion programme administered by the Board of Investment, which provides tax exemption to capital equipment and raw materials, and income tax holiday, also renders substantial incentives to industrial firms under the official promotion, which are mostly modern and large-scale firms.

In the early 1960s, partly due to the drive for modernization, capital intensive industries were given high priority in the investment promotion programme. But most modern industries attracted to the country were assembly type industries like automobiles and electrical appliances, with almost all parts and components imported. Other important industries covered in the promotion programme were textiles, tin smelting, and various chemical and metal products.

By mid-1960, it was realized that the promoted industries were mostly with high import content and provided little linkage effect. The Second Development Plan (1967-1971), while continuing to give importance to industries producing for the domestic market, also started to pay some attention to industries utilizing domestic materials and labour. The official investment promotion programme, which previously gave high priority to capital intensive and assembly industries using imported materials, was modified toward a reduction of incentives to these industries.

The strategy of promoting manufactured exports started in the Third Development Plan period (1972-1976) and continued until the present time. Various incentives were provided to exporters, partially offsetting the bias in the tariff structure which has been in favour of import-competing and against export-oriented industries. The major incentives for exporters of manufactures are the rebate of import duties and business taxes on inputs, and short-term loans with preferential interest rates. The investment promotion law was also revised to give more incentives to export industries.

In 1975, an Export Service Center under the Ministry of Commerce was set up to provide information to exporters and potential importers of Thai products. The Board of Investment also extended promotional privileges to large-scale trading companies engaged in exporting in 1978.

In the Fifth Development Plan (1982-1986), the industrial development policy is seen to emphasize the activities compatible with the country's perceived comparative advantage. An industrial restructuring programme has been introduced aiming at promotion of labour-intensive, resource-intensive, and export-oriented industries. Plans will also be set toward reducing the level of protection to a number of inefficient import-substitution industries. In addition, small and medium-scale industries and industries located in provincial areas will be given more attention by the government.

A new element in industrial development during the 1980s is the development of the Eastern Seaboard. With the discovery of natural gas in the Gulf of Thailand, plans for development of industries using natural gas and its by-products along the Eastern coast of the country have been drawn up. The development of light and export-oriented industries and the setting up of an EPZ in the Eastern Seaboard has also been considered.

PROSPECTS FOR FURTHER GROWTH

The prospects for further export expansion for Thailand depend on a number of factors: recovery in the world economy, particularly those in industrialized countries which are Thailand's major trading partners; the successfulness of further diversification in export markets and commodities, which depend much on marketing efforts; the increased competition from other developing economies; and the input conditions in Thailand. It is not certain that the rapid export expansion experienced by Thailand in the 1970s could be repeated in the 1980s.

Faced with stagnation in their domestic economies, industrialized countries all over the world became more protectionistic in the 1970s. The protectionistic trend has been continued in recent years. It is expected that slow growth in industrialized countries will continue and various forms of trade barriers, particularly those made on labour intensive products, will not be reduced in the near future. Thailand has so far been benefited as a marginal exporter for most manufactured products. But for some products like textiles and garments, maintaining the growth trend of the 1970s will be difficult, as the renewed Multi-fibre Agreement (MFA) tends to put more restrictions on suppliers of textile products. Besides the trade restrictions, Thailand will also be faced with increasing competition from other developing countries which are keen to promote their labour intensive exports. Whether Thailand will lose out or not will depend much on the productivity improvement in this sector.

Besides labour intensive products, the other major type of industrial exports from Thailand is processed primary commodities. This also depends heavily on industrialized country markets. Besides the tariff structure which tends to discriminate against the imports of processed commodities, there are also quantitative restrictions imposed on certain resource-based products of interest to Thailand, such as sugar and tapioca products.

On the supply side, the availability of raw materials to resource-based commodities is an important factor for the continued growth of processed commodity exports. Over the past two decades, the agricultural sector has grown at a respectable annual growth of 5%, giving significant support for growth in other economic sectors. The productivity of the agricultural sector has, however, not improved much as the passage of time, and increased production has been made possible largely by the expansion of cultivated land areas. Further expansion of arable land will become more and more difficult in the coming decade. Other resources, including forestry and fishery, are also facing the problem of depletion. If Thailand is to continue to enjoy comparative advantage in processed primary commodities, there will be an urgent need for conservation and development of available resources, and improvement of productivity in the primary sector.

Besides the expansion of manufactured exports, another alternative for further industrial growth is through the development of second-stage import substitution industries, i.e. import substitution of producer goods. Experiences in other developing countries tend to indicate that import substitution of producer goods are much more difficult than that of consumer products, and substantial capital, technology, and skilled manpower will be needed. Given the constraints on manpower, technology, and financial resources, it is not likely that the import substitution of producer goods will be as rapidly achieved as that experienced in the consumer goods industries.

Despite the rapid increase in manufactured exports, Thailand's industrial products still depend much on the domestic market. The export-output ratio in 1980 was around 20%, which means that the major outlet for Thailand's industrial products is still the domestic market. The increase in domestic income is thus helpful for the domestic market oriented industries. Since low-income people consume largely simple products that are produced locally, the improvement of income distribution in favour of low-income groups will be helpful to create increased demand for locally produced and consumed industrial products. The rural development programme and the development of small-scale and cottage industries in rural areas specified in the Fifth Development Plan, if successfully implemented, could significantly contribute to the growth of the industrial sector.

The future course of industrial development in Thailand will also depend on the development of new natural resources, particularly on the exploitation of natural gas already discovered, and possible discovery of oil in the North and the Northeast. Heavy industries like petrochemicals will be developed. But hasty development of heavy industries will incur substantial costs to the economy and may result in the development of industries that are not sufficiently competitive, albeit the availability of natural gas as fuel and raw materials. The Republic of Korea's experience of putting massive investment in petrochemical and other heavy

industries during the 1970s, which has caused much problem to the economy of the Republic of Korea, should provide a good lesson to Thailand and other developing countries which are eager to develop their heavy industries when they are not really ready to do so.

Given the constraints on manpower and financial resources, the Thai Government has put much hope on foreign direct investment for further industrialization, particularly on the development of industries along the Eastern Sea Board. Past experiences, however, show that the incoming of foreign direct investment has not been an unmixed blessing for the Thai economy. Foreign invested firms are in general heavily dependent on imported inputs, and the extent of technology transfer seems to be quite limited. The lack of effective technology transfer in industrial sectors is partly due to the lack of attention of the government in the technological aspects of industrial development, and the resulting lack of capacity in the part of Thai industrialists to absorb technology.

Experiences in Japan, and in a number of newly industrializing countries, show that the existence of well educated manpower, further training of skilled workers, and development of technology are among the most important factors for successful industrial development. The development of second stage import substitution in certain intermediate and capital goods industries will be proceeded in Thailand in the coming decade. Exported manufactures, while still using extensively locally available raw materials, and un-skilled or semi-skilled labour at present, will also need to be upgraded in quality. All these imply that the development of skill and technology is of utmost necessity. It is thus essential that policy measures be adopted and institutions be set up to facilitate the upgrading of technical and skill level in the industrial sector. The experience of Japan and Asian NICs in upgrading the technology and skill for their indigenous sector and effective acquisition of foreign technology can be a valuable lesson for Thailand and should therefore be carefully studied.

LESSONS FROM THAILAND'S INDUSTRIALIZATION EXPERIENCE

We have so far focused more on the positive side of Thailand's industrial development. It should not be misled that Thailand's industrial growth has not been achieved without pains. As a matter of fact, the Thai economy was confronted with a number of serious economic and social problems, some of which are the results of mistakes made in the process of industrial development. The protection induced import substitution strategy was helpful in making a quick start on industrialization as there existed a domestic market large enough for the setting up of domestic production. A number of foreign firms were also induced to invest in the import substitution industries in the 1960s. The high protection given to a number of import substitution industries have encouraged excess entries and resulting excess capacity. The tax exemption on capital equipment and intermediate inputs also encourage the setting up of industries with high import content and contribute to the country's trade deficits. The protection induced import substitution also have had a side-effect of leading to the concentration of industrial activities in Bangkok and surrounding provinces, and resulting to various economic and social problems such as traffic congestion, air pollution, and increasing crimes in the city.

The policy of putting more emphasis on the development of large-scale import substituti~~n~~ industries also lead to the imbalance in the country's industrial structure, where the majority of industrial enterprises - which are small-scale - have been discriminated against by the tariff and tax structure and by other pricing policies. They also have been lagging behind in technology and skills and development in other aspects.

Thailand's merchandise trade balance has been in deficit for every year since 1957, and the trade gap widens as time passes. During 1979-1981, annual trade deficit averaged US \$ 2,475 million, representing 43.9% of the country's merchandise export earnings. As deficits in the current account have become larger over time, Thailand has to increasingly rely on foreign loans to compensate the deficits. The situation in the balance-of-payments will become a constraint on the country's industrial development in the 1980s.

In the turbulent decade of the 1970s, Thailand was also confronted with the problem of economic instability similar to that experienced in other developing economies. The price level has increased appreciably, particularly during 1974-1975 and during 1979-1981, following the two energy crises. The average annual rate of inflation measured by the consumer price index was less than 2% during 1960-1970, and accelerated to 10% during 1970-1981. The worldwide recession and the low prices on primary commodities has also led to a mild recession in the Thai economy in the past few years. But real GDP still grew at an annual rate of around 6% during 1979-1982, comparing favourably with other developing countries.

A more basic problem for the Thai economy is the increasing disparity of income distribution. The average per capita income of the population in Bangkok and of those in the central provinces was 6 and 3.5 times higher, respectively, than of those in the Northeast in 1979. This compares with the corresponding difference of 5.2 and 2.4 times in 1960. With the increase in income as the result of economic growth, the proportion of population living in absolute poverty (defined to be with the annual income of US \$ 90 in 1975/1976 prices per person in rural areas and US \$ 120 per person in urban areas) declined from about half in the early 1960s to a quarter in 1975/1976. These figures, however, imply that more than 12 million people in the country remain in absolute poverty despite the rapid economic growth. Most of the very poor people are residents of the rural areas in the North and Northeast regions of the country. There are also severe disparities in education and health facilities and personnel among different regions of the country. A rural development programme has been planned in recent years, and the poorest districts in the North and Northeast regions have been identified for the government to concentrate on rural development projects in these areas. To what extent the rural development programme would help to alleviate rural poverty remains to be seen.

From what has been described above, we have seen that Thailand's industrial development process have gone through the stage of import

substitution and export expansion. The protection induced import substitution have created quite a number of problems to the Thai economy, including chronic trade balance deficit, concentration of industrial location, and structural imbalance and inefficiencies in the industrial sector. Export expansion of manufactures in the 1970s, on the other hand, enabled the country to achieve continued growth in the industrial sector.

The success in export expansion has been achieved mainly through the utilization of the country's perceived comparative advantage. Expanding exports of manufactures, which comprised mostly of labour-intensive and resource-based products, also enabled the economy to transform surplus labour in the agricultural sector to the industrial sector, and make fuller use of available resources.

Further growth of manufactured exports, however, will be constrained by various factors. It is thus necessary for the government as well as the private sector to try to improve the efficiency of the export sector in various aspects. Increase in subsidies to export industries should be avoided, since this will tend to retard the efficiency of the industries in the long run.

Economic growth in Thailand over the past two decades has been achieved with relative price stability and with little constraint on the balance-of-payments as compared to most other developing economies. However, increased spending in both public and private sectors together with the oil price increase have led to worsening trade and current account deficits, and increased dependence on external finance. This worsening trend in the country's external balance cannot be continued forever, and measures have to be taken to correct the trade and current account deficit. Attention should also be paid on price stability as experiences in many developing economies show that rapid inflation tends to disrupt seriously the process of economic development.

More importantly, the effect of industrialization and economic growth on income distribution should not be ignored. It is hard to imagine that a country with a large proportion of people in the country is living in poverty, and their children are with low education and poor health will become an industrialized economy in the future. In the 1980s and beyond, technology will be a decisive factor on industrial development. Those countries which are not keen to develop their technology and manpower will eventually be defeated in the battle of industrialization. It is thus necessary that the technological aspect of industrial development be taken with more consideration by the government, and every effort will be made on the development of well qualified manpower.

Table 1. GDP Share and Growth Rate by Economic Sectors*

| | GDP Share (%) | | | Average Annual Growth Rate (%) | | |
|------------------------------------|---------------|--------|--------|--------------------------------|---------|---------|
| | 1960 | 1970 | 1980 | 1960-70 | 1970-80 | 1960-80 |
| Agriculture | 40.51 | 32.20 | 25.19 | 5.38 | 4.43 | 4.90 |
| Mining and Quarrying | 1.23 | 1.70 | 1.55 | 11.99 | 5.87 | 8.50 |
| Manufacturing | 11.74 | 15.54 | 20.76 | 10.87 | 10.17 | 10.52 |
| Construction | 4.79 | 5.80 | 5.24 | 9.85 | 5.94 | 7.88 |
| Electricity and Water Supply | 0.30 | 1.09 | 1.83 | 23.11 | 12.93 | 17.91 |
| Transportation and Communication | 6.68 | 6.13 | 6.35 | 6.94 | 7.41 | 7.18 |
| Wholesale and Retail Trade | 15.84 | 17.67 | 17.00 | 8.99 | 6.62 | 7.79 |
| Banking, Insurance and Real Estate | 1.87 | 3.87 | 5.68 | 16.13 | 11.22 | 13.65 |
| Ownership of Dwellings | 2.98 | 2.00 | 1.49 | 3.63 | 3.90 | 3.77 |
| Public Administration and Defense | 4.56 | 4.31 | 4.19 | 7.34 | 6.67 | 7.01 |
| Services | 9.50 | 9.69 | 10.72 | 8.02 | 8.13 | 8.08 |
| Total | 100.00 | 100.00 | 100.00 | 7.82 | 7.03 | 7.43 |

Source: NESDB, National Income of Thailand, various issues.

* Calculated from GDP value at 1972 prices.

Table 2. Employment by Economic Sector

| Economic Sector | Percentage Distribution | | Growth Rate | Distribution to Growth |
|------------------------------------|-------------------------|--------|-------------|------------------------|
| | 1971 | 1980 | 1971-80 | 1970-80 |
| Agriculture, Forestry, and Fishery | 78.77 | 70.61 | 1.81 | 46.27 |
| Minering and Quarrying | 0.57 | 0.44 | 0.40 | 0.07 |
| Manufacturing | 3.95 | 7.90 | 10.33 | 19.72 |
| Construction | 1.13 | 1.93 | 8.59 | 4.32 |
| Electricity and Water Supply | 0.17 | 0.26 | 7.09 | 0.51 |
| Commerce | 7.07 | 8.47 | 4.81 | 12.66 |
| Transportation and Communication | 1.27 | 2.02 | 7.76 | 4.24 |
| Service | 7.02 | 8.36 | 4.75 | 12.37 |
| Others | 0.05 | 0.01 | -25.40 | -0.16 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 |

Source: Department of Labor Ministry of Interior.

Table 3. GDP Share and Growth Rate by Industry in the Manufacturing Sector*

| Industry | GDP Share (%) | | | Average Annual Growth Rate (%) | | |
|-------------------------------|---------------|--------|--------|--------------------------------|---------|---------|
| | 1960 | 1970 | 1980 | 1960-70 | 1970-80 | 1960-80 |
| Food | 34.64 | 20.53 | 14.19 | 5.27 | 6.15 | 5.71 |
| Beverages | 10.57 | 12.99 | 11.78 | 13.23 | 9.07 | 11.13 |
| Tobacco | 13.01 | 10.27 | 7.15 | 8.33 | 6.22 | 7.27 |
| Textile | 5.20 | 9.23 | 13.41 | 17.47 | 14.33 | 15.89 |
| Wearing Apparel | 8.01 | 4.68 | 9.07 | 5.11 | 17.68 | 11.22 |
| Wood & Cork | 4.79 | 3.14 | 1.64 | 6.35 | 3.20 | 4.76 |
| Furniture & Fixture | 1.18 | 1.31 | 0.61 | 12.13 | 2.04 | 6.97 |
| Paper & Paper Products | 0.21 | 0.73 | 1.58 | 25.97 | 18.98 | 22.42 |
| Printing & Publishing | 3.20 | 2.21 | 3.06 | 6.91 | 13.77 | 10.29 |
| Leather, Leather Products | 0.59 | 0.99 | 0.50 | 16.82 | 2.81 | 9.59 |
| Rubber & Rubber Products | 0.55 | 1.60 | 2.74 | 23.31 | 16.22 | 19.71 |
| Chemical & Chemical Products | 6.83 | 6.32 | 7.97 | 10.07 | 12.71 | 11.38 |
| Petroleum Refining | 0.01 | 6.04 | 4.81 | 106.53 | 7.65 | 49.11 |
| Non-Metallic Mineral Products | 2.89 | 5.05 | 5.72 | 17.25 | 11.53 | 14.35 |
| Basic Metal Industries | 0.43 | 1.68 | 1.15 | 26.97 | 6.09 | 16.06 |
| Metal Products | 0.39 | 2.11 | 1.07 | 31.45 | 2.91 | 16.31 |
| Machinery | 0.58 | 2.29 | 1.80 | 27.24 | 7.51 | 16.96 |
| Electrical Machinery & Supply | 0.60 | 1.36 | 2.02 | 20.32 | 14.55 | 17.40 |
| Transport Equipment | 5.42 | 5.13 | 7.80 | 10.33 | 14.84 | 12.56 |
| Misc. N.E.C. | 0.90 | 2.34 | 1.93 | 21.98 | 8.02 | 14.79 |
| Total | 100.00 | 100.00 | 100.00 | 10.92 | 10.13 | 10.53 |

Source: NESDB, National Income of Thailand, various issues.

* Calculated at 1972 prices.

Table 4. Distribution of Imports by Economic Classification

| Type of Imports | 1961 | 1966 | 1971 | 1976 | 1981 |
|---|--------|--------|--------|--------|--------|
| I. Consumer Goods | | | | | |
| A. Non durable | 32.20 | 17.74 | 10.75 | 7.82 | 6.30 |
| B. Durable | 7.27 | 8.20 | 7.13 | 5.36 | 4.36 |
| Total consumer goods | 39.47 | 25.94 | 17.88 | 13.18 | 10.66 |
| II. Intermediate Products & Raw Materials | | | | | |
| A. Chiefly for consumer goods | 10.87 | 14.04 | 18.78 | 17.54 | 15.61 |
| B. Chiefly for capital goods | 6.99 | 7.65 | 10.40 | 10.76 | 9.14 |
| Total intermediate product & raw materials | 17.86 | 21.69 | 29.18 | 28.30 | 24.75 |
| III. Capital Goods | | | | | |
| A. Machinery | 13.35 | 18.03 | 21.69 | 18.12 | 16.99 |
| B. Others | 11.97 | 13.34 | 10.74 | 9.04 | 9.35 |
| Total capital goods | 25.32 | 31.37 | 32.43 | 27.16 | 26.34 |
| IV. Other Imports | | | | | |
| A. Vehicle & parts | 7.96 | 10.12 | 8.23 | 7.24 | 4.40 |
| B. Fuel and Lubricants | 10.06 | 10.30 | 10.23 | 23.37 | 30.14 |
| C. Others | -0.67 | 0.58 | 2.06 | 0.75 | 3.71 |
| Total of others | 17.35 | 21.00 | 20.52 | 31.36 | 38.25 |
| Grand Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

Source: Bank of Thailand Monthly Bulletin, various issues.

Table 5. Exports by Economic Sectors

| Economic Sector | 1961 | 1966 | 1971 | 1976 | 1981 |
|---------------------------|--------------------|---------------------|---------------------|---------------------|------------------|
| 1. Agricultural Products | 8,264.3 (82.67) | 10,835.0 (76.85) | 10,812.2 (62.57) | 31,515.8 (51.82) | 72,998 (47.7) |
| 2. Fishery Products | 40.3 (0.40) | 246.7 (1.75) | 495.7 (2.87) | 2,707.1 (4.45) | 6,632 (4.3) |
| 3. Forestry Products | 330.1 (3.30) | 305.0 (2.16) | 265.8 (1.54) | 1,055.9 (1.74) | 143 (0.1) |
| 4. Mineral Products | 655.6 (6.56) | 1,629.6 (11.56) | 2,364.0 (13.68) | 4,112.8 (6.66) | 11,814 (7.7) |
| 5. Manufacturing Products | 239.4 (2.39) | 530.0 (3.76) | 1,731.5 (10.02) | 15,819.9 (26.02) | 54,743 (35.8) |
| 6. Others | 464.6 (4.65) | 553 (3.93) | 1,611.9 (9.23) | 5,660.2 (9.31) | 2,632 (6.7) |
| Total | 9,997.0 | 14,099.3 | 17,281.1 | 60,872.09 | 148,962 |

Note: Value in million baht. Figures in parentheses are percentage to total exports.

* Including re-export

Source: Bank of Thailand

Background Documentation of the Policies of Individual
Developed Countries toward the Developing Countries

THE CHANGING INTERNATIONAL POSITION OF U.S. MANUFACTURING AND U.S. INDUSTRIAL POLICY: IMPLICATIONS FOR LATIN AMERICAN INDUSTRIALIZATION (a summary) by Peter B. Evans*

The principal aim of this report is to examine the ways in which recent changes in the international position of U.S. manufacturing are likely to be reflected in future U.S. industrial policy and how, in turn, such policy is likely to affect the prospects of Latin American countries struggling to industrialize in the face of the currently unfavourable condition of the global economy. The main vehicle for the analysis is a set of three case studies of specific industries: steel, electronics and petrochemicals. Steel is an industry which is clearly declining in the U.S. and facing difficult problems of over-capacity worldwide. Electronics is an example of an industry in which the U.S. is likely to place substantial hopes for the future. Petrochemicals is an intermediate case, one in which the comparative advantage of the U.S. is likely to erode, at least in important segments of the industry, but which is currently a strong competitor internationally. Together they illustrate a range of sectoral problems to which U.S. policy must respond.

Current U.S. industrial policy might be labelled 'passive, ad hoc protectionism'. It has been shaped by the combination of three contradictory pressures. First, deep seated ideological resistance to an active governmental role in industrial development has all but eliminated any possibility of positive adjustment. Secondly, the serious social and economic problems caused by the declining international competitiveness of basic U.S. industries have created strong pressures for protectionism. Thirdly, the ineluctable interest of U.S. based TNCs in the maintenance of an open international economy has made systematic protectionism politically infeasible. In combination, these pressures have produced a policy which has allowed the growth of manufactured imports from Latin America while encouraging the growth of U.S. direct investment, but has also erected tariff and non-tariff barriers against Latin American manufactures in a number of different industries while failing to provide relief to U.S. communities and workers whose fortunes are tied to declining industries.

Continuation of current U.S. policy is the most likely prospect for the future, but three other possibilities must also be considered. None

* Professor Peter B. Evans, Brown University, USA

of these is likely to emerge as an alternative in itself, nonetheless, each represents a direction in which current policy might be modified. The most obvious is active retardation of structural change. This is an attractive possibility from the point of view of labour displaced from traditional industries by technological change and international competition. It may also be attractive to domestic capital in that it provides relief without implying serious government involvement in the allocation or management of industrial capital. It is, nonetheless, unlikely to dominate U.S. industry both because of the high welfare costs involved (especially to workers involved in the production of non-tradables), and because of its strong negative consequences for politically powerful TNC capital.

A second, even less likely possibility is positive adjustment focused primarily on achieving increased competitiveness in international markets. This would involve relaxing current attempts to shield "sunset" industries while actively promoting and subsidizing the growth of "sunrise" industries. Aggressive export promotion would be one of the hallmarks of such a policy and it therefore might be called "nationalist accelerated adjustment".

The final and least likely alternative might be called "internationalist accelerated adjustment". Like a nationalist variety of accelerated adjustment it would involve active governmental efforts to shift the sectoral profile of U.S. industry, but the major emphasis of such policy would not be on export promotion as such. Export promotion solves domestic problems at the expense of trading partners. For an economy as large as the U.S. to attempt such a solution would imply extreme costs for other nations, especially newly industrializing nations.

An "internationalist" industrial policy, one which attempted to solve U.S. economic problems without disrupting the industrial growth of other nations, would therefore have to focus primarily on using domestic resources, especially labour, more effectively rather than concentrating on balance of payments problems. This would entail significant public involvement in the reallocation of domestic capital, both among industries

and among activities within industries, and much more serious public attention to the functioning of domestic labour markets. While such an emphasis would be the most desirable from the point of view of U.S. trading partners, it is the least likely to find expression in future policy.

The way in which these tendencies are blended to form future U.S. industrial policy is obviously of crucial importance to Latin America. U.S. industrial policy affects all developing countries, but its effects are particularly great in Latin America. While East Asian NICs have played a more central role in the increased U.S. consumption of manufactures from developing countries, economic ties between the U.S. and Latin America are more intimate and complex, first of all because of the greater role of U.S. TNCs in Latin American manufacturing and, secondly, because of the greater inter-connection of the Latin American and U.S. labour markets (via immigration).

Continuation of current U.S. policies will hamper Latin America's prospects for industrialization. A movement in the direction of active retardation of structural change would force a fundamental rethinking of current Latin American industrialization strategies. Such a rethinking could in turn have serious, unanticipated negative effects on the international position of U.S. manufacturing. It must be remembered that without its trade with Latin America the U.S. would have had a negative balance of trade in manufactures of almost US \$ 12 billion in 1979 instead of a positive balance of over US \$ 5 billion.

Three industry case studies

Neither current U.S. industrial policy nor future possibilities should be examined in abstraction from recent shifts in the international position of the U.S. manufacturing sector. While lagging productivity growth and declining international competitiveness are problems for U.S. manufacturing in general, the situations of different industries vary tremendously. Thus, the changing position of the U.S. is best understood at the level of individual industries. It is not possible to

examine the full range of industrial variation, but steel, petrochemicals and electronics provide a good sample.

Steel is a classic example of declining U.S. competitiveness in basic manufacturing. U.S. steel companies never chose to compete in international markets, but they did enjoy a comfortable dominance of the world's largest domestic market. Over the years since World War II, this was gradually undermined by the failure of U.S. corporations to accompany technological change, changes in international raw materials prices relative to U.S. prices, and aggressive investments in the industry by the Japanese, Europeans, and NICs. The U.S. was left not only unable to compete internationally, but vulnerable to international competition in its domestic market. By the end of the 1970s profits had disappeared, tens of thousands of steel workers had lost their jobs, and imports were accounting for close to 15% of domestic demand. The steel industry was in serious trouble and the communities in the Northeast and the Ohio River Valley that depended on the industry were being devastated.

Given the distress of the industry, the high social costs associated with its distress, and the degree to which blame for the industry's problems could be attributed to failures on the part of corporate management, the steel industry presented an obvious opportunity for active public intervention. This opportunity was, however, explicitly rejected. Even the most comprehensive government plan for dealing with the industry's problems (the so-called "Solomon Plan") admonished that direct government involvement in the industry's decisions must be avoided.

Instead U.S. policy focused on ad hoc protectionist strategies such as the "Trigger Price Mechanism". These were estimated to have cost consumers about a billion dollars a year while saving only about 12,000 jobs. Ad hoc protectionism did not preserve jobs or profits in steel, but it did have a negative impact on the competitiveness of U.S. metal fabricating industries. In the case of the automobile industry, for example, it has been estimated that U.S. firms must pay 25% to 30% more for steel than their Japanese competitors.

There is no easy way out of the unfortunate position into which U.S. steel firms have gotten themselves. A general renovation of plant and equipment would not be feasible even if the capital were now available (as it was in the 1950s). Current capital costs are too high for new greenfield facilities in the U.S. to be competitive with existing facilities in other countries. Even if more competitive capacity could be built, domestic demand would not support any additional capacity and exports are almost out of the question given worldwide problems of over-capacity.

The most rational strategy would seem to involve phasing out the uncompetitive plants of the Northeast and Ohio River Valley, and shrinking overall capacity by between 10% and 20% while encouraging the construction of electric furnace mini-mills in areas where scrap is available and markets are more robust (e.g. the Southeast). Such a policy would involve active state involvement in capital allocation and, even policies in order to reduce social costs.

From the point of view of Latin Americans, steel is a classic example of the negative effects of current U.S. policies. Because of the essentially negative orientation of U.S. policy in the industry, the growth of steel capacity in Latin America has been seen as a threat, despite the fact that Latin America imports about three times the amount of steel from the U.S. that it exports to the U.S. and despite the fact that the growth of Latin America capacity has presented an important potential market for U.S. capital goods.

Brazil in particular has suffered from the ad hoc protectionism of current U.S. policy. With large domestic reserves of very high quality iron ore, Brazil can legitimately claim to have a long-run comparative advantage in the production of steel. Between 1979 and 1981 it tried to exploit this comparative advantage and solve its own problems of falling domestic demand by increasing exports of carbon steel plate, stainless steel wire rod and stainless steel bar to the U.S. Although Brazil never accounted for more than 5% of U.S. domestic consumption, even in those products in which it was most successful, its exports came under legal attack as being "subsidized" and therefore as potentially subject to countervailing duties.

Petrochemicals, unlike steel, has always had a strong international orientation. U.S. TNCs, both oil and chemical, have made major commitments to production facilities in the Third World and in Europe, and have provided the U.S. with an important source of export earnings. Between 1973 and 1980, U.S. petrochemical exports increased more than four-fold. Despite the apparent dynamism of the industry, however, continued U.S. competitiveness cannot be taken for granted. The rapid growth of exports was related primarily to the growth of worldwide demand rather than increased U.S. competitiveness. In fact, U.S. market shares were falling during this period. In plastics, for example, the U.S. share of world export markets fell from 27% in 1962 to 17% in 1970 to 12% in 1977.

Petrochemicals is a highly differentiated industry. The competitive position of the U.S. has remained very strong in the more technologically sophisticated downstream products, but in basic petrochemical products U.S. competitive advantage has been undercut by two factors. Most important was the dramatic change in relative raw materials prices that followed on the oil price revolution. Energy rich LDCs now have a substantial advantage over the U.S. in terms of raw materials and energy costs. In the case of Mexico, for example, feedstock costs may be a quarter of U.S. costs. The second change has been more gradual but is also important. The differential capital costs of constructing plants outside the U.S. is narrowing. To use Mexico as an example again, construction costs were estimated at 25% above U.S. costs at the beginning of the 1980s but will be only 18% higher by 1985.

Converging capital costs and substantially higher raw materials and energy costs leave the U.S. two choices with regard to basic petrochemicals. The profitability of existing naphtha crackers and other basic installed capacity could be shielded by raising the (already not insignificant) tariff barriers of those commodity petrochemicals that are easily transportable. The immediate negative effects of such a move from a Latin American point of view would be negligible. In the longer run however, Mexico (and potentially Venezuela) would be deprived of what could otherwise be a crucial market, a market that could facilitate the development of an important vertically integrated basic industry.

The protectionist option would also, as in the case of steel, have negative effects on the international competitiveness of U.S. industries for which basic petrochemical products are important inputs (e.g. textiles).

The alternative possibility would be to assume gradual replacement of a proportion of existing basic capacity by imports, and to focus on product and process innovations in more technologically sophisticated downstream products, (e.g. fine chemicals, agricultural chemicals). Even though the more advanced Latin American countries are unlikely to accept a definition of the international division of labour that would exclude them from the production of more sophisticated downstream products, increased U.S. openness with regard to basic commodity petrochemicals would significantly increase the options available not only to countries with a long-term comparative advantage in petrochemicals, like Mexico, but also to countries whose petrochemical development strategies focus on the domestic market, like Brazil.

The context shaping policy decisions in petrochemicals is much different than the policy environment surrounding steel. The companies involved are profitable, technologically aggressive, strongly interested in the preservation of a global environment open to trade and investment and without any overriding current interest in protection. The number of workers involved is relatively much smaller than is the case in steel and there is no pattern of community dependence on the industry comparable to the pattern that exists in steel. The policy environment is, therefore, generally much more flexible than is the case in steel.

At the same time, however, future possibilities in this industry are complicated by the fact that, unlike the steel case, U.S. corporations have significant global as well as domestic interests at stake. The policy issue is therefore not simply protectionism, but one of how the interests of U.S. TNCs would be affected by different patterns of importation. More specifically, U.S. TNCs are likely to have a strong preference for sourcing imports from the Saudi Arabian capacity which they are playing a central role in developing rather than from the Mexican capacity or Brazilian capacity which has been developed by state and local capital with much more limited participation by U.S. TNCs.

In steel, firm strategies were important mainly in the negative sense of generating problems which then had to be dealt with by future government policy. In petrochemicals, it seems likely that industrial policy will interact with firm strategies to determine the environment within which Latin American countries must operate. In electronics, firm strategies themselves seem likely to play the most important role in determining the options available to industrializing countries.

Electronics is already characterized by well established strategies for the international differentiation of the productive process. U.S. TNCs have developed a variety of different strategies depending on the subsector of the industry in which they are involved. In consumer electronics, the "run-away shop" has been the rule. The U.S. is an importer rather than an exporter, and in some products (e.g. black and white TVs) domestic production has virtually ceased. In semi-conductors both U.S. imports and U.S. exports are large. Capital intensive parts are fabricated domestically; labour-intensive assembly is done in LCDs and the assembled components are re-imported for insertion into final products, such as computers.

The computer industry itself remains geographically centralized. U.S. imports are still relatively small, production in LDCs is almost non-existent, and U.S. exports amount to about 25% of domestic production. Each of these ways of defining the international division of labour opens up certain opportunities for Latin American countries while at the same time placing important limits on the possibilities for industrial development.

TNC strategies focused on the geographic dispersion of the production process in electronics have facilitated significant expansion of Latin American exports in the industry, as well as stimulating the growth of labour-absorbing manufacturing activities. These developments are most significant in the case of Mexico, which now supplies almost a third of all television parts and apparatus imported by the U.S., and is an important supplier of electronic components in general.

One advantage of these manufactured exports is that they are unlikely to confront protectionist barriers erected by the U.S. government, precisely because they are so intimately linked to TNC strategies. Over 95% of Mexico's exports of electrical machinery are "related party imports"; that is, they are produced by subsidiaries of U.S. firms (or other kinds of "related parties"). In contrast to petrochemicals or steel, imports in this industry can count on powerful domestic interests in the U.S. which depend on their having access to the U.S. market.

The close linkage between TNC strategies and Latin American industrial growth in this industry has, of course, disadvantages as well as advantages. In direct proportion to the intimacy of their linkages with the division of labour as it is defined within TNCs, electronics assembly operations are marginal to the division of labour internal to the Third World countries in which they operate. Exports of 806.3/807, almost by definition, have few forward or backward linkages inside the country in which they are produced. Even in the case of a relatively industrialized economy like that of Mexico, electronics assembly operations are not a promising base for integrated industrial development (much less promising for example than petrochemicals), and in smaller less developed countries (e.g., Central America and the Caribbean) the prospects for positive general effects on industrialization are even more bleak.

At the same time, Latin American producers are very closely constrained by TNC strategies. Any attempt to move in the direction of constructing a more vertically integrated industry internal to a country like Mexico would run counter to the most efficient geographic division of labour as defined from a corporate point of view and, since the existing assembly oriented industry is completely dependent on the cooperation of TNCs, the corporate view must almost inevitably prevail.

Mexico and other Latin American countries that have become involved in electronics assembly are also vulnerable to changes in TNC strategy based on changes in technology. Already, the foreign share of the value added contained in 806.3/807 electronics imports is declining as the circuits etched on the originally exported wafers become more complex and

therefore more valuable. A potentially much more fundamental threat is contained in the possibility that changes in production technology might make automated assembly of semi-conductors in the U.S. economically preferable to the current international division of labour. Since promotion of such automated assembly technology is a lausible priority for a programme of "nationalist accelerated adjustment, this policy alternative may be more threatening to Latin America's interests in the electronics industry than a continuation of current policies.

Future possibilities

The industry case studies reveal a number of different ways in which Latin American countries might be negatively affected by future U.S. policy. The simplest effects are illustrated by the steel industry. Steel makes clear the limitations imposed on Latin American attempts to develop manufactured exports by current U.S. policy. No Latin American country with hopes of building future industrialization around the expansion of manufactured exports can afford to ignore the lessons of the steel case: penetrating the U.S. market independently of channels provided by multinationals is a very problematic strategy regardless of whether or not the inefficiency of U.S. producers make price competition feasible.

The lesson of Brazil's experience in steel is that success in penetrating U.S. markets is likely to draw attention to the successful exporter and provoke retaliation policies. Steel also underlines the reasons why current policies will persist. Even a radically market-oriented administration like the current U.S. one found itself unable to avoid supporting a continuation of ad hoc protectionist policies in the steel industry.

The electronics case provides a very different kind of support for the proposition that current policies are likely to persist. By making it more difficult to penetrate the U.S. market independently of channels provided by TNCs, ad hoc protectionism makes arrangements like those developed in the electronics industry all the more valuable to those who would expand their manufactured exports. In this sense TNCs may well find

that ad hoc protectionism serves their interests better than a policy of classic liberal openness. At the same time, the electronics industry provides a good illustration of both the constraints and vulnerabilities that confront Latin American manufacturing when it tries to operate within the international division of labour as it is defined by TNCs and the potential dangers for Latin America that are contained in a policy of nationalist accelerated adjustment.

Petrochemicals suggests a similar sort of caveat with respect to the potential benefits of a policy of "internationalist accelerated adjustment". The discussion of basic petrochemicals showed that the removal of governmental barriers would still leave questions of access at least partially in the hands of TNCs which were likely to prefer to source their imported inputs from petrochemical industries, like those in Latin America, where state and local capital along with non-U.S. TNCs play a predominant role.

The petrochemical case should not be taken to suggest that a policy of "internationalist accelerated adjustment" is not vastly preferable from a Latin American point of view to either the continuation of current policy or the adoption of a policy of "nationalist accelerated adjustment". It does, however, reinforce the obvious point that Latin Americans should not expect too much of U.S. policy even under the best of circumstances.

Current policies enhance the extent to which Latin Americans and TNCs can build alliances around internationalist positions. An internationalist policy might well increase the extent to which Latin Americans began to focus on the fundamental differences between the way in which they define internationalism and the way in which it is defined by TNCs. Regardless of its domestic effects and its consequences for openness, no U.S. industrial policy will strengthen the hand of Latin Americans in their dealings with U.S. TNCs. For example, not even the most internationalist policy is likely to deal with problems critical to Latin American industrialization such as "de-packaging" of technology currently controlled by TNCs or the effects of TNC market power on industrial structures in Latin America.

An adequate conceptualization of future possibilities for the evolution of economic ties between the U.S. and Latin America must consider the interaction of Latin American and U.S. policies, not just the probable configuration of U.S. policy. Thus, one important aspect of potential U.S. policies is the extent to which they would provoke or force nationalist responses on the part of Latin Americans. Systematic protectionism, for example, would force a fundamental re-evaluation of the current externally oriented industrialization policies of most Latin American countries. It would not only make resolution of balance of payments problems through the expansion of manufactured exports manifestly more difficult and force Latin Americans to curtail their consumption of manufactured imports, it would also make alliances with U.S. TNCs manifestly less valuable.

Indeed, the possibility of provoking retaliatory policies against U.S. TNCs (as well as U.S. transnational banks) cannot be discounted. A policy of internationalist accelerated adjustment on the other hand would not compel a particular policy response from Latin Americans. Latin American regimes might respond by offering a complementary openness, but the policy in itself would not preclude a response focusing on trying to develop less vulnerable and limited positions in the international division of labour in manufacturing by building more internally integrated local industries and trying to reduce dependence on external sources of financial capital and technology.

Variation among Latin American countries in terms of the character of their economic ties to the U.S. must also be considered. It is not simply fortuitous that Mexico and Brazil have served as the primary examples in each of the three industrial case studies. They not only dominate both the manufactured production and manufactured exports of Latin America, they also account for two-thirds of U.S. direct investment in Latin America and the largest share of U.S. trade in manufactured goods. For U.S. TNCs in sectors like machinery, electrical and electronic equipment and transportation equipment, Mexico and Brazil in combination represent between 80% and 90% of their stake in Latin America. Consequently, it is the policy responses of Mexico and Brazil that are most important to U.S. TNCs.

Mexico is particularly important. Because of its extensive trade relations with the U.S. and because of the extent to which U.S. direct investment in Mexico is linked to U.S. Mexican trade, Mexico is a prime candidate for being drawn in a common developmental strategy by U.S. adoption of an internationalist approach. Such a development would be particularly advantageous to U.S. TNCs operating in Mexico. By the same token, the kind of rupture that would occur in the event that the U.S. adopted a more stringently protectionist strategy and Mexico replied in kind would be most traumatic in the case of Mexico, despite the fact that the Mexican economy, more than any other in Latin America except Brazil, enjoys the scale and degree of differentiation necessary to make a more autarkic strategy viable.

The situation with respect to the countries of the Southern Cone (Argentina, Uruguay, Chile and Paraguay) provides the best contrast to the Mexican case. These countries have relatively little trade with the U.S. and U.S. TNCs have shown only limited interest in recent years in participating in the development of their manufacturing sectors. The relatively more distant connections between manufacturing in these countries and U.S. industrial policy is perhaps best indicated by the fact that they have virtually no representation among 806.3/807 exports to the U.S. The expected economic benefits from preserving hospitable economic climates in these countries are relatively minor compared to those in the Mexican case. Likewise the costs to the U.S. of the adoption of more nationalist policies by these countries would be less.

At the same time, the restricted scope of local manufacturing capacity would make it harder for these countries to adopt a more nationalist set of policies, even in the face of U.S. provocation. Economically, then, the U.S. would appear to have a great deal of leeway in its policies toward the countries of the Southern Cone. Politically, however, the situation is more delicate. The regimes that preside over these countries are firm ideological allies of the U.S. and the institution of an unfavourable industrial policy in the U.S. might well have both an immediate effect on their legitimacy and a longer term effect on their ability to remain in power.

The Brazilian case stands midway between the Mexican and Southern Cone cases. On the one hand, U.S. direct investment in Brazil is much less oriented toward the U.S. market than is the case in Mexico. Brazil's participation in 806.3/807 imports, for example is relatively minor. Its relatively smaller degree of participation in TNC constructed trade links with the U.S. make the possibility of Brazil pursuing a more nationalist course even in the face of an internationalist stance on the part of the U.S. greater than in the case of Mexico. At the same time, the scale and diversity of its economy gives Brazil a wider scope for movement in the direction of more autarkic policies than is enjoyed by the countries of the Southern Cone. Given that the stakes are higher and the outcome less certain in Brazil than in most other Latin American countries, the possibility of provoking a nationalist reaction in Brazil must be considered one of the major Latin American risks that would be involved in U.S. adoption of a more stringent protectionist policy or (less dramatically) in the continuation of present policy.

Regardless of U.S. policies choices, and regardless of the situations of the particular countries involved, the primary determinants of Latin American policies are likely to be internal. Nonetheless, U.S. policy makers must be aware that movement toward protectionism, and to a lesser extent continuation of current policy, does increase the risk of stimulating Latin American responses that would undercut what must be considered objectively a very favourable situation for the U.S. in general and for U.S. TNCs in particular. Movement of Latin American regimes in a more nationalist direction would be problematic for even the larger, more industrialized countries like Brazil and Mexico, but it would also hold the promise of alleviating some of the limitations imposed by the current nature of U.S./Latin American relations. From the point of view of the U.S., and especially from the point of view of U.S. TNCs, less "internationalist" policies on the part of Latin American regimes would be costly.

What is the most likely future possibility? It is quite simply that the U.S. will remain trapped in an industrial policy which offers little prospect of revitalizing its manufacturing sector while Latin American's continue to confront the limitations which this policy imposes on their own industrialization. Latin America must therefore formulate its own industrial policy with the clear realization that future U.S. policy is very unlikely to offer any relief from current problems.

STRATEGIES AND POLICIES FOR THE 1980s AND 1990s, AN AUSTRALIAN PERSPECTIVE
by J.A. Ferguson*

INTRODUCTION

Australia welcomes this opportunity to present its views on strategies and policies for industrialization in developing countries.

Australia's qualifications to speak in this area are based on its own, relatively recent, industrialization which has shared many of the characteristics of industrial development in developing countries - a small domestic market, an import replacement approach initially, substantial reliance on imported capital and technology - as well as its experience in cooperating with our developing country neighbours in the Asia/Pacific region in their industrialization.

The subject of the Lima Meeting is most complex and at the outset it must be noted that the Meeting appears to be premised on a new set of parameters for global industrial development during the coming decade.

This paper addresses three broad aspects of our approach to the long-term industrialization process in developing countries:

- whether there is a need for a radical change of direction;
- what is the "correct" recipe; and
- the major industrialization issues in the eighties.

The need to change direction

At a global level the economic situation which has been facing most countries is extremely difficult. In terms of unemployment, inflation, high interest rates, low commodity prices, large debt burdens, increasing protectionist pressures and so on. Although there are some signs that the bottom of the trough has been reached, evidence of any sustained upturn has yet to emerge.

There is no doubt that the world economy and particularly many of the non-oil producing developing countries have faced severe adjustment pressures

* H.E. Mr. J.A. Ferguson, Ambassador Extraordinary and Plenipotentiary, Embassy of Australia in Peru.

from events of the 1970s and early 1980s. However, one must question whether shifts in relation to industrialization opportunities have been so fundamental as to warrant a reversal of ongoing approaches.

In the Asia/Pacific region the state of industry in most countries suggests that there are grounds for confidence in the future and also satisfaction in the performance to date. This is not to say that serious problems do not exist, and will not continue to arise, but it suggests that the industrialization strategies pursued in the region (as discussed below) are heading in the right direction.

Accordingly there is no pressing need for radically new perspectives on industrialization. The most desirable course, it would seem, is to ensure that many of the industrialization strategies and directions already established are reinforced and continue to evolve. Therefore, one must counsel against engaging in new strategies of uncertain merit and cost effectiveness.

At the same time it is recognized that governments and organizations, including the UN system, are finding that they must operate within constraints that even a few years ago were not necessary. This suggests that all governments and international agencies must ensure, even more than in the past, that all activities are as cost effective as possible and must be contained within stringent budgetary controls.

In particular, in respect of industrialization, emphasis should be given to using resources on projects which will show early economic returns, where delivery will be direct and where confidence in the process of industrialization is promoted.

One way in which this should manifest itself is in lessening concentration on more esoteric and conceptual exercises. This can be justified particularly on the grounds that significant multiplier benefits can flow from sound industrial projects whereas excessive "hot air" merely tends to create explosions.

As a corollary close attention should be paid to determining priority areas, which, of course, are constantly changing, eliminating those activities of lowest priority and concentrating a major part of our efforts in the top priority areas.

To avoid waste and duplication of effort clear criteria and close communication are essential. Agreed objectives need to be pursued in a fashion consistent with the mood in which they were achieved.

This approach is not one of negativism. There are merits in a wide range of industrialization initiatives. The concern being expressed is that the limited resources available are used in the most effective way to contribute to the industrialization of the developing countries.

What is the correct recipe?

It has been common in the past for many developing countries to see industrialization as being synonymous with rapid development and to approach industrialization in unrealistic and constrained time frames.

Attempts to mirror developments in developed countries or in the more industrially developed of the developing countries have often led to a static approach to industry issues. This approach fails to recognize that industrial development is essentially dynamic and changeable and that successes reaped by one country may not necessarily be repeated in other countries in a different period of development and in a different international economic environment.

As a result there have been examples of successes in vertical industrial development which have often been at the expense of horizontal development, leading to significant social, health, employment and political problems. These have been accompanied by increased public intervention to support enterprises and an overall deficiency in political, social, technical, and managerial infrastructures to support such development.

Those approaches to industrial development which have emerged and which attempt to avoid or mitigate these problems should be strongly endorsed. These approaches have focussed on more realistic strategies suitable to the characteristics of individual developing countries and which have relied largely on the enterprise and resources of the country concerned. ESCAP has done valuable work in this area and has put forward strategies under two broad headings:

- The first is an endogenous form of industrial development involving strengthening absorptive capacity and manufacturing capabilities. Based not simply on massive transfer of resources or the appropriate mix of trade strategies (e.g. import replacement/export orientation) but more importantly on the attention given to the progressive and balanced development of infrastructure facilities, training, entrepreneurship, skills, education, investment policies and careful government planning, backed up by appropriate gap filling support from the international community.

- The second group of industrial strategies are of a qualitative nature and stress the re-orientation of policies to ensure broad community benefit. For example by strengthening linkages between agriculture and industry; balanced spatial dispersal of industry within countries; promotion of small-scale industries and their linkages with large and modern industries; and orientation of industry to satisfy basic needs.

All of this does not mean that one dismisses the significant advantages of interdependent development. Clearly closer co-operation between countries, particularly within regional groupings, is highly desirable. Numerous initiatives have been taken to encourage this; and despite uncertainties involved these have generally been successful. However, the precise form of such cooperation varies greatly between different activities, industry sectors and the socio-economic policies pursued. Such cooperation can, however, be facilitated most effectively by maintaining maximum flexibility and not seeking to impose a uniform model on such development cooperation.

Australia sees the future role of institutions in industrial development as including the following:

- First, building on existing expertise through the extension of services to foster industrialization but only on the basis of effectively meeting demonstrated needs. Operations should expand therefore as the need arises with the required administrative structure following, not vice versa;
- Secondly, providing pragmatic assistance to developing countries in meeting industrialization priorities where these are beyond domestic resources. Practical support of this type includes technology development and transfer, market assessment studies, information services, investment feasibility studies, policy consultations, technical assistance and establishment of regional facilities when viable;
- Thirdly, ensuring financial resources provided by the international community e.g. through the International Bank for Reconstruction and Development, the African Development Bank, the United Nations Development Programme and the United Nations Industrial Development Fund, are spent efficiently and in a complementary fashion to resources from other quarters and further that the proportion of such resources deployed to rhetoric or debate over largely irreconcilable issues is kept to a minimum; and
- Finally, providing a coordinating and "clearing house" role to encourage harmonization and integration of activities as far as possible.

As examples of this type of practical support one has in mind, there are a number of low cost projects in which Australia is presently involved which is believed carry the potential for a substantial pay-off

in terms of generating industrialization and economic growth. One such area is the hosting jointly with UNIDO of workshops in areas where Australia has some worthwhile technology to transfer to developing countries and where knowledge of this technology can be made available through the medium of short-term seminar programmes for experts who already have a considerable grounding in the subject area.

In a similar vein, Australia supports regional bodies such as the Asian Institute of Technology, the Regional Network for Agricultural Machinery and the Regional Centre for Technology Transfer. These institutions, by gathering information on technology and by training people with appropriate skills, can make a contribution to development far greater than the modest resources dedicated to them would infer. Institutions like these extend the "capabilities" of industrialization and perform a software function akin to the hardware of physical infrastructure.

A further area to which Australia attaches importance is that of small and medium-sized enterprises. This area is receiving considerably more prominence under the general umbrella of industrialization and rightly so. As a relatively small country Australia has very few world-sized firms and more than its fair share of small firms and accordingly a great deal of effort has been expended to improve and optimize the performance of Australian small enterprises.

Australia recently hosted a seminar on small and medium-scale enterprises in order to share its experience with developing countries.

Australia is also actively involved in the area of enhancing industrialization within the commonwealth through both its global institutions (particularly the industrial development unit) mainly based in London, and its regional arrangements.

Major industrialization issues in the 1980s

In summary, there is no single or simple strategy that can be rigidly followed in achieving industrialization. Either in the way individual countries "do their own thing" or in the supportive policies of international agencies or inherent in bilateral arrangements. At times the supportive role should be founded on a "global" strategy. In other cases support needs to be pinpointed to specific needs in individual countries.

There are however, broad principles which can assist in guiding the roles of particular agencies. For example, relatively small bodies should not become involved in large-scale projects and selecting areas of most immediate need which are not being covered by the work of other agencies. This is being facilitated by concentration on:

- project preparation;
- feasibility studies; and
- training workshops.

At the same time success should not be measured by the absolute number of projects but rather by the completion of a smaller number of projects which have been done well. In this regard the establishment of clear objectives and priorities is essential.

A brief summary of the broad approach Australia is expected to pursue in its own industry policy may throw some light on issues which are being encountered by, and likely to be confronted by developing countries. While the current situation causes some uncertainty it is possible to conclude that Australia will continue to maintain emphasis on industrial policies which cause minimum internal disruption at times of high unemployment and which encourage, inter alia, small business development, "sunrise" industries, industrial research and development and the integration of employment and training with industry policy.

Issues such as international protectionism, structural adjustment in developed countries, the respective functions of the public and private sectors, taxation policies, intervention in capital markets and appropriate planning mechanisms are all issues with which one must come to grips. Equally important are the goals of getting world markets on an expansion course, increasing resource flows generally and at the same time suppressing the distorting influence of inflationary pressures.

However, it must be stressed that these are issues which range far more broadly than the industrial arena and should not be allowed to obscure the more fundamental industrial strategy-specific questions which should be the main focus of this forum.

INDUSTRIAL DEVELOPMENT STRATEGIES AND POLICIES IN DEVELOPING COUNTRIES WITH PARTICULAR REFERENCE TO COOPERATION WITH THE FEDERAL REPUBLIC OF GERMANY by Juergen Kuehn*

Discussions on development strategies are frequently overshadowed by ideologies and therefore one-sided. Some maintain that initiating a successful process of development merely requires promotion of the right sector, e.g. industry or agriculture. Others have absolute confidence in the exclusive development of the domestic market, thereby opposing theories that are based on a mainly export-led development. Such one-sided views should be avoided. Given the interdependence between the individual sectors of the economy and between industrialized and developing countries, they lead to undesirable developments that are difficult to correct.

If a sound and gradual economic development is to be achieved, the interdependence between the individual sectors of the economy requires a policy that offers simultaneous assistance to more than one area, and in this way leads to mutual stimulation. Agriculture and industry, for instance, can generate mutual growth impulses.

One of the main problems faced by developing countries is the increasing food shortage. Frequently the reason for this is that the producer prices fixed by the government are too low. As a result, the urban population can obtain food at low prices, but at the same time the incentive for higher agricultural production is destroyed and the agricultural sector is prevented from developing a considerable demand potential for manufactured products, such as agricultural equipment, fertilizers and consumer goods, which in turn could encourage the creation of industrial jobs.

One-sided decisions should also be avoided when drafting a domestically oriented or export-led strategy. Which elements must be given particular attention depends on the situation in each developing country. A small, densely populated country without indigenous raw material resources and a big country with a large population and indigenous raw material reserves must pursue different strategies. The needs of the population will normally be an argument in favour of focusing greater attention on the

* Mr. Juergen Kuehn, Deputy Director General at the Federal Ministry of Economy, Bonn, Federal Republic of Germany.

home market. A domestically oriented strategy should not blindly copy foreign models and endeavour to achieve industrial growth through capital intensive investments, but should attempt to do so by mobilizing the unemployed and underemployed, so that the broadest possible sections of the population may be involved in the process of economic growth.

As the developing countries are normally dependent on imports for their economic development and can service their debts only via current account surpluses they must, as a matter of principle, also pursue an export-led strategy and integrate themselves into the world market with its division of labour. To achieve this they must be able to offer competitive export products, some of which require modern capital intensive industries.

Throughout, it is necessary to ensure that national and international development strategies are dove-tailed.

From this it follows that, in the search for strategies and policies for the industrial development of developing countries, it is probably impossible to develop general concepts that apply to all, or major groups of, developing countries. The situation in the various developing countries is so different - differences in territorial size, size and density of population, available resources, infrastructure - that general precepts cannot adequately take the concrete needs of each developing country into account. Therefore, it is necessary to draw up an individual strategy and policy for the economic development of each country and base them on the factor availability in the country in question. This does not rule out that during the process of development experience may be gained that should be drawn on by all.

It is the task of each individual developing country to draw up and put into practice the appropriate strategies and policies for its industrial development. This task cannot be assumed by international organizations or industrial nations. They can provide valuable help, offer advice to developing countries, and assist them with technical advice and

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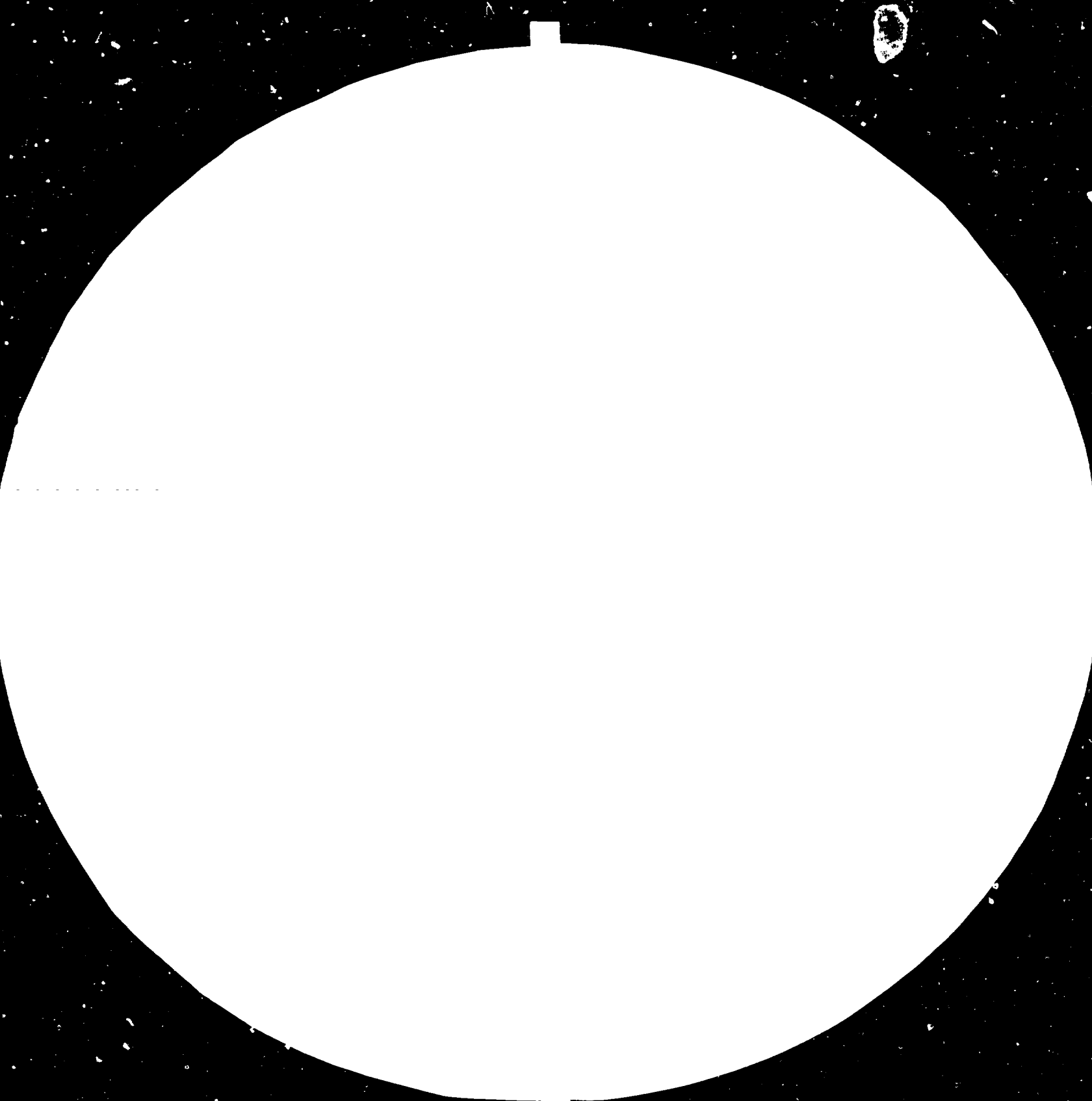
financial aid in the implementation of concrete measures. When industrial development strategies are drawn up, the following elements should be given particular consideration:

- the optimum use of indigenous resources;
- meeting basic needs;
- taking account of the rural poor and the urban poor;
- the connection between rural and industrial development;
- the expansion of transport and communications systems;
- safeguarding energy supplies;
- the training of skilled workers and managers;
- rural industrialization;
- the promotion of small and medium-size industries;
- the promotion of the production of exportable goods;
- the promotion of savings and an adequate supply of capital; and
- an increase in administrative efficiency.

When formulating their industrial development policies the developing countries should also take care to create a favourable investment environment that offers incentives not only for domestic but also for foreign investors. Cooperation can only hold the promise of success if the interests of all partners involved are accommodated. Unreasonable and one-sided regulations should be avoided and a stable political and administrative environment for such cooperation should be created and/or maintained.

Cooperation between domestic and foreign partners should be given particular encouragement. In joint ventures domestic and foreign partners can each make valuable complementary contributions. The domestic partner is familiar with the home market, is experienced in dealing with domestic workers, has ties with other companies and is acquainted with administrative practices. The foreign partner can provide scarce capital, transfer technology, contribute important technical know-how and managerial experience, help train skilled workers and managers and offer sales outlets on foreign markets. In some cases partners from other developing countries can also provide important experience.

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The Government of the Federal Republic of Germany respects the sovereign right of the developing countries to decide independently on their strategies and policies for industrial development and to implement the measures they adopted. However, it is prepared, within the limits of its financial possibilities, to provide on a mutually agreed basis technical and financial assistance to developing countries for the establishment and expansion of manufacturing enterprises.

Particularly important conditions for industrial development are a functioning transport system, a secure and reasonably priced supply of energy and the development of human resources. The latter requires an adequate food supply, health care, and training. The Federal Republic of Germany makes contributions to the development of all these sectors.

Setting up industries in developing countries also requires cooperation with private industry in the industrialized countries. Companies, and not the government, have the knowledge about production processes, company organization and sales channels. For this reason, the Federal Government applies a broad set of instruments to promote cooperation between German companies and developing countries. These instruments include:

- investment promotion agreements; such agreements have been concluded with more than 40 Third World countries. The experience gained with these agreements is positive. They provide mutual promotion and mutual protection of investment;
- capital investment guarantees; these are provided by the Federal Government to cover the political risk run by German companies that invest capital in developing countries; and
- equity participations of the Deutsche Gesellschaft für wirtschaftliche Zusammenarbeit (DEC - German Company for Economic Cooperation) designed to promote joint ventures of German companies in developing countries. Joint ventures involving small and medium-size firms are to be given particular encouragement.

The companies involved in private cooperation with developing countries are mainly large ones, while the number of small and medium-size firms is only small. This is regrettable, as small and medium-size firms offer special advantages: they are more flexible, more dynamic and better able to adapt to the situation. Moreover, a diversified economy with a large number of companies, including small ones, is less crisis prone than one that depends entirely on a few large enterprises.

Investment by small and medium-size companies in a developing country frequently entails a considerable risk. The Federal Government therefore grants preferential promotion to cooperation between small and medium-size firms and developing countries, both through a network of industrial cooperation advisers and through a scheme, under which German firms with an annual turnover of less than DM 200 million may obtain soft loans for the establishment of enterprises in developing countries.

The development banks in the Third World countries are an important instrument for the promotion of small and medium-size companies in developing countries. The Federal Republic of Germany provides them with loans which they can then pass on to small and medium-size enterprises.

If the development of the industrial sector in the developing countries is to be successful, these countries must also be able to sell their competitive products on the world markets. This assumes that the industrial nations do not only keep their markets open at the present level for imports of manufactured and semi-manufactured products from the developing countries and refrain from protectionist measures, but open their markets further as time goes on. Higher imports of manufactured goods will generate pressures to adjust industrial patterns to the changed production situation. This pressure must not be diverted by applying protectionist measures; instead, industry should face this challenge.

The necessary structural adjustments are primarily the responsibility of industry. The economic policy of the Government of the Federal Republic

of Germany is intended to facilitate and promote structural change. It aims above all to create the conditions necessary for forward looking private and public investment on a larger scale. The structural policy of the Government is intended to support the process of adjustment in industry by means of general measures to promote factor mobility and to accelerate technical progress.

The research and technology policy of the Government of the Federal Republic of Germany is intended in particular to increase international competitiveness. By promoting innovation and helping industry to develop new markets at home and abroad, the Government is increasing the adaptability of German industry and creating the conditions necessary for changes in the international division of labour with the developing countries.

The Government of the Federal Republic of Germany regularly reviews its structural policy, inter alia, with respect to its contribution to the desired change in the industrial division of labour with the developing countries and to facilitate the necessary process of adjustment in the Federal Republic of Germany. It takes the view that interventions, particularly subsidies which serve to maintain old structures, not only have an unfavourable effect on industrialization in the developing countries but also prevent the efficient deployment of production factors in the Federal Republic of Germany itself. The Government of the Federal Republic of Germany will continue in its endeavours to eliminate this type of intervention which maintains old structures.

Generally speaking, the Government of the Federal Republic of Germany believes that the effects of worldwide structural change which are equally positive for developing and industrial countries are best achieved by market forces (competition and prices) rather than by anticipatory planning between states of the industrial adjustment process. It is particularly important that world trade should be free to develop and that there should be free access to the markets of all countries for the increasing exports of the developing countries. The economies of the industrial countries must face up to the resulting pressure to make structural adjustments without resorting to measures designed to preserve old structures.

The trend in the Federal Republic's trade with the non-European developing countries illustrates that this policy of the Federal Government is successful. The value of finished products imported from the developing countries rose from US \$ 2,913 million in 1975 to US \$ 7,318 million in 1981. During the same period, not only did the share of finished products in imports from the developing countries increase, but the developing countries also raised their share in total imports of finished products noticeably. This is one of the reasons why the developing countries (excluding the OPEC countries) have achieved a constant surplus in their trade with the Federal Republic since 1977, with the exception of 1981. That is, their exports to the Federal Republic have exceeded their imports from it.

The level of future increases in exports from developing countries will depend largely on whether free trade can be maintained in the world despite the present difficult world economic situation, and whether protectionist tendencies can be prevented. The Government of the Federal Republic of Germany is therefore, internationally and within the European Community, in favour of an open multilateral trade system in the world and against protectionist measures.

SOME REQUISITES AND PROSPECTS FOR INDUSTRIAL DEVELOPMENT OF NEWLY INDEPENDENT COUNTRIES
AND THEIR COOPERATION WITH THE CMEA COUNTRIES by V.D. Popov*

The development of national industry is one of the major strategies of newly independent countries in their struggle for economic independence. Without national industry it will be difficult for newly independent countries to get rid of the one-sided and often monocultural pattern of their economy imposed by colonialism, increase labour productivity and accumulation fund, to provide their economy with a modern technological basis, to involve effectively the surplus population in social production process, and to change their role in the international labour division system. Finally, industrial development is followed by changes in the class structure of developing countries, and hence in the role and position of various classes, which is crucial to the eventual solution of the problem of the future direction of social development.

It was stressed at the meeting of experts on trade and economic cooperation between socialist and developing countries held in Bangkok (Thailand) early this year that the economic experience of the USSR and other countries of the socialist community had a great impact on the rates, trends and scope of industrial development of Asian, African and Latin American countries (Pravda, 4. IVI 83).

The rapid development of the national economies of the CMEA countries as well as the changed balance of forces in favour of socialism have created propitious conditions for further expansion of their participation in the international division of labour and in the development of various forms of cooperation with developing countries.

In the course of the development of the socialist community there emerged and is now successfully developing international division of labour of a socialist type. Within the framework of mutual cooperation on the international socialist division of labour basis new conditions reversed for the accelerated economic development of the CMEA countries, which, in turn, led to a substantial expansion of trade, economic and scientific and technological ties with developing countries.

* Professor V.D. Popov, Diplomatic Academy, Moscow, USSR.

** The rough English translation of this paper was edited by the UNIDO Secretariat.

The socialist community countries are putting into practice Lenin's prophetic words, "bolshheviks are creating a completely new type of international relations, which will enable all oppressed (nationalities) to get rid of imperialist oppression" (Lenin, 107).

A steady development of economic, scientific and technological cooperation and coordination of production is taking place. This is reflected in the growing volume of know-how transferred to newly independent countries, in the training of national specialists for these countries in science and production, in deepening the division of labour, in carrying out research and designing, in cooperation in the field of scientific and technological information, in planning economic development, and in the development of new forms of economic cooperation.

The scientific and technological revolution, which created new means of production and accelerated the progress in the field of transport, has made our planet more "compact" for optimal distribution of productive forces and their management. The perfecting of means of transportation has changed the criteria of profitability with respect to the distribution of production in regard to the advisability or expediency of its specialization and co-operation with respect to the preference given to the exploitation of certain resources etc. The revolution in the field of means of communication accelerated the process of the dissemination of news about scientific and technological achievements.

This fact is of overriding importance for the development of the economies of newly independent states in Asia, Africa and Latin America. These states are trying to make use of the favourable opportunities created by the scientific and technological revolution.

However, the full use of these opportunities is being hampered by the neocolonialist policy pursued by the West. Capitalism, characterized by relations of exploitation rapacious exploitation of natural resources, has not only preserved its nature, but is giving birth to new and more

sophisticated methods of exploitation of whole nations and countries.

"The imperialists", it was stressed at the XXVI Congress of the Communist Party of the Soviet Union, "are displeased with the fact that the newly free countries are consolidating their independence. In a thousand of ways they are trying to bind these countries to themselves in order to deal more freely with their natural riches, and to use their territory for their strategic designs. In so doing, they make extensive use of the old colonialist method of divide and rule". (XXVI Congress 1981, 14).

Progressive circles in developing countries are beginning to understand more and more clearly the incompatibility of the basic interests of their countries with those of the imperialist countries. That is why the struggle for the abolition of the unequal relations imposed by the former colonial capitalist powers and for the establishment of equitable and mutually beneficial relations is becoming more intense.

Studying the experience of the USSR and the other socialist countries, progressive political and public figures of newly liberated states are becoming aware of the fact that the most serious long-term socio-economic problems of Asian, African and Latin American countries can be solved through the creation of independent national economies on the basis of industrialization and uses of the latest achievements of the scientific and technological revolution accompanied by progressive socio-economic transformations in these countries. This will make it possible to increase labour productivity, to abolish or reduce unemployment, to increase aggregate national income and expand consumption funds, to abolish the imperialist monopolistic exploitation, and to achieve, eventual certain socio-economic progress.

Many years of inequitable economic relations with industrialized capitalist countries convinced newly liberated states that it is futile to eradicate technological economic backwardness inherited from the colonial past and to create independent national economies on the basis

of that sort of cooperation. Their own experience convinces them, that this problem can be solved only on the basis of an independent policy and closer cooperation with the socialist community - countries their allies in the struggle against imperialism for really equitable international economic relations.

The USSR and the other CMEA countries are making great efforts in transferring to all interested newly independent states their considerable experience in economic construction, scientific and technological, economic and industrial cooperation, their experience in training and effective employment of national personnel, as well as their experience in working out and carrying out plans of socio-economic development.

"No one should have doubts", was noted at the 26th CPSU Congress, "that the CPSU will continue the policy of promoting cooperation between the USSR and the newly free countries, and consolidating the alliance of world socialism and the national liberation movement".

The results of such equitable and mutually beneficial cooperation alongside with the efforts of young states to mobilize their internal resources has had a positive impact on accelerated development of the leading branch of economy - that of industry, and manufacturing industry in particular.

This accelerated industrial growth has been observed in developing countries in the years of independence. The average annual increase of industrial production in countries now reckoned among the group of developing countries was 3.7% in 1937-1948; the rates of growth almost doubled in 1949-1965, amounting to an annual average of 7.5%.

In the years 1965 - 1979 it increased to 8%, and although in the recent decade (1973 - 1982) the rate of industrial growth of the developing countries considerably decreased - in the first instance under the impact of the economic crisis of capitalism in the mid-1970s and in the early 1980s (to 5.8% in 1973-1980 and to 4.7% in 1973-1982) - even in those years it was 1.5 times higher than in industrialized

countries. By 1982 the industrial output in developing countries exceeded the corresponding index of pre-war 1938 by more than ten times.

In general, in the post-war period the rates of industrial growth considerably outstripped those of industrialized countries. But their rates were lower than in the (socialist) COMECON member countries. Initially in the 1950s this tendency became apparent in the extractive industry, but during the next decade also in the manufacturing industry of the non-socialist world.

According to the per capita data, industrial output in industrialized countries was increasing by 1% per annum from 1973-1982, whereas in the major regions of the developing countries, apart from Latin America, corresponding indices were twice as high. A new process of bridging the enormous gap between imperialist states and former colonial periphery has been initiated.

Table 1. Annual rates of industrial growth

| | aggregate industrial output | | | | industrial output per capita | | | |
|---|-----------------------------|---------------|---------------|---------------|------------------------------|---------------|---------------|---------------|
| | 1950- 1960 | 1960- 1970 | 1970- 1978 | 1978- 1982 | 1950 1960 | 1960- 1970 | 1970- 1978 | 1978- 1982 |
| developing countries | 6.8 | 7.2 | 6.5 | 2.5 | 4.6 | 4.7 | 3.9 | 0.4 |
| industrialized capitalist countries | 4.6 | 5.8 | 3.5 | 1.3 | 3.4 | 4.7 | 2.6 | 0.2 |

SOURCES: "International Life", 1979, 39 and UN, 1983.

The tendencies observed above led to a certain increase in the share of aggregate industrial output of capitalist world (from 9% in the early 1950s to approximately 15% in the late 1970s) and in net output of its manufacturing industry (from 6.9% in 1960 to over 10% in 1980).

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The increasing importance of industrial production in GNP in developing countries should also be noted. From a share of about 25% of total material production of developing countries in the early 1950s, it grew to almost 40% by the late 1970s, while the share of agricultural production decreased from 60% to 30% and less than 20% in the GNP.

In the early 1960s the ratio of industrial output per capita in the developing and industrialized countries was 1.32 for Asia, 1.28 for Africa and 1.5 for Latin America. By the mid-1970s this marked gap had considerably narrowed - to 1.23, 1.18 and 1.4 respectively, and this tendency is continuing.

One should make a reservation that the tendencies under observation can't always be traced in the course of analysis to the industrial development of a particular developing country. The point is that regions and countries are characterized by an extreme unevenness of development. In the period 1970-1976 the average annual rate in the manufacturing industry constituted only 2.5% for the thirty least developed countries, while in the rest of developing countries non-exporters of oil amounted to 8.4% and oil exporting countries to 11.6%. In recent decades the largest portion of industrial production increases in the zone of national liberation has fallen upon a dozen of states and territories (Brazil, Mexico, Argentina, India, the Republic of Korea, Hong Kong, Singapore). On the other hand, it should be taken into consideration that accelerated industrial development of liberated countries to a great extent was connected with investment policy of transnational corporations in this sector of the economy in Asian, African and Latin American countries. That is to say that in giving a final assessment of the results of industrial development in liberated countries one should distinguish between the growth of national industry proper and expansion of industrial enterprise of foreign capital, especially transnational corporations.

No matter what assessments are made of the industrial structure in developing countries and of the impact of highly developed capitalist and

socialist countries, one should always proceed from the specific conditions of the country under study and try to avoid application of abstract schemes and patterns tested under other historic, geographical and natural conditions. Thus, for example, for developing countries with rich mineral resources and large population (India, Brazil, Nigeria and others) the Soviet experience of industrialization and the creation of multi-branch production complex based on extensively developed specialization and cooperation is well justified.

At the same time, in dozens of major developing countries with limited resources and limited internal markets, the creation of full industrial complexes is predictably impossible and irrational. In many such countries special importance should be given to the ability to use the advantages of international division of labour, the participating in specialization and cooperation on a regional, as for example, in CMEA countries or on a global scale. That is why in similar cases an industrial structure of the national economy that considers the possibility and necessity of exceeding the rate of growth of a limited number of industries, for the development of countries that have favourable internal and external conditions, might prove justifiable. Cuba serves as an example of such rational cooperation with CMEA countries.

As most general trends in changes in the structure of industrial production of developing countries on the whole, for the past decade they have been connected mainly with the changes in the correlation between heavy and light industry. And here, as the meeting of experts in Bangkok pointed out, it was the experience of the USSR and other CMEA countries that exerted the decisive influence. On the whole, the growth rates of manufacturing industries in the developing countries exceeds that of light industries, as a result the share of heavy industry in the gross output of the whole manufacturing industry in developing countries increased from 33% in 1955 to 50% in 1975. And it has continued to increase - though slower - for the last seven years (1976-1982).

The tendency to accelerated development in the extractive industry as compared with the manufacturing industry in developing countries has been noted. It was connected with the speedy development of the oil and gas production, while the production of other mineral raw materials was growing at a slower rate than the production even in the light industries in developing countries. In the 1970s the rate of development of the manufacturing industry in the developing countries began for the first time to exceed the rate of development in extractive industry, thus outlining a new tendency to decrease the share of the extractive industry in the total volume of industrial output.

The correlation between large-scale and small-scale production is a peculiar problem of industrial development of developing countries. In contrast to the West, where industrial development led to the ousting of small-scale production by large-scale production, it is not possible to trace any tendency of this kind in developing countries. In most of these countries small-scale production increases both in its absolute volume of output and in the number of enterprises. No doubt, small enterprises in many ways do not meet up-to-date demands of industrial development. But socio-economic conditions in developing countries often not only justify the existence of small-scale production but make it necessary to render systematic and all-round assistance, including technological assistance from the state and international organizations. The programme for the Third Development Decade for the 1980s deems it necessary to stimulate (within the framework of the complete industrial structure) the development of labour consuming medium and small-scale industries which are effective and create wide opportunities for employment.

But this does not mean that small and medium-scale production can be regarded as the basis of industrial development of newly free countries as often ideological advocates of neocolonialism claim. The same programme for the Third Development Decade focuses on a "balanced industrial development of heavy light industry with its main branches, large, medium

and small-scale industrial units". (UN 1980, 7).

The traditional policy of Western monopolies concerning industrial development of newly free countries has for a long time been a policy of restraining the formation of an independent manufacturing industry in Asian, African and Latin American countries. With the attainment of national independence by former colonies this policy became more difficult. Therefore as was back in the 1960s, a new tendency began to take shape in Western capitalist countries - a tendency to adapt industrial development in newly free countries to the needs of the main imperialist centers and to channel the development in a way which would tie the developing countries to the economies of imperialist states even closer as the raw materials and energy crisis develops and as ecological problems, contradictions between labour and capital become more acute in the West.

Moreover, monopolies increasingly acquire additional incentives to transfer to backward countries those industries which require a lot of energy, materials, living labour and pollute the environment. As a result, a number of new industries have been formed in developing countries to serve as an appendage to the industrial potential of the West and certain enterprises were from the beginning turned into subcontractors of foreign monopolies. At present, one very often faces the situation where newly created enterprises produce intermediate products (assemblies, details, etc.) for more complex products manufactured by international monopolies. These enterprises do not possess industrial independence and finally become appendages to multinational corporations.

The realization of the new idea "to transfer industries" within the framework of the existing international economic order may easily lead to the growing expansion of TNCs in developing countries. In any case, including this idea into the North-South dialogue will inevitably bring about new Western demands concerning the creation of a favourable investment climate for private capitalist monopolies in developing countries.

Eliciting the extent of using industrial development of this or that developing country by international monopolies in their own interests under the slogan of "equal partnership" has become today a very important task of the analysis of industrial development.

In their struggle against growing expansion of foreign capital for securing conditions for independent development of their national industry, newly free countries find support in growing industrial cooperation with the socialist world. With economic and technological aid of the socialist community more than 2500 industrial projects have been built and are being built in Asia, Africa and Latin America.

Intensified cooperation of developing countries with socialist countries strengthens their position in relations with imperialist states, contributes to the strengthening of the state sector in the industry of developing countries and makes it possible to effectively use elements of planning in their economic life.

Working out long-term plans for developing countries singles out prospects, directions and scale of their industrial development, all these being decisions in the settlement of the key problem - liquidation of economic backwardness. For it is here that the roots of progress of newly liberated state lie. The impact of the world economy on the developing countries, the extent to which they will make use of the experience of socialist countries, and their cooperation with the latter determine the success of their plans.

Judging by the long-term plans (5-10 years) of socio-economic development of the countries of socialist orientation mapped out and adopted in early 1980s as well as by the contracts concluded by developing countries with CMEA countries, greater assistance will be given to them by CMEA countries in the construction of enterprises of manufacturing industry and energetics. With this aim in view it is planned to develop such forms of cooperation as production co-operation, compensatory

agreements, joint stock companies, transfer of new industrial know-how, licencing agreements, assistance of the engineering type. Moreover the conducting of joint research and development in various fields of science and technology, the setting up of joint consultation-designing bodies, and the supplying with industrial, economic and scientific and technological information is also foreseen.

The successful implementation of the Complex Programme of socialist economic integration of CMEA countries enhances the attraction of their example for developing countries and exerts an ever growing influence on them in the direction of developing integration processes, based on the principle of equality, mutual benefit and non-interference in each other's internal affairs.

The experience of co-operation between small socialist countries with large ones has demonstrated that exactly this type of integration is effective for developing countries and helps them rationally develop their own industry as well as to industrialize the whole economy on the basis of the latest achievements of the world scientific and technological progress.

The planned development of the economy of CMEA countries, the strengthening of the state sector in developing countries, and the introduction of planning into their economy, especially in the countries with socialist orientation, create a firm economic basis for co-operation between socialist and developing countries and open up favourable prospects for its broadening.

Economic co-operation between socialist and developing countries is acquiring a long-term character by means of signing bilateral and multi-lateral intergovernmental agreements. It is based on establishing and broadening ties between planning organs of CMEA countries with planning organs of developing countries.

The system of intergovernmental agreements is of special importance for newly independent states, solving complicated problems of the fundamental reshaping of backward economic structure in conditions of scientific and technological revolution, because it regulates the whole economy and external economic ties.

The broadening of economic co-operation between socialist and developing countries is dictated not only by marketing but also by global structural changes in the world economy. It is first of all related to the problems of raw materials, fuel and power, and food, as they have a long-term nature. General economic problems, caused by the deepening and sharpening of the economic crisis of capitalist countries have aggravated lately. It stimulated the interest of developing states in cooperation with socialist countries.

The comparison of the experience of capitalist and COMECON countries in solving such major international economic problems as the problem of raw materials, power, foreign currency, in leveling the development of cooperating countries and in overcoming economic backwardness of countries in general as well as of their separate regions convinces leaders of liberated countries of the advantages of production cooperation with socialist countries.

Marx' prophetic words, that not the capital but the working class in the course of class struggle will come to "the harmonious national and international coordination of public forms of productivity" (Marx and Engels, 553) are becoming true.

Under the conditions of composite socialist economic intergration, developing on the basis of public ownership, in combination of interests of separate countries as well as of interests of the whole socialist community, sharp contradictions which separate the interests of some countries and their organizations and corporations under capitalism do not in general exist.

That is why newly liberated countries, searching for the alternatives of cooperation with monopolies of capitalist countries, more often put forward production and science and technical co-operation with COMECON countries as a perspective form.

The concurrence of long-term strategic arms in their anti-imperialist, anti-monopolist and anti-colonial struggle form the basis of the growing economic cooperation between socialist and developing countries. Exactly this type of co-operation contributes to the strengthening of political independence and achievement of economic independence of young states.

However when characterizing economic co-operation of socialist and developing countries one should take into consideration some negative factors, such as instability of political and economic situation in many developing countries, unsteady economic development of some countries and regions. It has a negative influence on mutual relations and slows down the development of the objective tendency to the internationalization of the economic life.

A number of objective factors caused by the differences in political and socio-economic structures of the two groups of countries influences the development of economic co-operation of socialist and developing countries.

The insufficiency of a number of exported resources of COMECON countries also exercises restraining influence on the development of economic cooperation between socialist and developing countries. Successful realization of perspective plans of socialist countries for the 1980s and the implementation of their long-term objective programmes of development will without any doubt contribute to the increasing of their export potential and broadening their economic co-operation with developing countries.

The further growth and strengthening of the might of the USSR and other COMECON countries and the all-round assistance and support rendered to developing countries more and more limit the possibilities for the expansion of reactionary imperialist forces and the possibility of restarvation or preservation in this or that form of colonialist and neo-colonialist rule. The assistance and support of CMEA countries thus promote the further development of struggle of newly independent states for the creation of their independent national economy.

The establishment and development of broad economic ties with the USSR and other CMEA countries exercises a stabilizing influence on the economy of developing states. For CMEA countries the development of economic co-operation with developing states is one of the ways to deepen their production specialization and co-operation. It also contributes to the further growth of their productive forces and to the more complete use of the advantages of the international division of labour. Thus the co-operation between socialist and developing countries is becoming a vital factor in the acceleration of their industrial and socio-economic rates of development.

The principled policy of CMEA countries in the field of economic and scientific and technical co-operation with newly born states was once again confirmed by the decision of the XXXVI Session of the CMEA in 1982. The communique, signed at the Session, underlined the importance of strengthening co-operation in the field of economy, science and technology with the countries orientating towards the socialist way of development and trying to attain closer contacts with CMEA as well as with all developing countries. Speaking at the XXXVI CMEA Session, N. Tikhonov, Chairman of the Council of Ministers of the USSR, stressed that special attention should be drawn to the deepening of multi-lateral cooperation with the countries which had chosen the socialist way of development. It is necessary to promote the drawing of interested countries into the activity of CMEA with the aim of their gradual acquaintance with the work and strengthening of their economic ties with the socialist community.

The cooperation with countries of socialist orientation is directed at rendering support of these countries' efforts to eliminate positions of imperialist monopolies and provide the people's state with commanding positions in the economy, to go over to the planned development of productive forces, and to strengthen the state machinery with qualified national personnel.

Economic, scientific and technological assistance of CMEA countries, their practical actions aimed at strengthening independence of developing countries acquire special significance now that the USA and their NATO and other-aggressive-blocks' allies intensify economic expansion to newly liberated countries.

The fruitful solution of problems of national development and economic cooperation could be speeded up and facilitated as a result of the joint struggle of socialist and developing countries against the arms race imposed by the USA and other imperialist countries, for effective measures in the sphere of disarmament, for stable peace and security of the peoples on our planet.

Brief conclusions and proposals

- Industrial production in newly liberated countries is developing in conditions and under the impact of confrontation of two world social systems;
- The exploiter capitalist classes show frantic resistance to leaving the historic arena. Their attempts to prolong the existence of the capitalist way of production are seen in particular, in imposing it upon developing countries as neo-colonialism;
- Neo-colonialism is a new form of exploitation and dependence, corresponding to the qualitative changes which are taking place in the capitalist way of production;
- Transnational corporations which have become the most important factor in world capitalist economy, require such conditions under which it would be possible to turn the world into one large "enterprise" when developing countries would play the role of branches;

- Developing countries could solve their common national problem - the elimination of economic backwardness - when capitalism oriented, only by increased economic dependence by privation and suffering of the majority of the population;
- As far as the industrial production is concerned, the developing countries are industrializing and the national liberation movements are growing and the capitalist system has a tendency to a further aggravation of contradictions between the industrialized capitalist countries and developing countries. These contradictions will inevitably increase the number of socialist-oriented countries;
- The growth of the economic power of the political and ideological impact of world socialism as well as the interaction of all forces of international revolutionary process to a great extent contribute to strengthening this trend and translating the socialist perspective in developing countries into life;
- Overcoming the inertia of the old inequitable economic ties formed in the colonial epoch countries of Asia, Africa and Latin America are actively developing new economic, scientific and technological ties. They intensively cooperate with each other and with socialist countries. This course was approved by developing countries at the conference "South-South" held in Delhi in February 1982 as well as at the summit conference of non-aligned countries in Delhi in March 1983;
- Delegates to both Delhi conferences spoke in favour of a speedy introduction of a just New International Economic Order (NIEO). At the same time they pointed out the danger of imperialist attempts to try and impose its norms and principles, its plans to modernize world economic ties during the talks on the NIEO. Developing countries should do their utmost to prevent it;

- The analysis of industrial production in the 1970s and the early 1980s shows that the trend towards integration and regionalization gradually prevails over isolationism and autarchy, which objectively leads to erosion of world economic ties and will create various opportunities for their democratization ;
- The introduction of the NIEO would step by step restrict the sphere of uncontrolled domination of imperialism, reduce its reserves, weaken it, strengthen solidarity of all anti-imperialist forces, create conditions for a speedy development of industry and structural reshaping of economy of newly independent states on a new industrial progressive basis;
- Certain results of industrialization of developing countries are discernible even today and they will be more tangible in the future. It is along this road that many developing countries are making the greatest progress;
- However, the process of industrialization of developing countries encounters serious internal and external obstacles. It is the opposition of internal reactionary forces to progressive socio-economic transformations in developing countries as well as the opposition of external forces to restoration of national sovereignty over natural resources and their exploitation in the national interests of developing countries. Western diplomacy opposes effective control on the part of developing countries over activities of private foreign capital and transnational corporations;
- The results of the 1970s and the early 1980s revealed considerable irregularities in the process of industrialization among various groups of developing countries. Some of them increased their growth rates, others especially the least developed, decreased their growth rates or stabilized them at very low levels;

- In both groups of countries social problems have become more acute and the number of the poor, starving and unemployed is on the rise. The problem of internal accumulation has been aggravated external conditions for getting loans and credits so as to pay the ever increasing state debt and to cover the deficit of the balance of payments are worsening,
- Under the influence of internal and external factors and certain mistakes, many developing countries change their industrial policy. Strategic goals are often replaced by tactical ones, and less attention is paid to long-range goals of industrial development and industrialization; and
- The loss of a long-term perspective and of the ultimate goals of industrial development may considerably slow down the solution of the main problem of developing countries, namely elimination of their economic backwardness and putting an end to their dependence on imperialism.

It is advisable that the solution to the problem of industrialization of any one country - probably it is unrealistic to set such a goal for all countries - should be sought along the following lines:

- enhanced role of state enterprise;
- economically sound protectionism of developing national industry;
- use of tools of current and long-term planning and programming;
- priority of industry over agriculture;
- more active participation of developing countries in international industrial cooperation, above all with the CMEA countries, which are natural allies of developing countries in their struggle for establishing equitable and mutually advantageous relations; and
- optimal combination of national and foreign technology with a view to creating national scientific-technological basis and efficient highly skilled national personnel.

The choice of main criteria of industrialization will play an important role in determining the strategy and policy of industrialization of developing countries at UNIDO IV. Taking into account the importance of external factors (especially such as the structural reshaping of world economy, provision of energy and raw materials, adjustment to other world economic processes), priority should be given to internal criteria in accordance with the concepts of national and collective self-reliance.

Priority to external criteria in conditions of the TNC domination in world capitalist economy would mean dooming developing countries to a dependent, trying-to-catch-up, imitating type of industrialization, subordinated to the interests of industrially developed capitalist countries and their transnational corporations.

The quantitative indices of industrialization, determined by the Lima Declaration (a 25% share of developing countries in world industrial production in the year of 2000) and the Arusha Declaration (30% of world export of manufactured goods) should be supplemented with some qualitative characteristics such as the complex development of national industry on a modern scientific-technological basis, an increased volume of industrial production per capita, higher material standard of the working people, the all-round development of agricultural industry and the solution on this basis of the problem of food provision, the search for rational ways of developing small, medium and large-scale production and the optimal balance between them, and the establishment of the balance between capital-consuming and labour-consuming processes.

The fact that the industrial development of developing countries is affected by the impact of two socio-economic systems has a certain bearing on the policy and strategy of industrialization of newly independent states and leads to the use of entirely different forms and methods of industrialization in these countries.

As is known the socialist method of industrialization is based on public ownership of means of production and planned economy, whereas, the capitalist method is based on private property and uncontrolled market regulation. The future belongs to the first method. The second method, as shown by the experience of many developing countries, has no prospects.

In the past, a lot of conceptions have emerged dealing with economic development including industrial development and the priorities in the development of separate industries as well as in proportion between them. These conceptions reflect only separate stages of development, or the requirements of separate countries or even separate groups of the population in those countries, and it would be reasonable to unite them with the long-term policy and strategy of industrialization, giving preference to the latter as an objective beacon to which all other conceptions must be oriented.

Without a comprehensive approach to the policy and strategy of industrialization of developing countries, the continuity of the conceptions of separate stages of development may be broken; final objectives will be lost sight of; main resources will be channeled, as before, into the industries and spheres, meeting the requirements and interests of foreign capital; and local executives will be deprived of the opportunity to orient the process of industrial development to the major long-run national interests.

The experience of socialist and a number of developing countries has shown that a comprehensive approach to the policy and strategy of the industrialization of the developing countries gives an opportunity to put the process of a rapid industrial development on a national basis and ensure more favourable conditions for the participation of developing countries in international trade and international industrial specialization and co-operation.

The experience of the CMEA countries' co-operation with the developing countries has shown that the most effective solution to the problem of industrialization is the construction of key enterprises around which a production-territorial complex is formed later on. Such

a complex should consist of a number of interrelated production processes paralleled in due time with the development of service enterprises, suppliers of raw materials and separate parts and units within the framework of cooperation, internal and external consumers of the production of an industrial complex.

Production-territorial complexes are of value because they:

- stimulate the development of specialization and cooperation in developing countries and among developing and other countries, especially within the framework of integration of developing countries;
- give an opportunity to master and use the world achievements in new technique and technology;
- promote rapid development of their own scientific and technological research;
- speed up the elimination of one-sided industrial development and hypertrophy of separate productions, and of one-sided specialization in the international division of labour; and
- stimulate a large-scale training of local personnel of various kinds of qualification and specialization.

Mastering and effectively using the achievements of world science and technology is of special interest for developing countries. The experience of co-operation between developing countries and the CMEA countries has shown that the strategy of co-operation is the most effective when it is based on national combination of the use of the new world technological and scientific achievements and developing countries' own research. In the long run it will ensure the independent development of both industrial and scientific and technological potential and equal participation of the latter in the international division of labour and in international scientific and technological research.

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It should be noted in this connection that the imported sophisticated equipment and the related scientific and technological knowledge do not produce the desired results and remain a foreign body in the developing economy unless their application is followed by a mass-scale education and training of local specialists and the establishment of a diversified scientific and technical infrastructure comprising a network of general education and vocational schools, secondary special and higher education facilities, experimental research and testing laboratories, scientific and research institutions, designing bureaus, scientific information centres. It also demands the elaboration of legislative norms and the creation of state bodies that would facilitate the normal functioning of the new sophisticated equipment and the organization of a dependable material and technical supply through a centralized current and long-term planning programming.

Very often those branches of the economy, the development of which is vitally important for national revival and overcoming the disintegration of an developing economy are outside the bounds of technological progress. Moreover, the gains of technological progress enrich relatively limited strata of the population; the differentiation of profits sharing is thus intensified and possibilities of securing optimal employment at a given investment level are not made use of.

The setting up of a genuinely national independent economy is a time-consuming process, calling for utmost mobilization of resources of the whole nation. An analysis of the economic undertakings of the young states shows that the most rational and effective solution of the problem is possible only within the context of a comprehensively developed state sector and a planning appliance for it is only on the basis of a long-term economic policy rooted in a firm material and technical foundation of the public rather than private sector that the use and application of the imported scientific and technological experience and a creation of a national scientific and production potential are possible.

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