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industry and development

Special issue for the Third General Conference of UNIDO

INDUSTRY AND DEVELOPMENT No. 3

Special issue for the Third General Conference of UNIDO

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna

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UNITED NATIONS
New York, 1979

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AIMS AND SCOPE OF *INDUSTRY AND DEVELOPMENT*

The journal *Industry and Development* is published at least twice a year in English, French and Spanish, as an integral part of the work programme of the International Centre for Industrial Studies (ICIS) of UNIDO. The chief responsibility for the selection of articles and book reviews making up each issue is rotated among the members of a Supervisory Panel composed of the following ICIS staff members: J. Cody, A. de Faria, A. Feraldis, S. Nanjundan and V. Richardson. For this issue, the supervisor was A. de Faria.

Industry and Development attempts to provide a communication link between practitioners and theorists working on economic and related aspects of the process of industrialization. The focus of the journal is on applied analytical research in areas emphasized in the Lima Declaration and Plan of Action on Industrial Development and Co-operation, such as international industrial co-operation and consultations; national, sectoral and project planning and policy formulation; economic aspects of technology choice, transfer and development; the role of the transnational corporations; rural and small-scale industrialization; and income distribution and employment.

The Supervisory Panel welcomes the opinions and comments of its readers.

ID/SER.M/3

UNITED NATIONS PUBLICATION

Sales No. E.79.II.B.2

Price: \$US 5.00

(or equivalent in other currencies)

Preface

The purpose of this special issue of *Industry and Development* is to draw the attention of our readers to some of the key issues in the industrialization of the third world. These issues will be the subject of debate at the forthcoming Third General Conference of UNIDO, which will take place at New Delhi from 21 January to 8 February 1980.

Since 1975, when the Second General Conference was held in Lima, our activities have focused on four main areas which were identified at the Conference as suitable for helping all sides concerned: measures of national scope; co-operation between developed and developing countries; co-operation between developing countries; and increase of technical assistance to the developing countries.

Where do we stand four years after the Lima Conference? Although nothing can be stated in a precise and comprehensive manner, monitoring exercises being conducted at UNIDO for the preparation of basic documentation for the Third General Conference would seem to indicate that very little has been achieved. The publication of this special issue of *Industry and Development* gives me an occasion to make a few remarks on the developments which have taken place since 1975 and the problems faced by third world countries on the road to rapid industrialization.

The performance of developing countries, whose average industrial growth has been of the order of 6 per cent per annum since 1973, would fit into the 25 per cent Lima time-scale only if the industrialized countries grow at an average of less than 1 per cent per year. This is of course an unacceptable prospect for the developed as well as for the developing countries if the problem of mass poverty is to be properly tackled. Unfortunately, given the energy dimension in industry, it seems that very little more can be suggested. Indeed, the maximum we could propose for consideration would be a scenario where industrial growth for developed and developing countries would be 1.8 and 7.2 per cent respectively. However, it should be noted and borne in mind that such a scenario would necessitate a 2.6 per cent world growth in oil consumption, bringing about the exhaustion of both known and expected oil reserves by the year 2000. Wise and intelligent management of oil reserves is therefore urgently needed.

Other factors of no less importance also impede the industrialization efforts of the developing countries. Technology is one of them, for it is obvious that industrialization cannot be achieved without modern industrial technology and that industrialization is important if the world's increasing basic needs are to be met. We know that it took the industrialized countries many decades to bring the mechanization process to an impressive level of sophistication. The developing countries, however, must urgently acquire the necessary knowledge, but this cannot of course be done overnight by signing a contract on technology transfer.

The question therefore arises as to how the necessary knowledge and technology are to be transferred. Costs, conditions of transfer, suitability, performance, time

limits for ensuring the proper absorption of the technology involved etc. are all important aspects and have far-reaching implications. In this connection, much has been said and written about transnational corporations and their abuses. As they are almost the only suppliers of technology, the temptation is great for them to impose their rules, regardless of their disruptive effects on the socio-economic and cultural environment of the developing countries. These rules encompass the terms and conditions of technology transfer, pricing policy etc., and reflect a reluctance to assist in the marketing of new products designed for export. Within the United Nations system, UNIDO is trying to induce transnational corporations to adopt new and more reasonable attitudes, particularly through the system of continuing consultations, which is briefly described in this special issue. It is our view that Governments of developed countries could also bring their influence to bear for the same purpose, since they have the power to regulate activities in the name of public interest. We are convinced that if such initiatives are taken, they will contribute immensely to restoring confidence between developed and developing countries.

Another difficulty impeding industrialization is the complex problem of financial resources. We ought to answer a simple question. How can the developing countries develop satisfactorily if the financial transfer continues to be from South to North? How can they buy from the developed countries what they need, particularly plant and equipment, if the balance of trade in manufactured goods is maintained at a 1:5 ratio to their detriment? If their few manufactured items are barred from access to the industrialized countries, does this mean that they are expected to continue to pay for their imports with whatever raw materials they may have, thereby perpetuating the relations established during the colonial era? It would seem less ridiculous to replace all the schemes for industrial financing by a fairer price relationship for goods exchanged between developed and developing countries. Once this is achieved, then assistance to developing countries—I mean genuine assistance—could become an effort of global solidarity involving countries of both North and South, in favour of countries which have evidently little to offer even for meeting their most essential needs.

As for investment opportunities in developing countries, the UNIDO system of consultations is endeavouring to reach a consensus on what should be done at the international level in a variety of industrial sectors. Fertilizers, iron and steel, agro-based industries, petrochemicals, pharmaceuticals and capital goods are some of the sectors considered. International co-operation also requires improved terms and conditions for industrial financing, for the training of industrial manpower, and for the conclusion of industrial collaboration arrangements in general. Investments worth many billions of dollars in industrial infrastructure, industrial plants and services have been identified for common endeavours, provided that new rules of the game are introduced. New terms and conditions for contracts, mutual guarantees for both foreign investors and host countries, and improved mechanisms for the settlement of disputes are examples of the important issues involved.

Unfortunately, no easy solutions are really in sight, nor will any be found, unless and until there is a better and deeper understanding of the problems confronting all nations. The establishment of a new international economic order is precisely conditional upon such understanding, and upon the fairer international partnership which it would entail. The activities of UNIDO are all geared to such an objective, to such a hope.

I take this opportunity to thank Professor Hans Singer for playing the key role in the preparation of this special issue by contacting potential authors, reviewing the contributions and writing the introduction. My thanks also go to the other contributors to this issue who agreed to express their views on some of the subjects to be discussed at the forthcoming Third General Conference of UNIDO.

Abd-El Rahman Khane
Executive Director
United Nations Industrial Development Organization

Vienna, March 1979

EXPLANATORY NOTES

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

The term "billion" signifies a thousand million.

The use of a hyphen between dates (e.g. 1960-1964) indicates the full period involved, including the beginning and end years.

The following abbreviations have been used in this publication:

CMEA	Council for Mutual Economic Assistance
GSP	Generalized system of preferences
ISIC	International Standard Industrial Classification
MVA	Manufactured value added
SITC	Standard International Trade Classification
TNC	Transnational corporation
VER	Voluntary export restraint

Introduction to this special issue

H. W. Singer*

The Lima Declaration and Plan of Action on Industrial Development and Co-operation (ID/CONF.3/31, chap. IV)¹ and the Lima target on which it is focused are part of the broader discussions on a new international economic order. One of the major objectives of these discussions is to reduce the inequalities—so sharp as to be widely regarded as iniquitous—in the present distribution of income, wealth and power between the different countries of the world. The unequal distribution of industrial power is an important part of those inequalities or inequities. At the time of the Second General Conference of UNIDO held at Lima in 1975, 93 per cent of world industrial power, as measured by the volume of industrial production, was concentrated in industrial countries having less than one third of the world's population, leaving only 7 per cent in the third world. To change this distribution from 93:7 to 75:25 by the year 2000 was agreed at Lima to be the minimum needed to reduce the inequalities to more tolerable proportions.

One can debate the precise details of this specific target. Perhaps the data on industrial production omit a good deal of small-scale production and rural processing in developing countries, hence their real share at the time of the Lima Conference may conceivably have been 8 per cent, or even 10 per cent, rather than 7 per cent. One can debate whether the target should not have been in the form of actual growth rates of industrial production by the developing countries rather than—or in addition to—a target in terms of shares of world production. In some of the preparatory stages, for example at the Asian Preparatory Meeting, this was in fact done; the share of the Asian region in world production was targeted to rise, while at the same time the actual growth rate of industrial production was supposed to be at least 10 per cent per annum. As it is, the Lima target, being in the form of a share in production, does not say anything directly about the growth rate of industrial production in developing countries. Instead, it amounts to fixing a differential growth rate between industrial and developing countries, with the differential, given the 7 per cent base and the 25 per cent target, amounting in fact to 5.2 per cent per annum *more* growth in the third world than in the industrial countries. That is a very considerable differential, and it must be clear to everybody that it can only be achieved in the context of a general change in the structural relations in the world economy. Thus we may say that while the Lima target is an important part of the proposed new international economic order, the achievement of many other parts of the new international economic order is an essential precondition for the achievement of the Lima target.

There is one factor, however, which will make the achievement of the target somewhat easier, and this is forcefully pointed out in Jan Tinbergen's contribution. In the industrial countries, as—or perhaps one should say, if—GNP *per capita* continues to rise, according to the "law of Fourastié", the share of industrial

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¹ Transmitted to the General Assembly by a note by the Secretary-General (A/10112). Also available as UNIDO public information pamphlet PI/38.

production in GNP will fall, while in the developing countries, on the other hand, as GNP *per capita* increases the share of industrial production in GNP will rise. There may be some doubt about the extent to which GNP will shift from industry to services in the industrial countries as they grow even richer, since we are literally moving into unknown territory here; but we can be fully confident about the other part of the law of Fourastié, i.e. the rising share of industrial output in the poorer countries as they grow less poor. Hence the differential in growth between developing and industrial countries required for the implementation of the Lima target is less for GNP growth than for industrial growth. For industrial growth, as already stated, the required differential is 5.2 per cent. But for GNP growth it would be more of the order of 3 per cent. Combining such a differential of 3 per cent with the maintenance of at least moderate growth in the industrial countries will also not be easy, but it is surely not outside the realm of possibility. The original plans for the Second United Nations Development Decade were based on a differential of 1 to 2 per cent. In actual fact, the middle-income countries among the developing countries (those with a *per capita* income of over \$250 in 1976) showed a differential growth of GNP of 1 per cent over that of the industrialized countries during the period 1960-1970, which widened to 2.8 per cent during the period 1970-1976.² If this differential, admittedly largely accounted for by the relative stagnation in the industrial countries, could be maintained and expanded from the middle-income countries covered by the World Bank statistics to embrace also the low-income countries, then with the help of the Fourastié effect the Lima target would be within sight.

The formulation of the Lima target as a share in world production, and thus implicitly as a differential growth rate of industrial production in the third world as against industrial countries, raises the obvious objection that it can be realized at quite different levels of world production and industrial growth. Clearly it was the intention of the authors of the Lima Declaration and Plan of Action, which is concerned with growth and structural change in the world economy, that the reparation of inequities in international income distribution between countries must go hand in hand with the restoration of world international order so that we can return, in a different structural setting, to the kind of progress which the industrial countries were making in the 1950s and 1960s. Viewed in this context, the Lima target presupposes growth rates of industrial output in the third world of at least 8 to 9 per cent per annum. Such possible scenarios are explored by the author in the second contribution to this issue.

The quantitative nature of the target may also obscure the key importance of the correct pattern of industrialization, as distinct from its mere volume. Along with the inequities of distribution of income, power and wealth between different countries and the restoration of a workable new international economic system with satisfactory growth and full employment, there stands the third major objective of the new international economic order, the reduction of poverty. A group of eminent economists who recently met at UNIDO rightly declared that an objective such as the Lima 25 per cent target appears meaningless if it lacks qualitative content and overlooks human welfare, equity or the organizational and social changes required to achieve economic progress. Once again, the Lima Declaration and Plan of Action goes

²Data based on *World Development Report 1978* (Washington, D.C., World Bank, August 1978), pp. 78-79.

a long way to rectify any excessive emphasis on quantity and neglect of quality, by emphasis on employment, linkage with agriculture and social justice.

The author analyses some of the employment implications of the Lima target and its relationship to local agriculture. In the third article, C. Vaitos also brings this qualitative element more directly into the picture, although in a different way. Vaitos specifically reminds us of the important differences between a pattern of industrialization entirely or predominantly based on the activities of transnational corporations in developing countries as against one largely based on indigenous technology and entrepreneurship. The presumption must be that the second type of industrialization comes closer in qualitative terms to the intentions expressed in the Lima consensus, although the capacities of transnational corporations can serve as a very important stepping-stone towards the real goal of the Lima target. Another way of putting the same point would be that the true target in the total context of the Lima Declaration and Plan of Action should not be interpreted as a purely geographical concept, i.e. 25 per cent of world industrial production to be geographically located within the boundaries of developing countries. Rather, its meaning must be that 25 per cent of world production, in addition to being geographically located in developing countries, must also be an integral part of their national economies and serve as foundations for continued and sustained industrial and general economic growth.

The article by J. M. Bhagwati, which forms the fourth contribution, reminds us of the international context in which the Lima target will have to be implemented. He draws our attention to the indisputable fact of increased protectionism since the Lima target was first formulated and the equally indisputable threat which this represents to its possible implementation. The impetus for trade liberalization, for example from the Kennedy and Tokyo "rounds" and through the establishment of preferential systems, has been faltering under the impact of economic difficulties which have afflicted the industrial countries in the last few years. At the same time, any further progress in general liberalization will have a double-edged effect on the developing countries, reducing the value of their preferences unless the idea of negative tariffs, i.e. input subsidies, is countenanced, as is indirectly implied by the Singer proposal discussed by Bhagwati. His article, probably realistically, accepts the growing force of protectionism as an inescapable fact of life, at least as long as the industrial countries suffer from unemployment and stagflation. Moreover, the new protectionism often appears in forms which make its effective control or multilateral regulation very difficult, even appearing in the guise of voluntary restraint or multilateral agreements. What, then, can be done to reconcile the new protectionism with the equally inescapable claim for developing countries for the right to develop and to industrialize? Bhagwati's answer is financial compensation from Governments of industrial countries to the Governments of developing countries whose imports have been restricted. This presumably would give the Governments of developing countries the option to use these compensatory funds to finance industrial development on a different basis, either with more emphasis on the domestic market or on exports to other developing countries in a framework of expanded collective self-reliance within the third world, or indeed exports to other non-restricting industrial countries. These of course are only options: the Government might equally decide to use the compensatory money payments for importing food or developing agriculture, or improving health and education etc. The former (directly industrial) use of the payments would presumably help in achieving the Lima target in the face

of protectionism by the industrial countries; the latter option would not directly help to achieve the Lima target, although it could do so indirectly, and might in any case be defensible on other grounds.

The proposal is put forward as a second-best solution on the assumption that we have to accept protectionism in industrial countries as a fact of life. Given that assumption, clearly protectionism with compensation is preferable to protectionism without compensation. This leaves out the broader question whether achievement of the Lima target based on exports to industrial countries is preferable to industrialization based on domestic markets or on intensified intra-group trade among the developing countries. In any case, these three possibilities are functionally related to each other and should not be considered as alternatives. The successful implementation of the Lima target would probably require simultaneous progress along all three lines. The overall rate of expansion of exports of manufactures from developing to developed countries during the period 1960-1975 has been of an order of magnitude (12.3 per cent per annum) sufficient to give powerful impetus to progress towards the Lima target, if only the other two trends could be equally strong. The differential in export growth—3.5 per cent in favour of developing countries (12.3 per cent as against 8.8 per cent)—also is not far below the 5.2 per cent differential required for the achievement of the Lima target.

The next contribution, by Béla Kádár, is particularly important since it represents a viewpoint from one of the countries belonging to the Council for Mutual Economic Assistance (CMEA), and deals to some extent with their relations with developing countries—a subject often neglected in the current discussions. Béla Kádár's article is notable for a degree of optimism that a better international division of labour will emerge in the future, involving also the division of labour between the CMEA and developing countries. It is interesting to note that he considers such a division of labour "vital" for smaller CMEA countries such as Hungary. He also wishes such a new division of labour to be in an international framework as well as in one of bilateral co-operation and to be accompanied by adjustment or "structural" policies. In all these respects there is a fairly complete parallelism between the position of the market economies and that of the centrally-planned economies. Perhaps the most noteworthy aspect of his contribution is the argument, which the present author finds quite convincing, that in the developing countries export orientation or economic liberalization does not necessarily indicate a reduced role for the State. Béla Kádár argues the exact opposite. Western economists have tended too unthinkingly to equate import-substituting industrialization with control, planning etc., whereas export-oriented industrialization is associated with market freedom, *laissez-faire* etc. His article should give us second thoughts about this unthinking association, and on these as well as on other grounds, should be given careful consideration.

The sixth contribution, provided by the secretariat of UNIDO and based on its redeployment study, deals with problems of adjustment policy on the part of industrial countries. Without such adjustment policies, which can be shown also to be in the real interest of the industrial countries themselves, there can be no true international industrial co-operation, and the achievement of the Lima target in a context of world economic expansion would become much more difficult. This contribution therefore deals with a subject of the utmost importance. Its connection with the Bhagwati article is clear. At present, adjustment policies impose additional

expenditures on the ministers of finance in industrial countries at a time when the last thing they wish to do is to add to inflationary pressures through increased budget deficits or to add to stagnation by increased taxation, whereas protection costs them nothing in directly financial terms and may even yield extra revenue. This is an unhappy situation involving a divergence between the apparent financial costs and benefits of adjustment and protection, on the one hand, and the true social and economic costs of these two options, on the other hand. The Bhagwati proposal would remove the divergence by making protection costly even in terms of the budget account. The hope is that this will act as a deterrent and swing the balance back towards adjustment. There still remains the problem of making sure that the adjustment is of a truly positive character moving forward towards a new international division of labour based on true comparative advantages, whereas adjustment of a negative or purely defensive nature could be no more than protectionism in yet another guise. The willingness to shape adjustment policies in a positive and forward-looking direction will in turn depend on re-creating in the industrial countries also an atmosphere of confidence and progress, yet another example of the close interconnection between the restoration of a working international order and the reduction of inequities and inequalities between countries.

There are elements in the present international system, including international sub-contracting and off-shore assembly provisions, which could with vision and effort be developed into genuine approaches towards positive redeployment. So could the global planning and redeployment policies of transnational corporations, once benefits are more equally distributed. It is no accident that the transnational corporations have in fact "fulfilled" the Lima target, in the sense that about 25 per cent of their total production is located in developing countries.

Redeployment only forms a part of the sixth contribution. Apart from reminding us of a number of areas, such as industrial financing and technology, vital for the achievement of the Lima target but not specifically discussed in this issue, the paper describes the UNIDO system of consultations. This was set up in 1977, in accordance with the Lima Declaration and Plan of Action. Here we have a stepping-stone—at the industry and sector level—towards that more rational global distribution of industry which most expert opinion has seen as an essential precondition and a natural counterpart of the Lima target. In this connection it is especially appropriate to recall the words of Jan Tinbergen, who on a different occasion has written:

"The Declaration and Plan, endorsed by the Seventh Special Session of the United Nations General Assembly, call for the expansion of the share of Third World countries in world industrial production from 7 per cent as at present to 25 per cent by the year 2000. To attain this and related objectives there is a need for a new framework of rules and institutions to regulate and encourage industrialization, trade and development. This is required to eliminate patterns and practices which have evolved essentially on the basis of bilateral and group interests, many of which are incompatible with the attainment of an equitable international economic and social order . . . This may effectively lead to the establishment through agreements of an *international industrialization strategy* comprising a set of world programmes aimed especially and whenever possible at

the regional level. Such programmes would assist nations in formulating consistent industrialization policies and could serve as a basis for negotiations with other parties, especially transnational enterprises."³

As the UNIDO contribution makes clear, the consultations are not only "vertically" extending to include more and more industrial sectors, but also "horizontally" to include questions of manpower training and industrial financing. Considering the dependence of healthy industrialization upon a productive and efficient rural and agricultural sector, emphasized by economic analysis as the need for balanced growth, the specific inclusion of agro-based industries in addition to fertilizers, leather, vegetable oils, petrochemicals, iron and steel, and agricultural machinery is especially significant as a beginning of a global planning process for the location of industries and a new international division of labour.

A second contribution from the secretariat of UNIDO completes this special issue by giving us details of a series of studies undertaken by UNIDO in association with research institutes in some of the more industrialized countries on questions relating to adjustment policies in those countries. In this article, as in most others on the subject, the dangers of a protectionist reaction in the industrial countries are taken very seriously. The research is designed to suggest to the industrialized countries that there are other and better alternatives to protectionism, and that in any case protectionism specifically directed against the developing countries misses the mark, apart from being harmful and immoral. In this respect, the article will have the support of the vast majority of those in the industrial countries who have analysed or thought about these problems. It is hoped that many readers will wish to study the results of these UNIDO studies.

³J. Tinbergen, co-ordinator, *Reshaping the International Order: A Report to the Club of Rome*, Antony J. Dolman, ed. (New York, Dutton, 1976).

The target of twenty-five per cent for the third world

Jan Tinbergen

The Lima target

The Second General Conference of UNIDO held at Lima in 1975 set the target of increasing the developing countries' share of total industrial production to 25 per cent of world industrial added value by the year 2000. Since the level reached in 1970 was only 7 per cent, the target seemed ambitious, and even utopian, to many observers. This view was based on estimates of the annual rate of growth of industrial production in the developing and the developed countries between now and the year 2000. It can be calculated from the figures given that the annual rate of growth of industry in the developing countries must be 5.2 per cent higher than in the industrialized countries. At first sight, this seems a difficult objective to achieve. Moreover, the total industrialization effort, seen in this light, is not independent of the objectives that the industrialized countries set themselves in this regard, since it is the differential growth rate which must be 5.2 per cent. However, some of those who have doubts about the possibility of achieving the 25 per cent figure by the year 2000 are unaware of a phenomenon noted by Jean Fourastié.

The Fourastié effect

From the point of view of the subject of this essay, Jean Fourastié's interesting contribution (Fourastié [1], [2], [3]) has been to follow Allen Fisher (quoted in [3], p. 85) in the distinction between primary, secondary and tertiary sectors in the economy, and to ask what will be the contribution of each to the national product around the end of the twentieth century? He has concluded that the secondary sector—mainly manufacturing industry—will evolve in the same way as the primary—agricultural—sector, and will decline until it accounts for only a very small portion of the national product, noting (Fourastié [3], p. 89) that around 1800 the primary sector produced three-quarters of the national product, a figure which had fallen to only 7 per cent by 1970.

This paper will investigate the extent to which the contribution of manufacturing industry (the most important component in the secondary sector) is growing smaller. This phenomenon, the existence of which would appear confirmed, perhaps makes it more likely that the third world will achieve the goal established in Lima.

Percentage of GNP derived from industry

In this paper, industry is taken to mean manufacturing industry, i.e. major division 3 in the International Standard Industrial Classification (ISIC). This implies the exclusion of major divisions 2, 4 and 5, namely mining, energy production and

construction. It also implies that only the most important component of the secondary sector will be considered, but it is indeed this component that was discussed at the Second General Conference of UNIDO.

Historical figures for the contribution of industry to GNP

Historical figures for the contribution of manufacturing industry to GNP are available for some industrialized countries. Some of the figures are shown in table 1, with estimates of *per capita* GNP expressed in United States dollars at 1970 prices.

Table 1. GNP *per capita* and the percentage of GNP derived from manufacturing industry

Country	Year	GNP	
		Per capita (1970 dollars)	From manufacturing industry (percentage)
Italy	1863	176	16
	1898	320	15
	1953	825	36
	1960	1 120	27
	1970	1 760	32
Sweden	1863	251	8
	1903	675	24
	1951	2 000	41
	1960	2 780	24
	1970	4 040	29
United Kingdom	1907	865	27
	1924	1 100	31
	1955	1 630	39
	1960	1 800	32
	1970	2 270	33
United States	1874	985	14
	1924	1 960	22
	1960	3 470	24
	1962	3 700	28
	1970	4 760	25

Sources: Industry percentages for 1960 and 1970 calculated by the United Nations Research Institute for Social Development (UNRISD) ([4]); figures for other years compiled from S. Kuznets, *Modern Economic Growth* (New Haven, Yale University Press 1966), pp. 88 and 131; GNP *per capita* figures estimated by author on basis of above-mentioned sources and the *World Bank Atlas*, 1973. The 1960 and 1970 manufacturing industry figures calculated by UNRISD are not comparable with the other figures, probably owing to the use of 'purchasers' values; the values used by Kuznets are not specified, but in all likelihood represent higher prices.

Comparative contribution of industry in 1970

Figures for the contribution of manufacturing industry to GNP in 84 countries are given in UNRISD [4]. Table 2, which will serve as a basis for our subsequent calculations, was constructed from this UNRISD "world profile".

Table 2. Percentage of GNP derived from manufacturing industry as a function of per capita GNP

Per capita GNP range (1970 dollars)	Number of countries	Percentage of GNP provided by industry	
		Median and standard deviation from the mean	Level reached in the country with the largest population
100	9	9 (1.0)	9 (Indonesia)
100-200	14	10 (0.9)	14 (India)
200-300	19	17 (1.3)	16 (Thailand)
300-500	15	16 (1.6)	16 (Turkey)
500-1 000	8	23 (2.1)	23 (Mexico)
1 000-2 000	7	27 (4.2)	36 (Japan)
2 000-3 000	7	32 (2.0)	42 (Germany, Federal Republic of)
3 000-4 000	3	28 (3.2)	35 (France)
4 000-5 000	2	27 (2.0)	25 (United States)

The figures in table 2 clearly support Jean Fourastié's thesis: the maximum share of industry in GNP is found in the \$2,000-\$3,000 range, in terms not only of median values, but also of the countries with the largest population. The scatter of the data is rather large. Figures for countries with centrally planned economies are not given by UNRISD, owing to the lack of comparable information.

Table 3. Comparison of data on the contribution of manufacturing industry to GNP

National income per capita (1970 dollars)	Median of the profile ^a	Historical figures for selected industrialized countries ^b		
		Country	Year	Industry percentage
100-200	10	Italy	1863	16
200-300	17	Sweden	1863	8
300-500	16	Italy	1898	15
500-1 000	23	Italy	1953	36
		Sweden	1903	24
		United Kingdom	1907	27
		United States	1874	14
		Italy	1960	27
1 000-2 000	27	United Kingdom	1924	31
			1955	39
			1960	32
		United States	1924	22
2 000-3 000	32	Sweden	1951	41
			1960	27
		United States	1960	24

^aBased on table 2 above.

^bBased on table 1 above.

To assess the trustworthiness of our subsequent calculations, the world profile figures of table 2 must be compared with the historical figures for selected industrial countries given in table 1. This is done in table 3, omitting the figures for 1970.

Although the scatter is large, no important systematic difference can be detected. The historical figures are a little higher (1.3 per cent on the average).

Table 4. Proportion of GNP accounted for by manufacturing industry
(per-

Year	Austria	Belgium	Canada	Denmark	France
1960	26	30	23	29	40
1961	25	30	23	29	40
1962	24	30	23	30	39
1963	24	31	23	29	39
1964	24	31	23	29	39
1965	24	30	23	29	39
1966	23	31	22	28	39
1967	24	30	22	27	38
1968	23	31	22	27	38
1969	23	32	21	27	38
1970	23	23	20	27	36
1971	22	30	20	26	36
1972	21	30	20	26	36
1973	21	31	20	27	36
1974	—	—	20	27	36
1975	—	—	—	—	—

Source: Yearbook of National Accounts Statistics 1975, vol. III, table 3.

Role of developing countries in world industrial production: various estimates

In *Reshaping the International Order* (the RIO report) [5], an attempt is made to describe (with an indication of some of the alternatives) the type of income evolution that would be desirable in the developed countries and the third world. Once the desired income levels are established, it is possible to calculate from them the proportion which industry should contribute by a table similar to table 2 above. This has been done on the basis of the historical data given in table 1, excluding 1960 and 1970, by assuming a functional relationship ($i = r(y)$) between *per capita* income from industry i and total *per capita* income y , without taking into account the Fourastié effect. The shares in world industry achieved by the developing countries are recalculated for the year 2000 in table 5.

It can be seen that the assumptions of the RIO report [5] lead to very optimistic figures as regards the industrialization of the developing countries. This is hardly

Recent (1960-1974) figures for eleven industrialized countries

A further verification of Jean Fourastié's thesis is given in table 4.

The figures in table 4 either fluctuate or, for certain countries, show a clear downward trend. Once again, Fourastié's thesis is supported.

in eleven industrialized countries during the period 1960-1974
(centage)

<i>Germany, Federal Republic of</i>	<i>Italy</i>	<i>Netherlands</i>	<i>Sweden</i>	<i>United Kingdom</i>	<i>United States</i>
42	34	34	27	32	28
42	34	33	27	31	27
42	34	33	27	30	28
41	34	33	26	30	28
41	33	32	26	30	28
42	33	32	26	30	29
41	33	32	26	29	29
41	34	31	25	28	28
42	34	—	25	28	28
43	34	29	26	28	28
43	—	29	27	28	26
41	33	28	25	27	25
40	33	28	25	27	25
41	33	28	27	26	25
40	34	29	29	26	—
—	—	28	—	—	—

surprising, because these assumptions are based on an annual growth rate of 5 per cent in *per capita* national income as a "desirable objective". To form an opinion as to how realistic the 25 per cent target is, the starting-point should be a probable, rather than a desirable, growth rate. A probable annual growth rate income *per capita* would be 3.3 per cent. This forms the basis of table 6.

According to table 6, the share of world industry achieved by the developing countries will be 19 per cent, thus below the target set by UNIDO.

However, the figures are only approximate, owing in particular to the geographical breakdown used. They need to be refined by means of a more detailed breakdown. A study carried out for the United Nations (Leontief [6]) has identified 15 more homogeneous regions, thus making it possible to introduce much greater geographical detail. On the basis of scenario X of this study, some of the regions will have a *per capita* income of more than \$5,000 in the year 2000. It is here that Jean

Table 5. Estimated share of developing regions in world industrial production in the year 2000
(Based on a per capita income growth rate of 5 per cent per annum)

Region or grouping	Population (millions)		Per capita income (1970 dollars)		Share of industrial production in total income (percentage)						Income from industry in the year 2000		percentage of world total		
	1970	2000	1970	2000	2000		2000		2000		2000		2000		
			1970	A(i)	A(ii)	B	A(i)	A(ii)	B	A(i)	A(ii)	B	A(i)	A(ii)	B
Africa	349	579	200	864	864	864	23	23	23	118	115	118	5.0	4.5	3.4
Asia	1 958	2 971	150	648	648	648	23	23	23	456	443	456	19.3	17.3	13.1
Latin America	281	439	560	1 282	1 483	2 420	27	27	32	156	176	350	6.6	6.8	10.1
Industrialized countries	1 069	1 383	2 500	3 575	4 145	6 622	32	32	27	1 630	1 834	2 548	69.1	71.4	73.4
World	3 677	5 372													

Note: Alternatives A(i) and A(ii) represent scenarios that are essentially pessimistic with regard to food and energy production, while alternative B is more optimistic in this respect. For a description of these alternatives, and of the methods on which the estimates in this table are based, see J. Tinbergen [5].

Table 6. Estimated share of developing regions in world industrial production in the year 2000(Based on a *per capita* income growth rate of 3.3 per cent per annum)

Region or grouping	Per capita income (1970 dollars)	Share of industrial production (percentage)	Income from industry	
			Amount (billions of 1970 dollars)	Share of world total (percentage)
Africa	530	23	71	3.1
Asia	397	16	189	8.3
Latin America	1 483	27	176	7.8
Industrialized countries	4 145	32	1 834	80.8
Total:			2 270	100.0

Note: Totals may not add precisely because of rounding.

Fourastié's ideas can offer guidance, although some prudence is advisable. The author of this paper proposes the following percentages for *per capita* income derived from industry:

Per capita income (1970 dollars)	Percentage derived from industry
5 000-6 000	25
6 000-7 000	23
7 000-8 000	21
8 000-9 000	20
> 9 000	20

Calculations based on W. Leontief's figures, a single estimate for 1970 and two alternatives for the year 2000, are given in table 7. Alternative A uses the figures contained in table 2 above for the percentages derived from industry. Alternative B uses, for the developing countries, the percentages given in table 2, with their standard deviation subtracted in order to illustrate the sensitivity of the results.

Table 7 clearly does not change the conclusions reached with the help of tables 5 and 6. The main difference between the RIO report and the Leontief report is that the latter assumes that expansion in the industrialized countries will be more rapid, whereas this hypothesis is counterbalanced by the Fourastié effect. The percentage of national income derived from industry is 35 for alternative B of table 5, but only 23 for the two alternatives in table 7. It must be borne in mind that scenario X in the Leontief report is based on an ambitious programme for the development of the third world. However, even if, in the year 2000, the income of the developing countries from manufacturing industry were 20 per cent lower than the figure in table 7, the 25 per cent target for their industrial production would be achieved.

Table 7. Total income and income from industry in 1970 and in the year 2000

Country, region or grouping	1970 data						Estimates for the year 2000					
	GDP (billions of dollars)	Popu- lation (millions)	GDP per capita (dollars)	Per- centage of GDP derived from industry	Income from industry (billions of dollars)	GDP of billions	Popu- lation (millions)	GDP per capita (dollars)	Percentage of GDP de- rived from industry		Income from industry (billions of dollars)	
									A	B	A	B
Africa												
Arid	26.9	131	205	17	5	90	308	292	17	16	15	14
Tropical	23.7	141	168	10	2	82	332	247	17	16	14	13
Southern	16.9	22	768	23	4	148	50	2 960	32	30	47	44
Asia												
Centrally planned economies	134.8	808	167	10	13	835	1 226	681	23	21	192	175
Low-income	122.6	1 023	120	10	12	761	2 156	353	16	14	122	107
Europe												
Eastern	164.4	105	1 566	27	44	683	126	5 421	25	25	171	171
Western												
High-income	728.9	282	2 585	32	233	2 166	324	6 685	23	23	498	498
Medium-income	75.5	108	699	23	17	575	166	3 464	28	28	161	161

Japan	199.8	104	1 921	27	54	841	133	6 323	193	193	23	23
Latin America												
Medium-income	113.7	191	595	23	26	891	415	2 147	285	267	32	30
Low-income	39.9	90	443	16	6	326	207	1 575	88	75	27	23
Middle East	36.2	127	285	17	6	989	318	3 110	277	247	28	25
Northern America	1 059.5	229	4 627	27	286	2 720	300	9 067	544	544	20	20
Oceania	43.1	15	2 873	32	14	162	25	6 480	37	37	23	23
Union of Soviet Socialist Republics	434.9	243	1 790	27	117	1 994	321	6 212	459	459	23	23
World total					839				3 103	3 005		
Share of developing countries					74				1 040	942		
Total					8.8				33.5	31.3		
Percentage												

Note: Figures calculated, with the help of table 2 of this paper, for scenario X in the study by Leontief [6]. For the developing countries, alternative A is based on figures in table 2, and alternative B on those figures with their standard deviation subtracted.

Conclusions

In this paper based on the work of Jean Fourastié, an attempt has been made to estimate the percentage of world industry that will be located in the third world in the year 2000, by means of projected data on third world GNP in the year 2000, and on the share of GNP derived from industry. GNP in the year 2000 is estimated by applying a particular growth rate to figures for 1970. In addition, the growth rates in income *per capita* used in the RIO report (5 per cent), the figure of 3.3 per cent, and the percentages for the 15 regions given in the Leontief report (scenario X) were applied as alternative rates. The share of GNP derived from industry has been estimated with the help of the comparative figures for 1970 (world profile). The historical figures available for some industrialized countries do not diverge greatly from this profile. The profile must be extrapolated for GNP *per capita* beyond the maximum 1970 GNP. It is here that Jean Fourastié's thesis concerning the decreasing role of industry comes into play, the implications of which will be favourable to the achievement of the 25 per cent industrial development target set for the third world by the Second General Conference of UNIDO held at Lima. However, a substantial effort will be required if the figure of 25 per cent is to be achieved.

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Policy implications of the Lima target

H. W. Singer*

The 7 per cent baseline

According to the Lima Declaration and Plan of Action adopted by the Second General Conference of UNIDO held at Lima in 1975, "the developing countries constitute 70 per cent of the world population and generate less than 7 per cent of industrial production" ([1], para. 12). The initial question must concern the accuracy of this statement. In one respect, the statement is too pessimistic. It refers to recorded (largely modern) industry. If, in addition to modern industries, we include cottage, rural, self-employment, family, part-time, informal sector and other industrial activities, the share of developing countries would undoubtedly be somewhat higher. The same would be true if industrial output was valued in physical terms (or at purchasing power parities) rather than in monetary terms subsequently converted for international comparison at official exchange rates (a similar observation could be made with regard to comparisons of shares of world GNP). Yet in another respect, the 7 per cent baseline estimate may be over-optimistic rather than over-pessimistic. The developing countries may "generate" 7 per cent in the geographical sense of 7 per cent of world industrial output being produced within their boundaries. But if the question is pursued a little further, and it is asked who exactly does the "generating", the answer will often be that it is foreign investors, frequently transnational corporations. In a number of developing countries, the foreign-owned or foreign-controlled share in modern industrial production is quite high, sometimes over 50 per cent.

In summing up these doubts about the accuracy of the 7 per cent baseline, it may be assumed that the forces making this figure an understatement or an overstatement are more or less equal, and thus cancel each other out. Considerable research would certainly be required in order to change the figure.

In establishing the 7 per cent baseline, the Lima Declaration and Plan of Action states further that "the gap between the developed and developing countries has been widened" ([1], para. 12). This statement may also be accepted, although it requires a more precise formulation. It is obviously true in respect of the absolute gap—the difference in the actual volume of industrial production—separating the two groups of countries. Indeed, the disparities are so great that if industrial production in the developed countries grows at all, the developing countries would need a growth rate over 13 times higher in order to prevent the absolute gap from increasing (e.g. over 50 per cent annual growth would be required to keep up with a 4 per cent annual growth in the developed countries). Even this is an understatement, since on welfare grounds it is the *per capita* gap that is more relevant, and the population increases about 3 to 4 times as fast in the developing countries. The statement is also true in respect of the relative gap, so long as this is properly measured on a *per capita* basis. However, it is not so clearly correct if applied to relative growth rates of aggregate industrial production. This was clearly not the measure of the "gap" envisaged in the

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Lima Declaration and Plan of Action when reference is made to a "widened" gap. In any case, neither the welfare nor the equity meaning of that kind of gap seems particularly relevant (although it is important for the problem of unequal distribution of power and wealth among different countries and regions of the world), and the statement may therefore be regarded as essentially correct.

Modesty of the 25 per cent target

Although often quoted as a 25 per cent target, it should first be noted that the Lima Declaration and Plan of Action sets this as a minimum figure rather than a target. The share of the developing countries is to be increased "to the maximum possible extent and as far as possible to at least 25 per cent of total world industrial production by the year 2000" ([1], para. 28). This must be borne in mind, although it will be dealt with below as an actual target rather than a minimum figure. Those who consider the 25 per cent figure too ambitious and probably unattainable¹ would presumably find it even more unrealistic to treat the proposal as a minimum target.

However, despite such reservations, and without prejudice to their underlying arguments, one of the most remarkable aspects of the proposal, if treated as an actual target, is its striking modesty.² This can be illustrated as follows. If world industrial production increases at a rate of approximately 5 per cent per annum (in line with the range of UNIDO projections and with past experience modified by the difficulties of the last four years), then it would approximately double in 12½ years,³ or quadruple during the 25-year period from 1975 to 2000. Barring cut-backs in expansion owing to limited supplies, bottle-necks, environmental constraints, or checks on growth caused by devastating wars or recessions, the result would be scenario I, based on 5 per cent growth throughout the world, with the developing countries growing enough—about 10-11 per cent per annum—to reach the Lima target. This scenario is shown below.

Scenario I

<i>Year</i>	<i>World industrial production</i>	<i>Share of industrial countries</i>	<i>Share of developing countries</i>
1975	100	93	7 (7 per cent of 100)
2000	400	300	100 (25 per cent of 400)

One of the most important implications of this scenario is that the absolute advantage of the industrial countries in terms of higher industrial production would in fact sharply increase, from 86 (93 - 7) in 1975 to 200 (300 - 100) in 2000. Well over two thirds of the world increment in industrial production would still accrue to the industrial countries (meaning the limited group of countries classified as industrial in 1975), even though their share in world population will be steadily declining.

¹ See Glismann, Juhl and Stecher [2], where 15 per cent is suggested as a more likely and realistic figure.

² Jan Tinbergen agrees with this. See his contribution to this volume.

³ This was exactly the rate of expansion between 1960 and 1972-1973.

Naturally, this result is based on the assumption of continued rapid growth in world industrial production. In more recent years, however, with world industrial recession and stagflation, this assumption has become increasingly questionable. The target itself is, of course, compatible with different scenarios. For example, in the extreme case of world industrial production remaining stationary between 1975 and 2000, the target increase in the share of developing countries could only be achieved by an actual shift of industrial production from the industrial to the developing countries. In this "no-industrial-growth" scenario II, there would be no question of the industrial countries retaining the major share of an increment in industrial production. On the contrary, they would suffer an actual reduction, while the increment would be limited to the developing countries. Scenario II may be represented as follows:

Scenario II

Year	World industrial production	Share of industrial countries	Share of developing countries
1975	100	93	7
2000	100	75	25

However, it is interesting to note that the reduction in industrial output in the industrial countries would be under 20 per cent spread over 25 years, and the whole decline is not so much more than what the recent depression (1973-1975) is estimated to have cost the industrial countries over a much shorter period. The annual rate of growth of industrial production in developing countries, even in the extreme case of stagnation of world industrial production, would still have to be 4.2 per cent. This illustrates the sharp inequality of the present distribution.

The modesty of the Lima target is also borne out by considering the ratio of *per capita* industrial production. Taking the population of the developing countries as 70 per cent of world population in 1975 and 75 per cent in 2000, the disproportion in *per capita* industrial production would only be reduced from 31:1 in 1975 to 9:1 in 2000—still a striking disparity. Put in those terms, it seems difficult to treat the target as very radical. This is true regardless of the projected rate of growth of world industrial production.

Implied growth rates

To describe the goal (taken as an actual target rather than a minimum figure) as modest in welfare or equity terms is, of course, not equivalent to saying that it will be easy, or indeed possible, to achieve it. In order to assess the possibility of achieving the 25 per cent goal and to devise concrete policies and action accordingly, it must be considered in the context of the various assumed rates of growth of world industrial production (which in turn must be linked to some pattern of overall world production). Taking scenario I above, it will be seen that industrial output in developing countries would have to increase from 7 to 100 in 25 years. This is obviously a very rapid rate of growth by any past standards, involving as it does a doubling of industrial production about every 6½ years, or an annual rate of growth

of 11.3 per cent. In addition, it is almost half as much again as the corresponding 8 per cent growth target of the International Development Strategy for the Second United Nations Development Decade—and that in turn was based on a 6 per cent rate of growth of GNP, which will be almost impossible for the oil-importing countries to achieve, at least in the present decade. Moreover, the required growth rate of over 11 per cent per annum for the developing countries is based on a modest 5 per cent growth rate of world industrial production, and would vary in the same direction, although not exactly in the same proportion, as the latter. On the basis of UNIDO's own pessimistic variant, the growth of industrial production would still have to be 9.1 per cent per annum, well above the original target for the Second Development Decade (UNIDO [3]). The scenario I rate of 11.3 per cent growth is, however, still well within the UNIDO range of 9.1-12.0 per cent. Even scenario II, which assumes stagnant world industrial production, would require over 4 per cent annual growth of industrial production in developing countries. Thus the idea of a modest target seems slightly less convincing when considered, not from the point of view of welfare and equity, but from that of actual growth requirements. The suggestion that the developing countries are more likely to attain a 15 per cent share than a 25 per cent share was made from this viewpoint (Glismann, Juhl and Stecher [2]). The 15 per cent share would also result from the straight projection of trends observed in the 1970s.

A different approach could be adopted. If industrial growth in the developing countries during the period from 1975 to 2000 were limited to the 8 per cent per annum growth rate set in the International Development Strategy for the Second Development Decade, then a 1.8 per cent annual growth rate of industrial output in the currently industrialized countries would lead to a 25 per cent share for the developing countries by the year 2000. This pattern of development, which was implied by the International Development Strategy for the Second Development Decade, and which occupies a somewhat intermediate position between scenarios I and II, would represent scenario III, as outlined below.

Scenario III^a

<i>Year</i>	<i>World industrial production</i>	<i>Share of industrial countries</i>	<i>Share of developing countries</i>
1975	100	93	7
2000	193	145	48.3

^aBased on 8 per cent industrial growth in the developing countries.

Such a low growth rate of industrial output in the industrialized countries cannot be ruled out, especially if the period is marked by recurrent recessions, balance-of-payments crises, and perhaps confrontations with raw-material suppliers or environmental constraints. Moreover, with a shift to services and other non-industrial sectors, a 1.8 per cent growth of industrial output would be compatible with GNP growth of perhaps 3 per cent or even more. Thus, the previously established target for the Second Development Decade would be compatible with the Lima target, but only if there is a relatively low growth rate in

industrial production both for the world as a whole and in the industrialized countries. Such a scenario was certainly neither considered nor endorsed in the Lima Declaration and Plan of Action, which states that "the developing countries should increase their industrial growth at a rate considerably higher than the 8 per cent recommended in the International Development Strategy for the Second United Nations Development Decade".

Export and world trade aspects of the 25 per cent target

The more pessimistic view of the feasibility of the 25 per cent share also requires modification in the light of recent developments. The main consideration is not, however, the fact that the required growth rates of 9-12 per cent in industrial production have been actually achieved by a number of developing countries over a considerable span of years, including particularly countries already operating at a high level of industrial activity. Indeed, at very early stages of industrialization such growth rates are almost inevitable, even if not particularly meaningful. Of greater interest is rather a development which seems to have been somewhat neglected in the discussion of the Lima target. This is the structural transformation in the exports of developing countries, which to a surprising degree parallels the structural transformation involved in the Lima target.

Over the 22 years from 1952 to 1974 the manufacturing export volume of developing countries increased sevenfold (Healey [4]). This is an annual rate of 9.4 per cent, not far below the 11.3 per cent rate of expansion in industrial production required by the developing countries over the longer period to 2000 under scenario I, and within the range of the 9-12 per cent per annum rate of expansion required by the UNIDO projections. Even more strikingly, between 1962 and 1970 the manufactured exports of developing countries in terms of constant United States dollars increased by 11.6 per cent per annum (marginally more than the 11.3 per cent rate required by the Lima target under scenario I, and well up in the range of 9-12 per cent under the UNIDO projections). Between 1962 and 1969, the export growth rates for Argentina were 26.0 per cent, Brazil 29.5 per cent, Hong Kong 19.2 per cent, Pakistan 20.0 per cent, and the Republic of Korea 67.0 per cent, to select only rates well above the Lima growth rates of around 11 per cent. India raised the share of its manufactures in total exports to over 50 per cent (Tyler [5]). The share of manufactures in exports of developing countries increased over 18 years (from 1955 to 1973) from 7.7 per cent to 21.0 per cent—a striking parallel to the expansion in the third world share in industrial production from 7 per cent to 25 per cent over the considerably longer period to the year 2000 required by the Lima target. In fact, the shift which has actually occurred within the structure of the trade of developing countries is even more rapid than the one required in the structure of world industrial production.

The two cases are of course not directly comparable. The trade of the developing countries, at least before the rise in oil prices, represented a much smaller universe than world industrial production (\$74.6 billion as compared with \$600 billion in 1972). Trade structures are clearly more liable to change than production structures. The expanded share of manufactures in exports of developing countries to some extent simply reflects the relative stagnation of exports of primary commodities (other than oil). Nevertheless, the fact that the required rate of expansion for the industrial production of developing countries has, in fact, been achieved for the

manufactured exports of developing countries deserves attention. This is true especially since it has been achieved in the face of a failure by the industrial countries, in the GATT trade liberalization rounds, to pay sufficient attention to the legitimate export interests of developing countries in the sphere of industrial goods, and of a corresponding failure to develop adjustment policies designed to make room for such exports. In these circumstances, serious consideration should be given to the reform of the GATT rules, as suggested by J. N. Bhagwati, among others, in his contribution to this issue (see also Fels [6] and UNCTAD [7]). In addition, the effective protection rate is directly geared (escalated) to enable it to be most obstructive exactly where the competitive power of manufactured exports from developing countries is greatest. The additional exports of manufactures that would be made possible by removal of tariffs and non-tariff barriers have been variously estimated,⁴ but an increase of at least 50 per cent and perhaps as much as 100 per cent would be in line with the general results of the estimates. Such an increase, although admittedly a once-and-for-all jump, would reduce the overall annual growth rate required over the 25-year span. Moreover, even with the rapid change in the structure of the trade of developing countries, their share in world exports of manufactures (a share more directly comparable with the Lima target) failed to rise significantly, increasing from a very low figure (7.0 per cent in 1952) to only 7.8 per cent in 1974, similar to their shares in world manufacturing production.

All this suggests that there could be a much more rapid expansion in the future if the discriminatory obstacles could be removed as part of the process of establishing a new international economic order. The very fact that the share of developing countries in world trade in industrial products is still so low means that they should experience a much higher elasticity with regard to prices and other terms of supply and access than the old industrial countries.

In that case, the rate of expansion required by the Lima target under the UNIDO projections or scenario I (involving continued vigorous expansion of world industrial production) could be quite plausibly achieved as a result of export-led industrial growth. Such export-led growth would isolate the growth of industrial production to some extent from the constraints of internal balance and internal demand factors; it would help to remove the foreign-exchange bottle-necks now constraining industrial expansion and even the full utilization of existing industrial capacity; and perhaps through the dynamic effects of increased export orientation and greater efficiency even help to improve technology and productivity for the rest of the industrial sector, thus speeding up the rate of industrial growth.

On this basis, it would be easy to construct scenarios in which the share of developing countries in an expanding total of world trade in manufactured goods would rise rapidly from the low figure of 7.8 per cent in 1974⁵ (perhaps even to 25 per cent, in line with the Lima target for shares in production). For example, if the share of developing countries in manufactured exports, excluding processed food (6.3 per cent in 1970 and stagnant), could reach the level of their share in total exports. Combined with the linkage and multiplier effects involved, this by itself would certainly raise the share of the developing countries in world industrial production significantly above the 7 per cent baseline towards the 25 per cent target. And as exports become a rising part of total production, their high growth rates—well above those required by the Lima target as a whole—would have increasing weight in

⁴ The estimates are listed and discussed in Healey [8].

⁵ The figure comes from GATT [9].

the production total (which they did not have in the period from 1952 to 1974 because of the low and stagnant share of developing countries in world trade in manufactures).

High rates of growth of exports, because of their multiplier effects and the removal of balance of payments constraints enforcing deflationary pressures, have been successfully used to explain differential growth of industrial production among the major industrial countries (Kaldor [10] and Cornwall [11]). There seems to be no reason why a rapid growth of exports of manufactured products—if such a growth can be hypothesized for the moment—could not play a similar role in narrowing the differentials between the industrialized and less developed countries.

It was stated above that on the basis of foreign trade possibilities the Lima target could be presented as “plausible”, and that it was “easy” to construct possible scenarios on that basis. This statement must be qualified by a reference to political realities. It may be easy to construct scenarios, but it will not be easy to create the political conditions to make these scenarios come true. The logic of the international division of labour is one thing, but the willingness of the industrial countries (and of the developing countries as well) to pursue the structural and trade policies implied by that logic is quite another matter. The present formidable (and increasing) barriers to imports of labour-intensive manufactures and to the processing of primary commodities before export from developing to industrial countries are an eloquent reminder of the strong protectionist sentiment existing in the industrial countries. This sentiment may well become even stronger to the extent that the developing countries attempt to reach the Lima targets through export-led industrialization.⁶

A further possibility suggests itself by bringing together some of the results so far obtained. Under scenario III (based on the 8 per cent growth-rate target of the Second Development Decade) the industrial output of developing countries would be raised to just under half the level required for a “real implementation” of the Lima target under scenario I.⁷ This suggests a combination of measures. If it were possible (a) to double present industrial production by a once-and-for-all increase⁸ in the share of the third world countries in world trade in manufactures, and (b) to maintain, independently of such trade-oriented expansion, a growth rate based on balanced internal growth of 8 per cent as stipulated by the Strategy for the Second Development Decade, such a combination could also conceivably promote the attainment of scenario I. However, the objective of doubling production by a once-and-for-all rise in exports would require an approximate quadrupling of exports of manufactures of developing countries, and a rise in their share in such trade from some 7 per cent to 25 per cent. Such a rise would bring their share of industrial exports up to the level which has already been achieved for clothing, cotton textiles, footwear and a few other labour-intensive and standardized items, or to their share in the imports of labour-intensive manufactures in 1970 by the United States (29.1 per cent) and Japan (25.2 per cent). Such a rise would be well in line with present comparative advantages and the logic of a really free and fair world trading system. Moreover, much of this increase could be in the form of intra-group trade among developing countries, which is dealt with below.

⁶ J. N. Bhagwati, in this issue, also assumes that protectionist sentiment will be strengthened.

⁷ Scenario III increases industrial production of developing countries from 7 to 48.3, whereas under scenario I a level of 100 would be required.

⁸ In fact, however, such an increase would have to be spread over a number of years.

Collective self-reliance

The possibility of export-led industrialization as a means of approaching the Lima target has thus far been considered in terms of exports to the industrial countries. World trade among the third-world countries themselves has been a much-neglected, and even shrinking, part of total world trade. This share, already as low as 4.9 per cent in 1960, fell further to 3.8 per cent in 1973. Although it then rose to 5.6 per cent in 1974, this represents the increased cost of oil exports and imports between members of the Organization of Petroleum Exporting Countries (OPEC) and oil-importing developing countries, at best a zero-sum game as far as the developing countries as a whole are concerned. In the present situation, 70 per cent of the world's population living in the third world do only about 5 per cent of world trade with each other, while the 30 per cent living in industrial countries do 70 per cent of world trade with each other. On a *per capita* basis this is a disproportion of 33:1—almost the same disproportion as in the case of the present distribution of *per capita* world industrial production.

The reduction of this disparity through an expansion of intra-group trade among third-world countries could contribute substantially to the achievement of the Lima target for a number of reasons. In the first place, manufactures even at present play a bigger part in the intra-group trade of developing countries than in their exports to industrial countries. This tendency would almost certainly be further strengthened with any major expansion of such intra-group trade. Secondly, the manufactured and processed goods exchanged between developing countries would be more appropriate products, designed for low-income markets and produced with more labour-intensive technologies. Thus, the type of industrialization associated with this type of trade expansion would be likely to make a greater contribution towards the pressing employment and income distribution problems of third-world countries than is at present the case. In the third place, such trade might prove less attractive to transnational corporations,⁹ and thus give greater encouragement to the development of national production and national technology in the third-world countries. Finally, such expansion would be more likely to be shared by all developing countries, whereas at present, in general¹⁰ only a minority of relatively better-off developing countries has the basis for a thriving export sector able to compete for export markets in the industrial countries. The Lima Declaration and Plan of Action specifically qualifies the 25 per cent target with a proviso recommending "every endeavour to ensure that the industrial growth so achieved is distributed among the developing countries as evenly as possible" ([1], para. 28). This condition is more likely to be satisfied by an expansion of third-world intra-group trade, ample scope for which is provided by its extremely low present base.

A cautionary note may be useful. Although it was assumed above that collective self-reliance will provide benefits "distributed among the developing countries as evenly as possible" (in the words of the Lima Declaration), this will not happen automatically. The history of various schemes and attempts at collective self-reliance—from the Latin American Free Trade Association to the East African Community—shows that the fair and wide sharing of benefits is a difficult and sensitive issue. Far from coming about automatically, it will on the contrary require careful planning and preferential treatment for the least developed countries and

⁹ See the contribution by C. Vaitos to this volume.

¹⁰ The major exceptions are Egypt, India and perhaps Pakistan.

those most seriously affected by the rises in oil and other prices. Section IV of the Lima Declaration and Plan of Action on the least developed, land-locked and island developing countries should therefore be read in close connection with section II on co-operating among developing countries. This is indeed recognized in section II, which mentions preferences for the less industrialized among the developing countries. The planned allocation and distribution of "integration industries", with due concern for the interests of the least developed countries, should also be added.

At present, only about one third of the manufactured exports of developing countries go to other developing countries, in spite of the larger population involved and a natural affinity in type of product and technology. The Lima Declaration and Plan of Action did not indicate any quantitative targets regarding "co-operation among developing countries", but it would be expected that within the overall context of export-led industrial growth, at least a half of the additional exports would be in the form of expanded intra-group trade. There is certainly ample scope for such expansion. It is paradoxical that during the past 15 years, the share of intra-group trade in manufactures should actually have fallen, largely as a result of tariff barriers set up by developing countries against the industrial countries, but often "protecting" even more effectively against other developing countries. As a result, tariffs on manufactures tend to be actually higher in intra-group trade among developing countries than in trade between industrialized and developing countries. Yet such intra-group trade—like the intra-group trade of the industrial countries which forms the bulk of world trade—would provide new opportunities for trade on an intra-industry basis, permitting a development of the advantages of industrial specialization and diversification of products, with a resulting stimulus to improved technology and productivity. Intra-industry trade also creates less formidable adjustment problems within the various participating countries. Industries developed in the implementation of collective self-reliance, in turn, could provide a basis for more successful penetration of the markets of industrial countries and give the developing countries more equal bargaining strength.

The development of intra-group trade may require not only special preferential trade, industrial planning and allocation arrangements, but also special monetary and clearing arrangements. These are not directly mentioned in the Lima Declaration and Plan of Action, except perhaps indirectly in a brief reference to "strengthening regional institutions responsible for the promotion of economic co-operation between developing countries" ([1], para. 60[n]).

Whether the growth of industrial production in the third world can be export-led, either in the direction of world-wide trade or collective self-reliance, must still be treated as an open question. Economic as well as political difficulties abound. The possibility must at least be contemplated that the Lima targets will have to be reached without the benefit of such a lead. This possibility leads to a different set of reflections, in which the Lima target may be viewed either as a target to be tied to the employment needs of the developing countries, or as a target tied to the balanced growth of their economies. While in the final analysis these two roles of industrial growth are closely related, they lead to somewhat different approaches.

Employment approach

On an employment approach, the industrial sector would be regarded as residual in the sense that it has to absorb, and provide productive employment for, all those

not occupied in agriculture and other productive sectors. In this regard, the following scenario may be developed. The population and also the labour force of developing countries are increasing at about 2.5 per cent per annum (although possibly this rate will diminish with higher income levels later in the 1975-2000 period). The present rates of unemployment and underemployment are in the region of 30 per cent, according to estimates prepared by the ILO for the World Employment Conference [12]. Setting only the modest target of reducing the 30 per cent backlog of unemployment and underemployment at the rate of 1 per cent per year, and adding this to the annual increase in the labour force, the result would be a required annual rate of increase in employment of 3.5 per cent. How much of this will be provided by agriculture? If agricultural production increases at the rate of 4 per cent per annum (the target of the Second United Nations Development Decade), while output per worker in agriculture increases at the same rate (3.5 per cent) as that required by the Second Development Decade for the economy as a whole,¹¹ then employment in agriculture would increase only at the rate of 0.5 per cent per annum. This would throw a fearful burden of employment provision on the other sectors, since it would mean that the great bulk of the required employment expansion would have to be provided by transfer to other sectors, including industry. Although this enormous transfer need not require rural-urban migration on the same scale (there could be a great expansion of rural and decentralized industrial development and other non-agricultural rural activities), a good deal of migration would inevitably be involved in such a massive transfer. The conclusion must be that either the increase in productivity per person employed in agriculture should be kept below the presumed national average, as has been the case in the past and as would be likely in the future with increased emphasis on the family farm and small producer; or agricultural output should be increased at a higher rate. Certainly the need for food and other agricultural products (including inputs into an expanded industry) would justify the latter course of action.

It will be difficult enough in fact to raise the growth rate of agricultural production from the present level of 2.5 per cent per annum to the target rate of 4 per cent. It would also be difficult to visualize growth rates of industrial production of the order of 11 per cent or so while agricultural production *per capita* stagnates (as the 2.5 per cent growth rate implies). The results would be so seriously unbalanced as to make them untenable as a basis for the long-term achievement of the Lima target. The need for foreign exchange to import food and agricultural materials would deprive industry of the imports needed for 11 per cent growth, and would deprive the economy of the processing opportunities which would have to be a part of any rapid industrial expansion. The achievement of the 4 per cent target for agriculture seems almost subsumed in the Lima target.

To remain realistic, it will be assumed that agriculture will in fact provide additional employment at half the rate of the required total rate of employment expansion, i.e. 1.75 per cent per annum (which is 70 per cent of the natural increase in population and labour force). With a stipulated 4 per cent growth in agricultural output, this would mean annual increases in productivity per person employed of 2.25 per cent per annum. It will be further assumed that a typical developing country is being dealt with, where employment in the agricultural sector is currently 65 per

¹¹ Increases of 6 per cent in GNP, 2.5 per cent in labour force, and 3.5 per cent in output per person.

cent of total employment, and employment in industry 10 per cent.^{1 2} If half of the agricultural surplus population not provided for in agriculture itself must be absorbed by industry, and the other half by the infrastructure and services sector, industrial employment would have to increase by 9.2 per cent, made up of 3.5 per cent per annum to offset the natural increase in the labour force and gradually reduce the backlog of unemployment, and 5.7 per cent per annum to absorb the agricultural surplus. If productivity per employed person in industry rises at the stipulated (Second Development Decade) rate of 3.5 per cent per annum,^{1 3} balancing a natural trend towards higher productivity increase with the desirable development and use of more labour-intensive technologies, industrial output would have to increase at a rate of 12.7 per cent per annum. This is well above the implied Lima target (under scenario I) of 11.3 per cent, and indicates the need for further progress in the direction of capital-saving and employment-intensive technologies.

The upshot of the analysis is that the Lima targets once again appear as necessary, indeed as modest, if industry is to play a major role in employment absorption, or that the assumptions of the proposed model must be modified to reduce the required growth rate of industrial production. It should be emphasized, however, that gradually, as the share of agriculture in total employment falls towards the end of the 1975-2000 period, the proportionate transfer of employment out of agriculture will represent a gradually diminishing burden of employment creation for the other sectors, including industry. By that time, the proposed employment scenario would fall into line with the growth rate implied by the Lima target.

Balanced-growth approach

The orders of magnitude raise doubts as to whether industrial growth can carry the major burden of providing sufficient employment, especially during the first part of the period, except perhaps through the rapid development of labour-intensive technologies and strong emphasis on rural and small-scale industries. The alternative is to base national development on agriculture as the primary sector and develop industries with strong emphasis on agriculture-industry linkages and interactions. This is a hopeful approach, for a number of reasons. A prosperous farming sector would require a large volume of inputs from the industrial sector: fertilizer, insecticides, weed-killers, water pumps, agricultural tools and equipment of all kinds, ranging from hoes and ploughs to trucks and tractors. Much of the increased agricultural production would require industrial processing, or provide the basis for new resource-based industries. The development of agriculture will require a good deal of new construction, with implied demand for a wide range of construction materials and equipment. Higher agricultural incomes are spent with progressively more emphasis on industrial consumer goods. Higher incomes from the industrial expansion would in turn provide an expanding market for agriculture, especially food, with the associated normal multiplier and feedback effects within the agricultural sector itself.

^{1 2} This figure would be lower if we limit ourselves to modern industry, and might be higher if we include all the informal and craft types of industrial activity. Perhaps the figure can be accepted as a reasonable compromise.

^{1 3} The actual annual growth of output per person in industry as a whole was 3.4 per cent during the period 1955-1965 (2.7 per cent in manufacturing as a whole). See United Nations [13].

Thus if agricultural production and employment could be expanded well beyond the targets assumed in the scenario based on the employment approach, the full and planned utilization of the manifold agricultural-industrial linkages could provide a balanced-growth basis for industrial expansion. But it can be calculated that for industrial production to expand at the scenario I rate of 11.3 per cent per annum, reliance on balanced growth would require a much more rapid growth of agriculture and other sectors of the economy, and hence of *per capita* GDP of developing countries, than has been assumed in the basic UNIDO projections, those of the Second Development Decade, and others. This is also implied in a study carried out at the Kiel Institute, according to which the projected rates of GNP growth and the assumption of unchanged inter-sectoral relations would suggest a share of developing countries in world industrial production of 15 per cent rather than 25 per cent (Glismann, Juhl and Stecher [2]).

Export-led industrial growth, as considered above, would be of doubtful developmental value if the export earnings had to be used for the import of food. Continued dependence on food imports from misnamed "industrial" countries would also be difficult to reconcile with a strengthened position of developing countries in a new international economic order. Thus there are many reasons—quite apart from the obvious priority claims of proper nutrition, especially for children, and the welfare argument that links increased food production so directly to employment—for starting with agriculture as the independent variable in development planning. Perhaps it is a paradox of development—not the only one of its kind—that the best way to achieve the Lima target may be to approach industrialization indirectly, as a necessary condition and consequence of the closing of the food gap in the developing countries. Once agriculture is reinstated in its natural role of providing employment and perhaps also foreign exchange, industrialization can then assume its natural role, namely the raising of productivity and GNP, and serving as the focus of efficient and modern technology.

Negotiation priorities

The table below summarizes the implied growth rates of the different industrialization strategies discussed above.

**Growth rates implied by different industrialization strategies
for the period from 1975 to 2000**

<i>Scenario</i>	<i>Level of industrial growth required in developing countries to reach the Lima target (percentage)</i>
UNIDO projection	11.4 ^a
Industrial stagnation in developed countries	4.2 ^b
Complete trade liberalization	8.0 + a once-end-for-all rise ^c
Second Development Decade	8.0 ^d
Industrial employment expansion towards full employment	12.0 ^c

^a Implies an industrial growth rate in developed countries of 5 per cent per annum.

^b Implies an industrial growth rate in developed countries of 0 per cent per annum.

^c No specific implications for industrial growth in developed countries.

^d Implies an industrial growth in developed countries of 1.8 per cent per annum.

It would appear therefore that the "least-cost" industrialization strategy, in terms of growth-rate implications for both developing and developed countries, is the strategy which links trade liberalization to industrial expansion in the developing countries. Moreover, intergovernmental forums are likely to be more effective for negotiating trade-related agreements, for as C. Vaitsos has shown in his contribution to this volume, transnational corporations are not primarily interested in the export industries of the third-world countries. Their primary concern is in the area of the restructuring and reallocation of world industrial investment. No programme for international industrial redeployment can be implemented without active participation by the transnational enterprises. In the field of international trade, on the other hand, the initiative lies with governments.

J. N. Bhagwati's contribution to this volume outlines a plan for the reform of GATT, which could provide substantial impetus to industrial growth in developing countries. Consideration will now be given to two other issue-areas likely to be of crucial importance if trade policy is to make a significant contribution towards the achievement of the Lima target. In both fields, progress will require protracted international negotiations and co-ordination of policies.

Adjustment assistance programmes

National adjustment assistance programmes in the industrial countries are rarely devised keeping in view their impact on the economies of the third world. If the industrial countries could be induced to take the needs of the developing countries into account in this field, it would be a relatively cheap way of providing effective assistance to the latter. An UNCTAD study found that "the aggregate labour displacement impact in the developed market economies of significantly increased imports from the developing countries would be small . . . Similarly the aggregate costs of structural relocation to facilitate increased imports from developing countries and the budgetary costs of the required adjustment assistance programme should be relatively moderate" (UNCTAD [7], p. 52). At present adjustment assistance schemes are narrowly conceived. They generally overlook the costs that the consumer in developed countries must bear as a consequence of the implementation of their schemes. The industrial country Governments also generally pay scant attention to the long-run identity of interests which should unite them and the developing countries in promoting trade liberalization, which can be an agent for creating a more efficient and rational international division of labour. Truly successful adjustment assistance programmes, from the point of view of the world economy, are those that promote trade liberalization, thereby creating a pattern of resource allocation which is efficient in the sense that it maximizes long-term global productivity. Adjustment assistance programmes must be concerned with moving resources out of declining industries in the developed countries and with the reallocation of resources to those industries in the developing countries which have a comparative cost advantage. Such an adjustment assistance programme may be costly from the perspective of a national economy, but it is not impossible to conceive of an international arrangement whereby the short-term costs of such programmes can be mitigated, first by balancing them against the gains of a higher level of international trade, and, secondly, by compensatory financial flows within larger groupings. It is thus of some importance to attempt to create international

negotiating machinery designed to co-ordinate the adjustment assistance programmes of the developed market economies. Such co-ordination should be explicitly aimed at making adjustment assistance programmes a vehicle for trade liberalization. This implies increasing the efficiency and complementarity of different national schemes and the establishment of appropriate mechanisms for anticipating resource displacement in vulnerable industries. Support must be provided for potentially competitive industries. Eligibility criteria for adjustment assistance should be harmonized. Resources should be provided for temporary costs incurred by individual countries as a consequence of the implementation of trade-liberalizing adjustment schemes. An institutional focus should be provided for co-ordination between developed and developing countries, in order to ensure that the development and industrialization needs of the developing countries are taken into account in the formulation and harmonization of national adjustment assistance schemes. Some consideration may be given to providing compensation to developing countries adversely affected by the operation of specific adjustment projects.¹⁴ The Third General Conference of UNIDO might perhaps lead to discussions among developed countries on the one hand, and between developing countries on the other, for the co-ordination of existing adjustment assistance schemes and the formulation of more effective ones in industries which are of significant interest for the promotion of manufactured exports from developing countries. This may be an important step towards meeting the Lima target.

Intra-group trade among developing countries

Another important area in which negotiations can prove fruitful is that of intra-group trade among the less developed countries. Useful work on this question has been done since 1976 under the auspices of UNCTAD, but it might be useful to seek to identify industries that can be regionally integrated or industries located in third-world countries that are potentially competitive on present import markets. It is clear that achieving industrial integration and developing potentially competitive, third-world-based industries will involve co-ordination and harmonization on a wide range of policies. But trade policy may not be an inappropriate instrument for initiating this process of co-ordination. Trade is particularly important because, as neo-classical theorists have so often stated, trade may—if trade is free—substitute for movements of factors. The resource-rich developing countries are now becoming increasingly aware of the social and economic problems associated with the movement of labour from Africa and South Asia into their countries. It is thus not impossible to find common ground between labour-importing and labour-exporting developing countries. The labour-importing developing country may buy consumer and investment goods from the labour-exporting developing countries, instead of importing labour to produce the goods itself, or importing the goods from a high-cost developed country.¹⁵ Such trading arrangements are likely to encourage investment

¹⁴ One such scheme is proposed by Joekes, Kaplan and Singer [14].

¹⁵ Most of the labour imported into resource-rich developing countries has been employed in the construction industry, but this may change in the future. It, therefore, seems feasible to suggest that resource-rich, population-poor countries should seek industrialization through the development of technology- and skill-intensive industries, and import light manufactures and labour-intensive goods from labour-intensive developing countries.

arrangements and an ultimate co-ordination of a whole range of economic and social policies.

This leads back to the central point underlying the whole preceding analysis. The creation of an international environment in which governmental negotiations create convergence in the policies of the developed and the developing countries is vitally important if the Lima target is to be reached. This target is by no means over-ambitious. Indeed, J. Tinbergen's contribution to this volume shows that it is in line with historical trends. Yet it can only be achieved if a large-scale international effort is made to co-ordinate the policies of all those involved in the process of world industrial development.

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World industrial development and the transnational corporations: the Lima target as viewed by economic actors

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Each of the main areas involved in the shaping of a new international economic order is characterized by the response it provides to two interrelated questions of crucial concern: that of who controls the evolving forms of international economic interaction; and that of for whose benefit should those forms of interaction work. With a few exceptions, as in the case of oil, past experience in effective international economic and power readjustments shows that the initiative has come basically from the countries of the North and their economic actors. Among the latter, the role played by the transnational corporations (TNCs) is central.

The TNCs represent the main operational institutions through which the North has chosen to structure its international production and exchange activities (both North-South and North-North). They are also among the most dynamically expanding participants in the international economy. During the past decade, even if increased forms of international oligopoly competition have been noted in some of the sectors where the TNCs concentrate their operations, the economic presence and importance of the transnational enterprise as an institution has been increasing unabated (as borne out by data presented below). The emergence of some important economic actors in the South, such as State enterprises, has not checked the advancement of the TNCs. Quite on the contrary, through the enhanced industrial activities of economic actors of the South, the linkages with the TNCs—notwithstanding the popular misconception—have in many cases increased, and more complex relationships in control and decision-making have emerged. A key outcome has been that non-equity forms of TNC operations, particularly since 1973, are becoming increasingly important. As a result of these trends, the TNCs are bound to play a crucial role in any future restructuring of North-South relations, especially in the area of industrial readjustments.

A sense of proportion is vital in order to understand the magnitude of TNC participation. Up to 1973, the market value of international production through the operations of the TNC exceeded that of international trade and was about one third of the world's gross output outside the centrally planned economies. During the 1960s, the growth rate of TNC international production was reported as about double that of world output, and as one half the size of world trade (Dunning [1]). The 1970s, beginning in particular with the world economic slowdown in the post-1973 period, showed a relative reduction in the growth rate of international business, which fell, in many cases, below that of world output (Rose [2]). In addition, host and home countries showed an increasing awareness and sophistication regarding TNC operations, and hostility towards their unchecked growth. The reaction of the host countries, particularly developing countries, reached its apex in the mid-1970s. Home country governments, particularly in the face of

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severe world economic problems, may also eventually adopt policies imposing more severe constraints on the activities of the TNCs (the initiative in this area will again rest with the North). Developments of this kind suggest that the global expansion of the TNCs will not confirm earlier apocalyptic predictions, according to which these enterprises will capture 60-70 per cent of world industrial output (Perlmutter [3] and Ball [4]). On the other hand, TNCs should not be viewed as a morbidly overgrown species of dinosaur threatened with imminent extinction. Instead, they are likely to continue to grow, adapting to changing economic environments and capturing significant parts of the world economy. However, the form of their participation may change, they may diversify their mode of operation, and rely less exclusively on foreign direct investment.

The extent to which industrial reallocations and readjustments at the international level (such as that represented by the Lima target) will contribute to the reduction of inequities at national and international levels and to the advancement of the overall development process of the third world will depend on the way in which the following broad issues are resolved:

- (a) How the industrial readjustment process will affect the international sharing of benefits from expanding economic activities;
- (b) How the benefits accruing to the third world will be shared within its member countries;
- (c) How the readjustment process will affect the overall productive structure of the third world;
- (d) Where the centres of strategic decision-making will be located in a redressed distribution of industrial activities.

The answers to each of these questions will greatly depend on the growing influence exercised by the TNCs, in industrial activities. Some of the most important implications, so far as the four questions are concerned, of the presence of TNCs are considered below. It would be useful, however, to begin with some general comments on existing practices of TNCs.

I. Morphology of transnational corporations

During the five-year period from 1971 to 1976, the book value of TNC foreign investments in the world economy increased by more than 80 per cent compared with the total volume registered in 1971 for all previous years. (The corresponding volume in 1976 was reported to be of the order of \$287 billion.)¹ Taking into account that output of affiliated firms in many cases increased faster than their equity investments, and that non-equity operations became increasingly important during the 1970s, the above-mentioned high growth rate underestimates the actual expansion of TNC activities. During this period, the sales of foreign-based affiliates of TNCs increased at average rates higher than those reported for their consolidated sales world-wide. As a result, increased international redistribution together with an expansion of activities was taking place.

Inter-country comparisons revealed high concentration indices in both the industrialized and the developing countries. In the 1970s, four industrialized

¹ Unless otherwise indicated, the figures cited are from United Nations [5].

countries (Canada, Germany, Federal Republic of, the United Kingdom and the United States) served as host countries for more than 40 per cent of the reported world-wide foreign investments. Since all four of these countries were also among the largest home countries of TNCs, foreign investments followed their longer-term tendency of being a two-way street among the developed countries. With regard to foreign investments reported in developing countries, more than 20 per cent were in countries belonging to the Organization of Petroleum Exporting Countries (OPEC), and another 27 per cent were concentrated in four large developing countries (Argentina, Brazil, India and Mexico). TNCs were primarily interested in developing countries with large internal markets or rich natural resources. In this connection, it should be noted that each of 80 developing countries has a population less than that of Belgium (10 million), and more than 100 have, individually, a GNP smaller than that of Belgium. In addition, 50 per cent of the stock of foreign investments in developing countries in 1975 was located in those having a *per capita* annual income of greater than \$1,000. Another 23 per cent was located in countries with a *per capita* annual income of between \$500 and \$999.

The above-mentioned high degree of concentration in countries with particular characteristics is complemented by a high degree of industry concentration in the operations of the TNCs within each country. Whereas at the international level the prevailing trends indicate a growing number of TNC and other participants in various sectors, at the national level the concentration in industrial production and wealth is increasing. The trend towards concentration "continues largely unchecked in developing nations."² As a result, the economic environment within which the TNCs exercise their growing strength does not reflect the law of large numbers. Instead, highly oligopolistic and concentrated structures have emerged involving the upper income countries internationally, as well as the upper income brackets nationally.

A further consideration is also of interest. In the late 1960s, developing countries accounted for about one third of the reported world-wide stock of foreign investments in industry (i.e. manufacturing, extractive industries and services). By the end of 1975, the corresponding share of the stock of investments in developing countries had dropped to about 25 per cent. This has often been interpreted as an overall consolidation of TNC activities in the industrialized countries and an "emigration" from developing countries, a trend contrary to the Lima target.

The disparity in the reported figures should be attributed, basically, to the large-scale nationalizations carried out by the developing countries in the mineral and petroleum sectors during the 1970s. In fact, the share of developing countries in the reported stock of foreign investments has been increasing in the manufacturing and service sectors during the 1970s. For example, in the mid-1970s, the combined book value of foreign investments in the manufacturing sector of developing countries by the major home countries (i.e. Germany, Federal Republic of, Japan, the United Kingdom and the United States) accounted for about 22 per cent of the total reported by those four countries world-wide. At the beginning of the decade, the corresponding figure reached a maximum of approximately 20 per cent. In the case of Japan, developing countries as host countries accounted for more than 77 per cent of direct manufacturing investments and for about 53 per cent of total direct investments reported by that country in the mid-1970s. Similarly, in the service sector, and for the four above-mentioned countries, developing countries accounted for just over 26 per cent of the book value of such investments world-wide at the

² United Nations [5], p. 54. For specific country examples see Newfarmer and Mueller [6].

beginning of the decade. By the middle of the 1970s, the corresponding figure exceeded 30 per cent.³ Thus, investment figures show that TNC activities in developing countries were increasing in percentage terms and approaching the Lima target in the case of manufacturing. The target was even surpassed in the service sector. It was only in the extractive and petroleum sectors that recent nationalizations reversed the third world share in the book value of reported investments. Yet even in this case, the TNCs have in many instances more than compensated for their virtual withdrawal from equity participation, through increased activities in technology, marketing and management contracts.

II. Transnational corporations and industrial readjustments to increase the participation of developing countries

A distinction should be drawn between, on the one hand, the capacity of TNCs to adapt to changing economic conditions and business opportunities, and, on the other, the role which they play in promoting or limiting certain structural readjustments in the composition and performance of the world economy. In the first case, the TNCs have undoubtedly proved themselves to be among the more flexible economic actors. Their growth speaks for their capacity to adapt and innovate within rapidly changing economic environments. Any industrial reallocation process in the North-South context will find the TNCs as active participants. At the same time, however, their economic and non-economic power is used extensively, in order not only to respond to exogenous economic conditions, but also to mould and structure them. In the latter sense, it is appropriate to ask what the main attitudes and activities of the TNCs will be with respect to a relative change in the world allocation of industry? The answer is a composite one, four aspects of which should be stressed: industrial reallocation in materials processing; import-substituting manufacturing activities; export-promoting industrial operations, and the services sector. Each aspect clearly involves different types of production and exchange activities subject to various qualifications, including the direction of technological change, differences between existing firms and newcomers, host and home country characteristics and government policies etc. Only the more important, common tendencies will be dealt with below.

Materials-processing activities

In the case of materials processing, the attitude (as distinct from the degree of participation) of the TNCs will be largely negative with respect to any reallocation of activities, because a major strategic interest is at stake. It concerns the need to secure their sources of supply within vertically integrated industries under their control. The process of nationalization of assets in natural resources, which has taken place during the 1970s in the third world, represents an attempt to remove one end of the vertically integrated structure of the corporate system.⁴ The TNCs counter-reacted

³In the case of United States foreign direct investments in the banking and insurance sectors, the developing countries accounted for about 24 per cent in the early 1970s and for more than 36 per cent by the middle of the decade.

⁴One at least short-term effect of the nationalization process has been the reduction of exploration activities by the TNCs in the third world.

by promoting alternative control mechanisms over the nationalized enterprises (Moran [7]). They also entered into long-term procurement arrangements in exchange for non-equity finance and technology, and tried to keep downstream industrial activities under their own control, outside the third-world countries. Under this strategy, governments of developing countries that nationalized TNC assets at the raw-materials level often found that they had to sell their output to foreign-controlled processing and distribution outlets frequently owned by the same parent firms whose assets had been nationalized. Thus, reallocation of processing activities in the third world will be bitterly fought by the TNCs, since such a reallocation could dilute the companies' control over their vertically integrated industries (Radetzki [8]). In this effort, the TNCs are likely to be aided by their home country Governments, which for strategic and economic reasons, and partly as a result of TNC pressures, have set up a cascading structure of tariffs on processed material imports.

The degree to which such a TNC strategy will be successful will depend on the following: certain policies of host countries which increasingly link co-operation in extractive activities with TNC assistance in local processing;⁵ the arrival of newcomers and independent firms on the international scene; and the attempt by certain industrialized countries (especially Japan) to correct unemployment and growth problems at home through the sale of equipment, plant, technology and other services within the framework of foreign investment activities in materials processing (Council on Industrial Structure [9]).

Import-substitution manufacturing activities

The area in which the TNCs will continue to play their most important role in the distribution of industrial operations internationally will be that of import-substitution manufacturing activities of developing countries. Despite increased and well-publicized TNC exports from the third world during the present decade, the share of local sales in the total volume of operations of manufacturing foreign affiliates in developing countries has been increasing (Helleiner [10]). The model of foreign direct investment in manufacturing continues to be basically an import substitution model. This is particularly so in Africa and Latin America, but it is also true in South-east Asia.

The TNCs will relocate certain manufacturing activities in developing countries as a response to two underlying longer-term economic trends: first, the increasing share captured by industrial activities in general and manufacturing in particular in various developing countries as the latter's income rises above certain levels; second, the levelling-off of various manufacturing operations and the increasing importance of service and related skilled-labour activities in the developed countries. Oligopoly competition—through the threat of market pre-emption by other TNCs—and host government policies will continue to prove the most important catalysts in this spatial movement of manufacturing operations.

The manufacturing activities of TNCs in the past have not significantly and directly contributed to net income generation in developing countries (Lall and Streeten [11]). In the case of manufacturing, instead of being market-creators (in the

⁵Such has been the case of Jamaica in its recent negotiations with the bauxite-aluminium companies.

sense of significantly and directly contributing to the social net income generation of their host developing countries), the TNCs will basically tend to follow the market. They will be attracted by the growth potential of markets in developing countries. On the other hand, market creation by the TNCs will be largely related to their extensive advertising activities. The latter promote product differentiation and variation in consumption patterns.

Specific subsectors will tend to take the lead in industrial relocation in different parts of the third world. The automobile industry, which at present in Latin America accounts for about one third of the sales volume of all foreign direct investment in manufacturing (Vaitsos [12]), will have an increasing role to play in the larger countries of South-east Asia. Light consumer durables and non-durables will be important in Africa, while industrial intermediary products and capital goods will prove quite significant in Latin America in future.

Export promotion

In the case of exports of manufactured goods from developing countries, two important considerations relate directly to the role of the TNCs. First, these enterprises have been ranked among the major international users of labour-intensive technologies in certain manufacturing activities. In some sectors, such as electronics, various TNCs have reallocated a part of their operations in developing countries so as to take advantage of the relatively low wage level existing in such countries. Second, the major barriers to the entry of manufactured exports from developing countries into the industrialized countries appear to be not of a technological, but of a marketing nature. In the latter case, product differentiation practices, foreign control of distribution outlets, and protective measures by Governments of developed countries are among the key constraints on the expansion of manufactured exports from developing countries. By helping to deal with such constraints (even through the exertion of pressure on home governments),⁶ the TNCs can provide significant assistance to the export performance of developing countries. For example, during the 1970s, affiliates with United States majority ownership based in developing countries accounted for about one third of total United States merchandise imports from the third world. However if petroleum is excluded, the figure becomes approximately 10 per cent (Chung [13]).

Although the role of TNCs in third-world industrial exports is undoubtedly quite important, its overall significance has been greatly exaggerated and over-publicized. Even in the case of Asia, which is presented as a major TNC export success story, the TNCs do not account for a commanding share of total exports.⁷ Other economic actors in the developed countries, such as retail and procurement houses, appear to be equal or even more important contributors to export performance (Hone [14]). Moreover, locally-controlled firms in the Republic of Korea proved to be equally

⁶ Existing commercial barriers set up by Governments of developed countries are to a large extent applicable to imports from developing countries when such goods are manufactured by locally-owned third-world enterprises (e.g. textiles, shoes, steel). In contrast, products which are manufactured and traded by TNCs (such as electronic products) do not confront similar trade barriers in the home country of their parent firms.

⁷ In the case of the Philippines, which has one of the highest levels of foreign participation, the TNCs were reported as accounting for about 25 per cent of manufactured exports. In India, the corresponding figure is below 4 per cent.

active participants in the export drive. National firms also tended to have, for similar export activities, fewer imported inputs and a higher ratio of value added to sales than foreign firms (Cohen [15]).

In fact, "contrary to widely-held views, vertically integrated transnational enterprises may not be taking over increasing shares of developing country trade" (Helleiner [16]). For example, if petroleum is excluded, foreign affiliates of United States TNCs are reported as accounting for decreasing proportions of developing country exports to the United States (Chung [13]). Similar conclusions were reached for intra-group trade among developing countries.⁸ Despite their relatively high participation in the manufacturing export performance of developing countries in the past, and despite their transnational status, which enables them to play a role of potentially major importance, the TNCs are not likely to contribute significantly, at least in the medium term, to a world reallocation of manufacturing activities through high exports from developing countries. There are three basic reasons for this. First, continuing low levels of economic activity and high unemployment in the industrialized countries make these firms particularly sensitive to official monitoring of their operations by their home governments, for fear of possible involvement in the export of employment opportunities to developing countries (Samuelson [18]). They are also coming under increasing criticism from organized labour groups in their home countries (International Confederation of Free Trade Unions [19]). Second, the establishment of parallel subsidiary activities in neighbouring developing countries—partly in response to the import-substituting policies of each individual host government—implies that the evolving segmented structure of TNC production in developing countries is likely to prove in future a major obstacle to the growth of manufacturing activities through the expansion of intra-South exports.⁹ Third, planned labour-saving technological development (as in the case of the electronics industry) will induce migration back to developed countries of industries previously attracted by exports from low-wage third-world markets.

Service sector

The service sector is an area in which the TNCs are likely to continue to promote substantial reallocation of certain activities to the third world. In this case, the reallocation process will be a derivative of, or be induced by, two underlying forces. First, the international location of certain service activities, such as banking, insurance, engineering and consulting, has been shown to follow (with a few years lag) the location patterns of TNC industrial operations. To the extent that these firms will continue to increase their participation in the expanding import-substituting activities of developing countries, the reallocation of certain service activities will follow. Second, the nationalization processes in the minerals, oil and commodities sectors of developing countries has brought about a transformation in the type of TNC participation: equity involvement in these sectors is being replaced by service arrangements. The existing evidence suggests that service activities have been one of the highest growth areas of TNC operations in developing countries during the 1970s.

⁸ For the case of Latin America, see Casas [17].

⁹ For an analysis and empirical evidence on Latin America, see Vaitos [12], chaps. I and II.

The conclusions drawn from the foregoing analysis may now be summarized. TNC efforts to promote reallocation of industrial activities to developing countries are likely to be concentrated on import-substituting manufacturing activities and related services. With regard to primary products and commodities, a transformation is taking place, characterized by TNC non-equity involvement in areas which were traditionally covered by foreign direct investments. In the case of materials processing, which will probably result in sizeable investments and operations, the TNCs and their home governments will resist reallocation, except in the case of pollution-intensive processes. However, reallocation and TNC participation will take place largely as a result of policies followed by Governments of developing countries. In the coming years, the area which, in relative terms, is unlikely to prove a major contributor to TNC-induced industrial reallocation is that of exports of manufacturing products from developing countries. Technological change, economic crisis in the developed countries and established parallel investment activities by TNCs in the third world could very well prove the most important obstacles to such export activities.

III. Implications of TNC-induced industrial reallocation to developing countries

International equity issues

To the extent that the TNCs exercise control over a significant part of any process of reallocation of industrial activities to the South, the latter will obtain only a portion of the resultant benefits. The remainder will accrue to the TNCs and other economic actors of the North that sell goods and services to the South as a result of the TNC operations. Gross industrial statistics do not show which economic actors profit from such activities, nor do they reflect their net local impact. Yet, even in the absence of direct TNC involvement, if industrial reallocation to the South brings greater complexity and depth to the production process, then imported inputs from the North will probably be used. The conditions of acquisition and, of greater long-term importance, certain crucial matters relating to the delegation and scope of strategic economic decision-making authority could, however, be quite different.

As a result of both TNC practices and host government policies, there exist certain conditions under which reallocation to and expansion of industrial activities in the South could lead to net income losses for the latter, even if benefits continue to accrue to the North. Such conditions of "immiserizing growth" involve the following elements: a high import content in the industrial expansion of the South; numerous possibilities for effective income remittance through transfer pricing in TNC interaffiliate exchanges; broad access to scarce host-country resources by foreign firms, in such a way that the latter either pre-empt or displace alternative lines of development in the host economy; and high tariff and non-tariff barriers raised by the host government or established through product differentiation by the TNCs in their import-substituting industrial activities in the South, or through high subsidies offered to them for export promotion.¹⁰

Once the decision has been made for the location of certain industrial activities in the South, two sets of fundamental but opposing issues will prove crucial in

¹⁰ For empirical evidence on the implications of such conditions, see Lall and Streeten [11].

determining the international distribution of benefits. On the one hand, the increasing awareness, sophistication and bargaining skills of developing countries vis-à-vis the TNCs will certainly make it possible for host countries to achieve better terms in future. Moreover, the emergence of alternative sources of supply of productive inputs in the world economy will improve the options available for meeting the needs of developing countries. In fact, playing one TNC against another might become one of the strongest negotiating cards at a country's disposal in future international business dealings.

On the other hand, although the developing countries' knowledge and potential capacity to bargain more effectively with the TNCs is improving, their political will to do so might be diminishing. Such a reduction in political firmness may be due in part to the economic impact of the slowdown in the world economy on developing countries, particularly in the area of foreign debt management. The political will of developing countries may also have been seriously affected by the emergence in the South of various regimes whose survival often depends, in part, on the acquiescence, if not support, of foreign economic and political centres of power. Finally, the growing influence exercised by the TNCs on small but well-organized and powerful local groups in the South has given them a domestic base from which to press their interests on the host governments.

An additional factor has strengthened the bargaining power of the TNCs in matters relating to the international distribution of benefits. It is based on the internal functioning and organization of the TNCs, and concerns the growing importance of related-party transactions in the international trade of goods and invisibles. For countries such as the United Kingdom and the United States, transactions of this kind, which supersede the market system, account for 40-50 per cent of their total external trade in industrial goods (UNCTAD [20]). In the case of royalties from technology licensing, about 80 per cent of United States receipts are on an intra-firm basis (United Nations [5], p. 70).

National equity issues in the South

The impact of TNCs on international equity questions can be altered through changes in the exercise of relative bargaining power. However, the scope for direct change in the national equity impact appears to be quite limited. The TNCs have not been created to promote equality, but to generate surplus concentrated among relatively few enterprises operating within oligopoly markets. This basic aim clearly does not depend solely on their foreign and transnational status within the host countries. It is more a question of the types of products and business activities pursued. Nationally controlled enterprises in the same sectors and product lines will tend to produce comparable distributional results. The key questions in this context concern, on the one hand, the ability of the host country to capture, basically through fiscal means, the surplus generated by the TNCs, and, on the other, the commitment of the host government to use this surplus to promote social and economic justice.

The direct employment effect of the TNCs in the third world is extraordinarily small in relation to their economic power. The industrial TNCs in all the developing countries are reported as employing between 2.5 million and 4 million people (Vaitos [21]), which represents only a small multiple of the direct employment effect

of the handicrafts industry in Mexico. Even this figure could be misleading in employment terms, since the operations of the TNCs might, and often do, displace previously operating national firms. Of greater importance, particularly for the less developed among the developing countries, is the displacement of locally produced traditional goods (which have a high local input content and create considerable employment) by modern goods (which have a high imported intermediate content and use employment-saving techniques). This trend has been observed in Africa in the case of textiles, shoes, soap, detergents and similar products (Langdon [22]).

In the consumer-goods sector, the TNCs concentrate on advertisement-intensive products that cater to the consumption needs of the higher income brackets. The resultant impact on both production and consumption helps to sharpen rather than alleviate economic and social divisions within developing countries. Moreover, there are certain fundamental technical factors—in addition to socio-political ones—which tend to limit the direct participation of TNCs, except for those providing various intermediate goods and services such as fertilizers, massive irrigation projects and power generation, in efforts to meet the basic needs of the poorer strata of the population in developing countries. If the acknowledged direct and indirect impact of the TNCs on the political and cultural life of the host countries is also taken into account, it will be seen that an industrial reallocation process dominated by the TNCs is more likely to produce conditions that intensify rather than relieve social injustice and poverty in the third world. On the other hand, the use of the acknowledged skills of the TNCs in the development process may have potentially favourable indirect effects, especially in the generation and capture of surplus and the overcoming of certain technological and organizational constraints.

Impact of transnational corporations on the productive structure and the centres of strategic decision-making

The conduct of the TNCs has the following three main characteristics:

(a) TNCs provide, across national frontiers, a set of technological, organizational, marketing and other inputs, some of which may be company-specific or, more importantly in development terms, lacking in the host economy;

(b) The inputs are provided in a packaged form and the TNCs attempt to maintain them as captive as possible within their corporate structure;

(c) The basic decisions concerning the allocation of resources and, to a large extent, pricing rest not with the acquiring firms in the host country, but with the supplying firms in their regional or global headquarters.

Each of the above-mentioned characteristics has different implications for the host economies. To the extent that TNCs provide certain essential inputs, they help to overcome specific technological and other production problems, and hence to improve the local production structure. The indirect effects of TNC operations, by generating other productive activities in the host economy, might therefore be far more important than the directly observed effects. On the other hand, since such inputs are provided in a packaged form (so as to ensure oligopoly returns to the TNCs through tied-in sales), the host countries are precluded from utilizing or developing a part of their own productive resources. The result is a loss of

opportunities for "learning by doing" certain activities and skills, since the latter are directly provided by the TNCs. As has been correctly noted, the greatest disadvantage of the TNCs stems from the complete nature of their contribution. Furthermore, the captive status of key inputs within the corporate system means that a great deal of the most important skills and capabilities are neither transferred to the host economy, nor ceded by the TNC, nor assimilated by local economic actors. Finally, foreign-based centres of strategic decision-making for TNC operations make the evolution of the host economies, both in sectors where such firms participate and in some related sectors, dependent on economic actors foreign to the host countries. This type of decision dependence could have a crucial impact on a country's economic and social development.

The shape given to the productive structure of the host economies as a result of the interplay of all aspects, both positive and negative of the issues outlined above will depend on two further considerations: first, the extent of overall foreign presence in the host country; second, the level of development of its local productive sector and the nature of its economic programming and decision-making. For economies such as those of Japan and the Eastern European countries, which first developed the basis for their own productive structure, which have a relatively small foreign participation in their domestic economy, and which have established procedures of economic programming and decision-making, the relative openness recently shown to the TNCs could provide the means of bridging certain technological and production gaps without endangering the whole economic structure.

However, for most of the countries of the South, the above-mentioned pre-conditions do not exist. The net impact of TNC operations on their productive structures might therefore often reflect more of the negative aspects of the company's operations (i.e. packaged and captive nature of resource flows and foreign centres of decision-making), even though certain types of industrial growth may occur as a result of the foreign contribution. In fact, inter-country empirical evidence compiled over a period of time suggests the following evolution of the present relationship between the South and the TNCs: the richer a country grows and the more sophisticated its productive structure becomes, the more it becomes dependent on foreign economic actors and the more it might mortgage its future development.

The attainment of the Lima target through the reallocation of industrial activities in the South cannot be conceived as an end in itself. Its social legitimacy requires, as noted in the opening paragraph, a prior evaluation of who should undertake the reallocation process and whose interests it should serve.

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Industrial expansion in developing countries and implications for trade policies

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Introduction

The need to keep the markets for manufactures in the developed countries open, in consonance with the spirit of the liberal international economic order underlying the establishment of GATT, is clear today in the developing countries, even though their demands for commodity schemes to regulate international markets for primary products seem to point towards a less liberal international economic order. The reasons for this perception of the importance of open markets in developed countries are essentially threefold.

First, it is widely understood that the process of industrialization cannot be sustained in many developing countries over a very long period by counting on domestic markets alone. Thus the process of import substitution has to give way, at one stage or another, to an outward orientation which permits external markets to sustain industrialization on an ongoing basis.

Secondly, there is a growing awareness that the process of industrialization is both more effective and more efficient with export-promotion rather than import-substituting policies. For "primitive" agricultural and extractive economies, it is admittedly true that the choice between export promotion and import substitution implies, in turn, a choice between specialization in primary products and industrialization. This, however, is no longer the case once industrialization has been initiated, and the question then becomes one of whether the system of foreign trade will bias the industrial sector towards the home market (as in the case of over-valued exchange rates), or whether it will eliminate this bias and restore parity of incentives for the export markets. Under the latter policies, a number of empirical studies now suggest that export, and hence economic, performance is superior, and that industrialization can therefore proceed very rapidly.¹

Finally, the increased involvement of developing countries in the international capital markets during the 1970s, and the clear need for continuing success in export performance, so as to ensure debt servicing, and for the maintenance of confidence, so as to achieve growing capital inflows, only underline the necessity of an open international economy.²

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¹ Among the studies pointing to this conclusion are Bhagwati [1] and Krueger [2], based on a United States National Bureau of Economic Research project on foreign trade regimes and economic development.

² On the debts of the developing countries, the annual reports of the World Bank are a good source of information. A useful analysis of their distribution among developing countries and the mix of official and private borrowings defining the debt as of the mid-1970s, with estimates of aid that would be implied by debt write-offs on different conditions, is in Peter Kenen [3].

While this paper will focus primarily on the issues raised by the desirability of keeping markets in developed countries open to manufactures of the developing countries, the above-mentioned points also give rise to the following considerations:

(a) Highly successful developing countries, such as Brazil and the Republic of Korea cannot expect to have their markets closed to the manufactured exports of either developed or developing countries. The less developed among the developing countries can properly look upon the most prosperous as virtually developed countries with identical obligations to sustain an open trading system. Similarly, Governments of developed countries that have been absorbing increased developing country exports primarily from the most successful developing countries³ are under pressure at home, especially from the unions, to seek reciprocal guarantees that the markets of those countries will also be kept open to imports. Therefore, just as the successful developing countries have emulated Japan well in their export-promoting industrialization, so they will be under the same pressure as Japan to accept their emergence as developed or quasi-developed countries with corresponding obligations;

(b) The importance of trade liberalization among the developing countries, emphasized since the 1950s by eminent economists of various schools of thought but hampered by the generally restrictive trade policies of most of the developing countries, is only further strengthened by the reasons outlined above for an open economy;

(c) Finally, the increasing participation of the centrally planned countries of Eastern Europe in the trade, credit and technology markets of the North (i.e. the developed countries) has implications that are both competitive, hence probably detrimental to developing countries (for example, developing countries and socialist countries of Eastern Europe would bid for the same pool of internationally investible funds), and complementary, hence beneficial. From the latter point of view, still relatively unexplored, joint North-East manufacturing ventures in the South might be considered with the North and East supplying finance and technology, and with export agreements with the countries of the East in accordance with their established practices.⁴

I. Access of manufactures to the markets of developed countries

The question of maintaining assured access to the markets of developed countries has taken on particular urgency with the recent upsurge of protectionist pressures. There is some room for debate whether this upsurge is temporary or of long-term duration. The case for assuming that it may disappear with the restoration

³ Thus, between 1965 and 1975, according to estimates made at the World Bank by D. Keesing and associates, the share of East Asian countries in developing country manufactured exports to developed countries rose from 38 to 54 per cent, and that of Latin America (principally Brazil and Mexico) from 14 to 20 per cent. The overall share of developing countries in world manufactured exports, however, appears to have increased from 6.5 per cent in the mid-1960s to around 8.2 per cent in 1973 and 1974.

⁴ Such tripartite industrial co-operation was the subject of an UNCTAD Seminar on Industrial Specialization through Various Forms of Multilateral Cooperation, Geneva, 2-5 December 1975. See, in particular, the Chairman's assessment, which forms an annex to the report of the Seminar, with the present author's synthesis of the deliberations on the tripartite industrial co-operation projects. Desai [4], Guy de Lacharrière [5], Thierry de Montbrial [6] and Berman [7].

of fuller employment rests on the observation that, in the United States at least, the timing of these pressures coincided with a significant rise in unemployment during the 1971-1972 period, when the Burke-Hartke bill, with its remarkable ambition to put a crawling ceiling on all categories of imports, made considerable headway in the United States Congress. On the other hand, the same empirical observation may be used to show that the problem of protectionism is of a long-term nature. It would be indeed unrealistic to expect the problem of stagflation to be solved, at either the theoretical or the policy level, in the near future.

In fact, there are two other arguments that tend to reinforce the conclusion that protectionism is likely to endure as an important political force in developed countries. First, the available evidence suggests that the growth in imports from developing countries into the United States has hardly meant an absolute decline in the output levels of competing domestic industries. Thus, the case for serious injury, in accordance with GATT regulations, hardly exists for the industries that have been demanding protection. It seems as if the problem with low-wage or labour-intensive industries such as textiles, leather products etc. is simply that of secular decline in their employment levels as a reflection of rising wages, capital accumulation and possibly technical change. Complaints about imports therefore consist largely in externalizing rather difficult, secular adjustment problems of industries whose decline is due to factors extraneous to imports. But if this be the case, then protectionist demands are likely to continue, since problems of secular decline are endemic to growing societies. Secondly, as Erik Lundberg of the Swedish Academy of Science has noted in the case of Sweden, demands on the State have tended to multiply outside the United States to the point where the flexibility of hiring and dismissal that substantially open economies need in order to make trade adjustments may no longer be readily available; unions seem to act at times as if on-the-job security is part of the obligations that the modern welfare state must bear towards its citizens.

It is of great importance to the developing countries that the protectionist threats fail, and that the basic framework of a liberal, open international economic order remains intact, thus enabling them to benefit by an expanding world economy without real or threatened trade barriers. In this connection, in recent international discussions basically two alternative approaches have been proposed for the restructuring of the existing GATT framework (as defined by article XIX), and for dealing with matters such as voluntary export restraints (VERs) and the Long-Term Agreement on Textiles, which have been repeatedly applied outside the current framework, and which must therefore, together with article XIX, be viewed as part of the existing order (or disorder) with regard to the access of manufactures of developing countries to the markets of developed countries.⁵

Orderly marketing arrangements or organized free trade

One approach, favoured by government spokesmen of a number of developed countries and by some writers on the subject, would consist in following the example of the Long-Term Agreement on Textiles and carving up the world trading system into "orderly" markets, with controlled access by developing countries to the

⁵ For details concerning VERs, the agreement on textiles etc., see Bhagwati [8]. A briefer version, omitting some of the relevant tabular information, appears in Bhagwati [9].

markets of developed countries. Such a "system" is a misguided planners' dream. It is noteworthy that the textiles agreement has served to impose very effective entry restrictions on LDCs, while failing to place any restraints on the growth of the import-competing industry in developed countries, thus providing the best available evidence for rejecting such an approach if the interests of both the LDCs and a liberal international order are kept in view.

There is much to be said in favour of an approach that starts from the assumption that trade ought to be allowed to expand in its typically unpredictable manner, without the interference of bureaucrats and politicians, who, unable to foresee the areas in which, and the extent to which, beneficial trade will expand and contract, would tend to encourage selfish bargaining and constraints on trade that would reduce the prospects for rapid expansion of developing country exports. An instructive exercise for spokesmen of developing countries who feel inclined to accept suggestions by developed countries for such a shift in the world trading system would be to calculate the decline that would have occurred in their manufactured exports if the rates of expansion of quotas provided for in the textile agreement had been applicable to all other developing country exports in Standard International Trade Classification (SITC) categories 6 to 9.

Revision of GATT

A far sounder approach would therefore consist in modifying the GATT framework in such a way as to reflect current developments while preserving the original notion that trading rules constitute an order, and that a fair and consistent framework for restricting the use of trade barriers is necessary to enable governments to stand up to special interests calling for protectionism (or, in its euphemistic version, "organized free trade").

The Bhagwati proposal

An approach along the above-mentioned lines, which takes into account the growing tendency of developed countries to bypass article XIX of GATT has been proposed by this author. The rationale for the specific elements of this proposal is as follows. The threat of protectionist restrictions being applied by importing countries on the grounds of market disruption clearly implies a welfare loss for the exporting countries. The economic welfare of the exporting country will be less than if there were no such threat. If the exporting country reacts in turn by the adoption of optimal policy measures designed to restrict exports and to reduce the likelihood of recourse to VERs or similar constraints related to market disruption, then the welfare loss from the threat of restrictions will be less than if the exporting country took no such action, but there will still be a loss. Moreover, if investment allocations, once introduced, cannot be readjusted without costs, then the presence of adjustment costs will further increase the welfare loss from the threat of trade restraints. Finally, the actual application of trade restraints would inflict a welfare loss on the exporting country in excess of the expected loss from the threat of such restraints at a future date.

From the general theoretical principles outlined above, certain compensatory arrangements would seem to follow. First, there is a case for asking importing developed countries to compensate exporting developing countries faced with threats of trade restraints related to market disruption. The developed countries can reasonably be asked to "buy", by means of compensation payments, the right to demand, for a given product, the application of trade restraints related to market disruption, and to forgo the right to resort to trade restraints on all products not covered by such payments. Thus a list of "restrainable" items can be prepared under multilateral auspices such as GATT, and the inclusion of an item in the list would require compensation payment for threatened exporters incurring corresponding welfare losses. In addition, the actual application of such restraints, by imposing a greater loss, would require further compensation to the adversely affected exporters.

Compensation for potential and actual losses incurred by exporting countries as a result of trade restraints related to market disruption would therefore be the logical outcome of this analysis. The rules governing the compensation process and their implications with regard to the modification of article XIX of GATT and related provisions need to be developed in greater depth. These rules may be defined in a number of ways.

(a) *Penalty or compensation for potential restrictions.* For the reasons stated above, a list of "items potentially subject to trade restrictions related to market disruption" should be maintained. This list may be described as the list of potentially restrainable items.⁶ In order to include an item in the list, the developed countries would be required to pay a "penalty" that could be used to compensate exporting countries subject to welfare loss as a result of the threat of trade restraints on the item;

(b) *Penalty or compensation for the actual application of trade restraints on potentially restrainable items.* As and when trade restraints are actually applied, there should be a further penalty payment for the compensation of exporting countries whose export market interests are prejudiced as a result of the restraints. The penalty so imposed, if it is to reflect the compensation due to the exporting countries, must be less than the actual cost of the trade restraints, taking into account the adjusted sum originally paid for putting the product on the list of potentially restrainable items;

(c) *Escape clause applicable to the list of potentially restrainable items.* While the two preceding rules should, in principle, divide all items into those that are restrainable and those that are not, this is politically unfeasible. There will almost certainly be cases in which unforeseen and politically unmanageable difficulties arise concerning products not already included in the list of potentially restrainable items, and the importing developed country will be unable to avoid responding to political pressures for trade restraints.

An escape clause applicable to items not included in the list would therefore be appropriate. At the same time, since the escape clause should not provide an incentive to avoid the option of including such items in the list of potentially restrainable items, it would be equally appropriate to make the invoking of the clause both more difficult and more costly. Thus, the escape clause should require that the importing developed country be allowed none the less to resort to trade restraints on

⁶ A parallel to this recommendation may be found in the practice of "binding" tariffs in advance.

products not on the list of potentially restrainable items, provided that, on the one hand, it makes a demonstrable case, under multilateral (GATT) auspices, of the existence of serious injury (as under the current provisions of article XIX of GATT), and that, on the other hand, it then makes a considerably larger penalty payment for the compensation of the exporting countries. It would also be necessary in practice to keep a product on the list of restrainable items for a substantial amount of time before permitting recourse to trade restraints in relation to that product. Otherwise, if a period of only a few weeks or months were required, it would be to a country's advantage to wait until the period elapses rather than invoke the proposed escape clause, which involves higher penalties;

(d) *Automaticity of compensation.* The penalty or compensation would be automatic under the preceding rules, rather than representing a mere possibility as is currently the case under article XIX of GATT. This would rule out the use of political pressure to avoid this obligation when resorting to trade restraints;

(e) *Financial form of compensation.* The above rules require financial compensation, in contrast, for example, to the type of compensation currently provided for under article XIX, which takes the form of either the granting of a new tariff concession (on another product) or the withdrawal of a tariff concession by the exporting country. The latter method reflects the tariff-bargaining framework in which GATT rules are enmeshed. It is basically unsound, since permitting an exporter to raise retaliatory tariffs as a form of compensation presupposes that such tariffs are advantageous, whereas in fact they are likely to cause even more damage through further restraints on trade, and to disrupt yet another market in seeking redress for the original market disruption. The financial form of penalty or compensation provided for in the rules suggested above is free from these obvious defects;

(f) *Compensation to exporting country.* The preceding compensation rules may be applied solely to exporting developing countries, which are the main countries (with the exception of Japan) to have been seriously affected by the restrictions on textiles and by VERs.⁷ There is in fact a greater willingness, in the context of the new international economic order, to make reasonable adjustments on behalf of developing countries through the framing of new trade regulations. The financial flows thus generated are likely to be of far greater significance to developing countries than to developed countries, taking into account their respective needs.

The foregoing set of rules, essentially involving the compensation of exporting developing countries by importing developed countries, are not entirely novel in their reference to the potential use of trade restraints, since the well-established practice of the binding of tariffs implies waiving the potential use of restrictions. With regard to the notion of compensation itself, there appear to be no obvious precedents. However, a partial precedent, which suggests that the preceding proposals are entirely feasible, concerns the payment by the United States of a substantial sum as compensation to the Government of Turkey for the enforcement of the ban on poppy production. The use of this money to compensate Turkish farmers would in theory have made it possible for them to shift to another type of cultivation at no financial loss.

⁷ VERs have affected Japan seriously. In some cases, such as that of steel VERs in the United States, the impact was felt by developed country exporters, and imports were initially diverted to developing countries, which thereby benefited.

The Singer proposal

In this context, note should be taken of a recent proposal of Hans Singer for compensatory cash payments to be made by developed to developing countries for loss of markets arising from unilateral imposition of trade barriers. He argues that "developed country compensation is due to damaged developing country producers."⁸ Interestingly, the Nobel Laureate Jan Tinbergen, in 1962, had also briefly suggested the desirability of financial compensation to exporters faced with market losses as a result of tariff changes, a proposal developed in connection with tariff changes arising from the establishment of the European Economic Community (EEC).⁹

Preferred mix of GATT and developed country policy changes

The author would prefer a comprehensive change in article XIX of GATT on firm theoretical foundations, in keeping with GATT's original philosophy of maintaining open markets, along the lines of the proposal presented earlier in this paper.¹⁰

At the same time, it should be noted that the proposed rules would be considerably strengthened through the implementation by developed countries of the following two policies, one of which is being gradually extended in scope.

(a) To the extent that the response to foreign imports, or to domestic decline due to other reasons, consists in providing domestic adjustment assistance to enable factors of production to retrain and relocate, the need to resort to trade restraints will be correspondingly reduced by making the pressures from the industry for such restraints both less intense and politically less difficult to resist;

(b) Elementary principles clearly show that trade restraint, as a means of sustaining the production level of domestic industry, is inferior to the use of a production subsidy, from the standpoint of the importing developed country itself.¹¹ It is equally obvious that the use of a production subsidy will expand the overall market for the imported item in the developed country, while a tariff, by increasing the consumer price, will reduce it. Therefore, since domestic production must be maintained at a suitable level, the use of a production subsidy by the importing developed country would be preferable, from the standpoint of the

⁸The Singer proposal and that put forward by the present author, although similar, are different in theoretical approach. For example, whereas the author's proposal provides a theoretical basis for paying compensation to Governments of developing countries, the former proposal suggests that the compensation is to be paid because Governments of developing countries may have a fiscal constraint on paying adjustment assistance to developing country producers. See Joekes, Kaplan and Singer [10].

⁹Singer [11], which however contains no detailed theoretical basis for the proposal.

¹⁰The mechanics of changing article XIX to incorporate the contents of the Bhagwati proposal have been outlined in Bhagwati [8].

¹¹This is one of the important policy prescriptions from the theory of optimal policy intervention in the presence of non-economic objectives, arising from the fact that the tariff imposes a consumption cost by raising prices for consumers, which would be avoided by a production subsidy, while equally protecting domestic output. See Bhagwati and Srinivasan [12].

exporting developing country, to trade restraints.^{1 2} Thus it would be useful if the overall reform in the field of trade restraints related to market disruption were to include a multilateral agreement by developed countries to use production subsidies rather than tariffs or trade quotas, whenever trade restraints are invoked under the rules specified above. The exceptions to this code could include emergency situations in which an immediate trade quota may be necessary, in which case the quota could be phased out and gradually replaced by a production subsidy on a multilaterally agreed schedule.

II. Conclusions

An alternative view that requires consideration is that the threat of protectionism is so serious, and the executive authorities' political ability to resist it so strained, that it is best to leave things as they are. Kenneth Dam, the United States lawyer, forcefully advocates this view, contending that recent attempts to change trade rules in the United States have led to an erosion of the principle of free trade. This view would seem to be reinforced from another source. Jan Tumlir of GATT has often spoken recently of the threatened breakdown of the liberal trading order, drawing attention to the numerous attempts at imposing VERs, the firm position adopted by the EEC on renegotiation of the textiles agreement, and the general attitude of spokesmen of developed countries in trade negotiations, who seem to proceed on the assumption that access to the markets of developed countries must be treated by LDCs as a privilege to be negotiated, whereas membership of GATT implies that this is not a privilege, but a right.

If indeed the situation is so fragile, one may well wonder whether, from the vantage-point of the twenty-first century, the post-war period will be seen as a short-lived experiment in restoring free trade in commodities, and whether trade in commodities will have come to be accepted as an area subject to strict regulation by governments through international negotiations and the resulting quotas or price barriers. Viewed from a historical perspective, this possibility cannot be altogether dismissed. Immigration restrictions, for example, are today taken for granted, with human-rights advocates showing a curious absence of any pangs of conscience over the implied loss of the right to live where one chooses. One wonders how many people realize that immigration restrictions are of twentieth-century origin, and that in the nineteenth century great world-wide migrations took place without passports or immigration quotas.

This author is not particularly alarmed by such a prospect materializing in the field of commodity trade. The viewpoint represented by Kenneth Dam and Jan Tumlir seems very pessimistic even as a short-term possibility, and negotiated changes leading to a system incorporating some of the proposals contained in this paper should not be ruled out altogether. The North-South negotiations will be an unspectacular, ongoing process, from which constructive reform will emerge, as always, by means of slow evolutionary change.

^{1 2} This conclusion would have to be modified, but is not altogether nullified, if the domestic industry wishes to maintain a certain share of sales in the domestic market. The optimal policy intervention in this case, from the developed country's viewpoint, would be the combination of an import tariff and a production subsidy.

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The increasing entry of developing countries into the international industrial division of labour

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Main characteristics of the export of manufactured goods by developing countries

As a result of internal and international processes operating at the beginning of the 1960s, the value of exports of manufactured goods by developing countries amounted to \$6.4 billion in 1965, \$13.1 billion in 1970 and \$37.3 billion in 1974, according to various issues of the United Nations *Monthly Bulletin of Statistics*. Although the external conditions for export expansion deteriorated during the 1974-1975 period of stagnation of the developed market economies, the import of manufactured goods from developing countries by developed market economies declined only from \$25.8 billion to \$24.2 billion, as revealed by foreign trade statistics of the Organization for Economic Co-operation and Development (OECD), or simply stagnated, as reflected in various World Bank surveys. According to provisional estimates, the imports of manufactured goods from the developing countries by the developed market economies increased by more than 30 per cent in 1976 and by 10 per cent in 1977, that is, assuming a dynamics similar in scale to that for trade among the developing countries, for which there are political incentives, the combined manufactured goods exports of the developing countries probably exceeded \$45 billion in 1976, and \$50 billion in 1977.

The export orientation of industrialization in the developing countries proceeded with differing intensity and effectiveness in each region and country, and the evolution of exports of manufactured goods increasingly reflects differentiation of the world market position and structural development of the different countries. The greatest shift in position among the different developing regions arises from the strong advance of the South-east Asian countries, which set out earliest and most firmly on the path of export orientation. The share of the Asian continent (including that of the South Asian countries, which is declining, and that of the South-east Asian countries, which is sharply rising) rose from 57 to 62 per cent between 1965 and 1975, while that of Latin America rose from 20 to 26 per cent, and, at the same time, the share of the African continent dropped from 23 to 11 per cent.

The entry of the developing countries into the international division of labour is becoming differentiated. The main characteristics of this are as follows:

(a) The range of countries exporting manufactured goods has expanded. The number of developing countries with exports of manufactured goods exceeding a value of \$50 million was only 14 in 1965, but had risen to 40 by 1975;

(b) There is a high degree of concentration among groups of exporters, one of which, including Brazil, Chile, Hong Kong, India, Mexico, the Republic of Korea and Singapore, accounted for two-thirds of the exports of the developing world in 1974.

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A further 7 countries—Argentina, Colombia, Egypt, Kuwait, Malaysia, Pakistan and Thailand—accounted for 13 per cent of the manufactured goods exports of the developing world. At the same time, the combined share of more than 100 other developing countries was less than 25 per cent;

(c) The degree of concentration among developing countries exporting manufactured goods is increasing. The share of the five biggest developing exporters of manufactured goods in the total exports of manufactured goods by the developing countries was 21.2 per cent in 1965, and had risen to 49.1 per cent by 1974;

(d) Among the more important exporters of finished products, the growth rate was considerably slower than average for those having difficulty coping with the consequences of import-substituting industrialization or struggling with special political problems, such as Algeria, Angola, Chile, Egypt, India, Pakistan and Tanzania, which experienced a downward trend during the period under consideration;

(e) As a result of the rapid increase in exports of finished products, the export structure of a number of developing countries shows signs of advancement beyond the framework of a monocultural economy. In the smaller countries of South-east Asia, industry is now the driving force of economic growth and of entry into the international division of labour. In the large countries of Latin America endowed with greater natural resources, geographic characteristics are playing a still more important role in determining the direction of specialization, although during the past decade the structural diversification of external trade has greatly accelerated as a result of the export orientation of industry.

The growing differentiation of the growth processes and of the external economic positions of the developing countries is also reflected in the transformation in the product structure of their exports of manufactured goods. In the course of the century preceding the early 1960s, the structure of the exports of manufactured products by developing countries was unfavourable from the point of view of economic growth, technical progress and the strength of their market positions, and consisted largely of light industry products and metallurgical articles representing a lower level of processing, growth incentive and demand elasticity. In 1965 machines represented barely 6 per cent of the exports of finished products by the developing countries.

The complex changes that took place over the past decade made it possible for developing countries to go into engineering industry exports. Between 1965 and 1974 total exports of manufactured goods by developing countries at current prices increased sixfold while at the same time their exports of machinery and installations increased seventeenfold, from \$395 million to \$6.750 billion, and the share of machinery rose to over 3 per cent of total exports and over 18 per cent of exports of finished products, despite the shift in world market price relations. The main engine for machinery exports was electro-industry products, which exceeded 50 per cent of the total supply, while new products such as machine tools, business machines, transport vehicles and instruments also appeared on export lists.

Exports of chemical industry products, forming the other important line of technical and structural development, rose from \$510 million to \$3.360 billion in the period under study, that is, an increase slightly higher than the growth rate for exports as a whole. The export of metallurgical products grew at a slower rate than average. Engineering, chemical and metallurgical industry products together

represented one fifth of the manufactured exports of the developing countries in 1965, and 31 per cent in 1974. The problems and interrelationships of exports of manufactured goods by developing countries have become more varied, and can no longer be identified by reference to a few light industry products.

Light industry products still represent a decisive, although declining, part of the export of finished goods by the developing countries. Surprisingly, the export of light industry goods increased fivefold in the period under consideration, and was only slightly below the average growth rate for exports as a whole. Because of the limited statistics available, the dynamics of the most important light industry product groups can only be studied in a combined form from 1970. Between 1970 and 1974, when the volume of exports of finished products by the developing countries was multiplied by a factor of 2.8, the value of textile industry products rose from \$1.9 billion to \$5.0 billion, while that of more labour-intensive garment industry products rose from \$1.3 billion to \$4.8 billion. The share of textile and garment industry products within total exports of finished products rose from 24 per cent to over 26 per cent between 1970 and 1974. Exports of footwear representing 8-10 per cent of exports of finished products also had an above-average growth rate.

Anticipated trends in the export of manufactured goods by the developing countries

The efforts to increase the developing countries' share of world industrial output to 25 per cent by the year 2000, which is the target set by the Second General Conference of UNIDO held at Lima in 1975, and the manifold tasks related to industrialization activities and the export of finished goods must be undertaken in a world economic environment characterized by a lower growth rate than in the past quarter of a century for the industrialized market economy countries and even for the countries belonging to the Council for Mutual Economic Assistance (CMEA), with an estimated annual average rate of real expansion in world trade of 6-8 per cent. A question therefore arises concerning the extent to which the historically unparalleled high rate of entry of the developing countries into the international industrial division of labour during the period 1965-1976 can be maintained. It is a key question, with implications for the internationally determined rate of industrialization and growth of the developing countries, and also for the overall evolution of international relations.

The entry of the developing countries into the international industrial division of labour is not linked to voluntarist decisions, but to objective social and economic processes unfolding on a world-wide scale. These processes may be rightly viewed as irreversible, both as a whole and in terms of their more important components.

The anticipated trend in exports of finished goods by the developing countries is presented in the table below on the basis of a survey made by the World Bank, which contains the most comprehensive available estimate. Two variants dependent on the commercial policy behaviour of the developed market economies are used.

According to the estimate, exports of finished products by the developing countries will increase between threefold and fourfold over the coming decade, at an annual average rate of 11.0-13.4 per cent. Researchers in the Federal Republic of Germany have reached a similar conclusion.¹ They assume an annual average

¹ *IFO Schnelldienst*, 29 April 1977, *DIW Wochenbericht*, 5/1975.

increase of 15-20 per cent in imports of manufactured goods to the Federal Republic of Germany from the developing countries.

In connection with the above-mentioned forecasts, it would be useful at this point to recall two basic assumptions. First, the growth rate of exports of finished products by the developing countries will remain higher than that of industrial output, hence industrialization will also be export-oriented in future. Secondly, exports of finished products by the developing countries will continue to expand at a more rapid rate than both their total trade and world trade, with corresponding shifts in the geographic and product structure of world trade affecting the different regions and countries to varying extents.

In the case of the developing countries, the growth of exports of finished goods is expected to continue, and by the middle of the coming decade finished products should represent a major part of their exports (excluding energy resources). Thus, with the exception of the oil-producing countries, trade in finished goods would by then be the major feature of participation by the developing countries in the international division of labour.

A further change is being brought about within the structure of exports of finished products by the above-average increase in exports of non-electrical machines and vehicles, estimated at an annual average of 15-16 per cent, and by the average

Anticipated evolution of exports of finished goods by developing countries

Countries	Value of exports				
	1974 (millions of dollars)	1985 (millions of 1975 dollars)		Average annual growth rate (percentage)	
		Variant A	Variant B	Variant A	Variant B
A. Countries with low income levels	3 288	7 290	13 550	8.0	15.0
Africa (excluding Northern Africa, South Africa and Southern Rhodesia)	303	555	960	6.0	12.0
Others	112	485	790	13.0	20.0
South Asia	2 873	6 250	11 800	8.0	15.0
B. More industrialized countries	25 965	78 620	90 400	11.5	13.2
East Africa	433	1 010	1 450	8.0	12.0
East Asia	17 462	55 000	56 800	12.0	12.5
Latin America	6 385	18 490	26 300	11.0	15.0
Middle East and Northern Africa	1 685	4 120	5 850	11.0	15.0
Total	29 253	85 910	103 950	11.1	13.4

Source: World Bank, "Trade liberalization and export promotion", World Bank Staff Working Paper (Washington, D.C., 10 June 1977), p. 18.

Note: The two variants used are dependent on the commercial policy behaviour of the developed market economies.

expansion of 7.5-10 per cent per year in exports of light industry products. If the more favourable development variant materializes, 34 per cent of the total export of finished goods by the developing countries will be products of the engineering industries by 1985, 10 per cent will consist in products of the chemical, and 6 per cent in those of the metallurgical industries.

The estimates suggest that entry into the international industrial division of labour would further intensify the process of differentiation within the developing countries. The combined share of the countries of Africa (excluding Northern Africa, South Africa and Southern Rhodesia) would decline to 2-3 per cent by 1985, while those of East Asia would represent 64-68 per cent, Latin America, 21-26 per cent, South Asia, 7-11 per cent, and the Middle East and Northern Africa, 5-6 per cent.

The further advancement of the developing countries in the international industrial division of labour largely depends not only on changes in world economic and political conditions, but also on the direction and effectiveness of the economic policy measures taken by individual developing countries. Although it is difficult to quantify and isolate the effect of these two main components (even though some estimates put the value of the industrial export increment that can be achieved by the developing countries through internal measures at two thirds, or at more than four fifths in the case of the least developed countries), the following sections of this paper will briefly discuss the most important internal and international conditions for an export-oriented industrialization effort.

New economic policy aspects of more intensive participation by the developing countries in the international industrial division of labour

The past fifteen years have clearly shown that developing countries following a conscious and comprehensive strategy of export-oriented industrialization have achieved remarkable results in accelerating their growth and industrialization, in developing the structure of their economies, and in improving their relative international market positions. On the basis of past experience and its long-term development consequences, it seems that the creation of export-oriented industrial projects and vertical industrialization involving the maximum possible use of local manpower potential and natural resources will continue to be the most practical strategy for economic development and industrialization for the majority of developing countries.

With regard to the debates on economic policy and on the subject of export-oriented and import-substituting industrialization, the developing countries are still frequently advised to combine a strategy of import substitution and export development. However moderate they may seem, these recommendations can only be applied at the sub-branch level. It is a fact that economic growth, including export-oriented growth, steadily widens the internal market and continually expands the range of import substitution, which is in itself a healthy process that should be encouraged through economic policy. However, at the level of the national economy, the combination or parallel application of two kinds of strategy (development and limitation of competition mechanisms, administrative guidance and indirect incentives, diversification and specialization etc.), which impose contradictory

demands on the system of economic policy choices and techniques, can easily lead to economic chaos and prolonged stagnation of growth, as the example of a number of developing countries shows.

It cannot be expected that countries which have gone through a long protectionist development stage can rapidly switch over from import substitution to export orientation at any given time. Employment problems and government sensitivity to lack of political balance during the period of transition, which might be prolonged in some cases, could make it necessary to apply simultaneously the two kinds of development policy in the different branches, but this in itself can neither make a virtue of necessity nor undermine the primacy of the export-oriented strategy, at least for the smaller countries.

The experience of the past decade also throws light on the degree of effectiveness with which the range of economic policy means of entry into the international industrial division of labour can be used. During the course of three decades the industrial policy of the developing countries was essentially industrialization and the creation of industrial capacities, and the main means used to attain this end were direct administrative guidance, a protectionist tariff and import policy, and foreign exchange restrictions. As the requirements of market competitiveness and efficiency came to the fore with growing export orientation, a bigger role in creating a healthier economic environment and defining its ground rules was played by the banking system, an aggressive exchange-rate policy, credit arrangements, a state-financed export promotion system, the establishment of export regions, the co-ordination of capital imports and structural policy, and the involvement of diplomacy in external economic tasks.

There is now an extensive literature comparing the degree of efficiency of the export incentive systems created in the different developing countries.² However, the success of the export-oriented strategy can be attributed not only to the incentive system, but also to the change in the economic role of the State and the system of state economic guidance. It is known that in most developing countries a reduction in the previously large number of ministries and state supervisory organs heralded a transition in development policy.³ Western political and economic theories frequently incorporate a concept identifying so-called inward-looking economic development with a strengthening of the economic role of the state and of centralism, while export-oriented development is identified with economic and political liberalization, a weakening of the role of central organs, and expansion of the decision-making sphere. There is now a rich store of historical examples to show that in countries becoming industrialized by a delayed process of free market economy development (e.g. the countries of Southern Europe and Latin America), the forced accumulation necessary for accelerated growth, the optimal distribution of income for export orientation, the low wage level ensuring comparative wage advantages, and the guarantee against strikes and expropriation have been largely secured through

² The Kiel World Economic Institute recently concluded its study of the incentive system of about 20 developing countries, the findings of which are reported in a study by J. Donges, "The expansion of manufactured exports", Kiel Arbeitspapiere No. 49 (Kiel, Institut für Weltwirtschaft). A comprehensive view of the subject is also given by B. Balassa, "Export incentives and export performance in developing countries", World Bank Staff Working Paper No. 248 (Washington, D.C., 1977).

³ When the concept began to change in Colombia and Brazil, for example, the 25-30 state permits needed to arrange a foreign trade deal was reduced by about four fifths, leading to an important increase in the speed of decision-making and turnover.

mechanisms involving the use of force and the centralization of political power. Thus, in the case of free market economy growth processes, the trends toward economic and political liberalization do not at all necessarily coincide.

Export orientation combining a delayed process of free market economy development and centrally planned development require, for special reasons relating to the problem of growth, an increase in and modernization of the economic role of the State. From the investment point of view, a number of factors explain the increase in the role of the central organs. Export orientation calls for accelerated development of the indirect components of market competitiveness (e.g. vocational qualifications, energy supply, transport, communications, social and cultural facilities), and consequently an increase in the proportion of non-productive (infrastructure) investments. The transition from import substitution to export orientation generally leads to a growth in the proportion of non-productive investments to 60-70 per cent, and a rise in the share of state financing. Certain larger investments to develop the production structure are also generally carried out with state participation. However, in contrast to the linear nature and excessive range of import-substituting industrialization, the necessary selectivity of export orientation calls for a narrowing of the production range and the elimination of enterprises that lag behind. Enterprises (both state and private) accustomed over a long period to a system of protectionism are not prepared to close down without producing a shock effect, although political constraints frequently prevent them from making such an impact. Thus, in countries changing over to export orientation, it is generally state intervention (transfer of ownership, subsidies etc.) that ensures the reorganization or merger of unprofitable enterprises, their transfer to less developed regions, and complete or partial closure. This process is naturally accompanied by centralization of economic resources.

A further problem is created by the fact that the growing tasks of modernization, managing technical progress, and adjusting to international economic and political processes require a monitoring capacity and an information basis generally not available at the enterprise level in the developing countries (except in the case of transnational corporations). The collection, assessment and publication of information is increasingly becoming a state task. Similarly, the more sophisticated system of guidance of export-oriented development, related to the increasing competition mechanisms and growing differentiation and complexity of economic interests within the economy, calls for a strengthening of the role of the State in the tasks of development, guidance, co-ordination and harmonization. It was no coincidence that upon changing their concept of development, a number of market economy countries engaged in "belated" industrialization, such as Brazil, Mexico, Pakistan and Spain, began to draw up indicative economic development plans for the private sector and compulsory plans for the state sector.

Finally, increased reliance on the international division of labour and a reduction in the problems arising from the asymmetry of power give urgency to the need to strengthen central economic machinery. In the case of export-oriented development, the developing countries are exposed to a far broader range of pressures from the more industrialized countries and the big multinational enterprises, which have much more powerful means (economic, technical, military etc.) at their disposal. The extent of the losses arising from the asymmetry of power can be reduced through greater centralization of economic power in the country concerned and fuller social control of natural resources and investment sources. Particularly important from this

point of view are a state monopoly of foreign trade and foreign exchange and the establishment of an external market organization on a centralized basis, without which the national private sector of the least-developed smaller countries is generally unable to cope with the problems confronting it.

The problems and the performance of developing countries that have set out on a path of export-oriented growth thus show that not only the re-evaluation of priorities in development policy, but also the establishment of a system of institutions and the leading role played by central bodies are of vital importance for lasting success.

Tasks of international adjustment related to export-oriented industrialization of the developing countries

The participation of the developing countries in the international industrial division of labour, owing to the historical development of the main target areas for their exports of finished goods, creates adjustment problems mainly for the developed market economies. Since the greater part of the export range of the developing countries is made up of price-sensitive products that are competitive as regards price but of low demand elasticity, the dynamic development of their exports is only possible if the industrially developed countries hold back their production and open up their import markets.

So far, the majority of more developed countries have waged a persistent rearguard struggle against wider liberalization, particularly during periods of cyclical increases in unemployment, and have explained their action by referring to the need to ensure employment and prevent market disruption. However, it is an economic fact that in branches of industry affected by the exports of developing countries, each worker employed in production makes superfluous, in the case of the OECD countries an average of \$20,000-\$30,000 worth of imports. Assuming an increase of \$50 billion in exports of finished goods from the developing countries to the developed market economies between 1976 and 1985, the import competition from the developing countries would lead to the loss of 1.7-2.0 million jobs in the developed market economies, that is, it would require the transfer of just under 3 per cent of the total number of persons employed in the processing industry over a period of 10 years. The unsoundness of using employment losses resulting from import competition as a pretext for protectionism is also clearly demonstrated by calculations made in the Federal Republic of Germany,⁴ which show that almost four fifths of the jobs lost between 1962 and 1975 were due to increased productivity, and barely 2 per cent to import competition from the developing countries. At the same time, other calculations have shown⁵ that the expansion of the purchasing power of countries increasing their industrial exports to the Federal Republic of Germany makes possible an increase in exports by the Federal Republic of Germany that absorbs 80 per cent of the manpower forced out of the branches that fall behind due to import competition.

In these circumstances, the demands of the developing countries for a ban on further import restrictions, for an end to the pressure exerted through so-called

⁴F. Wolter, *Adjusting to Imports from Developing Countries* (Kiel, Institut für Weltwirtschaft, 1976).

⁵*DIW Wochenbericht, loc. cit.*, p. 38.

voluntary import restrictions, for a reduction of quantitative restrictions and non-tariff barriers, for general trade liberalization (particularly for textile and garment industry products), for a further reduction in the tariffs directed against the developing countries, and for recognition of the justification of export subsidies offered by the developing countries to industry, all appear justified and are not likely to disturb the foundations for the growth of the developed market economy countries.

Although it would be risky in the present uncertain situation to attempt to forecast the future shape of international trade policy, certain indices nevertheless provide a clue to the direction, scope and pace of its long-term evolution. Thus, for example, in the United States, Congress in 1974 empowered the President to curtail tariffs by 60 per cent and to abolish those below 5 per cent on a mutually advantageous basis. Negotiations in this connection are expected to be completed by 1979, and the tariff reductions will be made over a period of 10 years. The harmonization formula proposed by the European Economic Community holds out the prospect of an average tariff reduction of 30 per cent, with a time limit on implementation up to 1990. Thus, the trade policy conditions for industrial exports promise to improve over the long term, even if not to the extent and at the pace desired by the developing countries.

The strengthening of the efforts aimed at the conceptual standardization of industrial policy, previously considered a weak link in the economic strategy of the developed market economies, the normative development of such a policy, the formulation of a long-term approach to its integration into the overall development strategy, and especially the new emphasis placed on structural policy, are closely related to the readjustment of the world economy. In order to promote structural adjustment to the new world economic situation, the market economies, in addition to traditional economic policy measures, are to an increasing extent offering advice, information and financial assistance for the establishment and operation of new enterprises, inter-enterprise co-operation, technical development, and the vocational retraining of manpower released from branches that lag behind or for transfers from one region to another. Although work on the development of structural policy and on the problems arising in a time of recession remains largely unfinished in the developed market economies, the avenues explored in search of solutions and the results, both positive and negative, of past experiences are worthy of consideration.

Although of less world economic impact, the problems relating to the industrial division of labour between the countries belonging to the CMEA and the developing countries are of an entirely new character. The centrally planned countries cannot refuse to support the entry of the developing countries into the international industrial division of labour on the grounds that this process is advancing under the banner of transnational corporations, serves the interests of "false" industrialization arising from a neo-colonialist division of labour, divides the developing countries, and hinders the development of East-West relations.

Transnational corporations as yet account for only one third of the exports of finished goods by developing countries, which, if neglected by the centrally planned economies, would not be able to find an alternative to co-operation with the transnational corporations and the leading market economies. Nor would it be against the long-term interests of the least developed countries if they grew at a slower pace so that the international spectrum of more industrialized countries could expand. If the centrally planned countries were to remain absent from the

organization of the international industrial division of labour, the developing countries would have to reach an accommodation mainly with the developed market economies. Such an outcome would actually reduce the possibilities for the development of East-West economic relations, which are of such importance for the maintenance of peaceful coexistence, and could lead to the world economic isolation of the CMEA countries and the solidification of their regional inward-looking strategy. The smaller CMEA countries, particularly Czechoslovakia, the German Democratic Republic and Hungary, unable to rely on long-term and lasting import substitution, would be hardest hit by such a situation, since these countries already participate in the international division of labour mainly through manufactured goods which represent 60-80 per cent of their exports to countries without centrally planned economies, and more than four fifths of those to the CMEA countries. It is therefore a question of vital importance for the CMEA, and primarily the smaller member countries exporting finished goods, to play an active part in the organization and further development of the international industrial division of labour.

From the very beginning, in their theoretical and international economic policy positions, the CMEA countries correctly recognized that despite all their contradictions, the demands raised by the developing countries in international forums are based on wider, politically more progressive foundations than previously, requiring a comprehensive reform of the economic relations established by the developed market economies. These demands largely mean the adoption by the developing countries of the principles put forward earlier by the centrally planned countries, and in this sense they also represent an achievement of international economic diplomacy. The CMEA countries can thus give moral, political and economic support to any comprehensive organization of the international industrial division of labour which is intended to play a regulatory role not for a single group of countries, but for all countries, and which does not indirectly hinder the strengthening of East-West industrial co-operation.

However, adjustment to new trends in the international industrial division of labour also raises a number of internal and external economic problems for the CMEA countries. The changing world economic role of the developing countries calls for a more rapid enunciation and application of structural policy concepts within the different national economies, and more radical measures for the downgrading and development of different branches and sub-branches, particularly in countries which must rely to a greater extent on the industrial division of labour. Adjustment to world economic processes can undoubtedly produce a shock effect in certain sub-branches. However, over the long run such shock effects exercise a beneficial influence on the national economy, ease the problems arising from manpower shortages, and encourage exports by more modern branches.

Within the framework of bilateral co-operation with the developing countries, greater attention should be devoted to the problems of the industrial division of labour. The introduction in 1965 of duty-free imports of goods produced and exported by the developing countries, the purchase of part of the output of plants set up with the assistance of the CMEA countries, the practice of signing long-term commercial and economic agreements, the aid given for national industry and the purchases of finished goods, increasing by an annual average of 35 per cent during the period 1974-1975, clearly represent the most important steps taken by the centrally planned countries to extend the industrial division of labour between the developing countries and the CMEA. At the same time, future requirements include

the identification of further possibilities, wider specialization agreements, greater participation in export-oriented industrial projects, and further expansion of the range of finished goods purchased from the developing countries and of the mechanisms of industrial co-operation.

In the present stage of co-operation among the CMEA countries, certain tasks already arise at regional level. The requirements of the industrial division of labour with the developing countries should be taken increasingly into account in the integration strategy of the CMEA countries and in the further development of their external economic mechanisms. Industrial co-operation with the developing countries would be much easier for smaller CMEA countries without an extensive production, technical and financing background if the CMEA countries could rely on suitable co-operation mechanisms in their joint actions on third markets. An increasing number of tasks relating to the transfer of information, the establishment of contacts and organization can be performed at regional level in future.

Even if the possibilities for the development of relations at national and regional economic levels are fully exploited, a growing number of adjustment problems can only be solved within an international framework. It is essential, in particular for the small CMEA countries dependent on the international division of labour, to become increasingly active in the work of the international bodies dealing with industrialization and manufactured goods exports of the developing countries, such as GATT, UNCTAD and UNIDO, since in their treatment of international trade policy problems they are shifting their attention to an increasing extent from raw materials to manufactured goods.

However, the present international bodies have not yet ensured a suitable institutional framework for co-operation on structural policy, which has become a highly important area of international economic co-operation. It is now increasingly recognized that easing world monetary and trade problems requires the co-operation of all countries. There is less awareness that co-operation, information exchange, and the gradual co-ordination and organization of long-term growth and structural transformation processes connected with monetary and structural problems are also indispensable for the rational reorganization of the world economy. Industrialization and the export specialization of industry obviously call for the greatest foresight, and involve an extremely high risk of faulty decisions-making. There are steadily diminishing prospects for achieving the necessary export-oriented industrialization of small, less developed countries over the long term without prior international co-operation and guarantees. Nor do automatic market mechanisms provide a reliable basis for rational forecasts and planning of long-term industrialization and specialization. The equitable distribution and optimization of the advantages and burdens of a new international industrial division of labour requires co-operation on international markets, structural policy and industrial development. Such co-operation could promote a world-wide reduction of the social costs of industrialization, maintenance of the community of interests of the developing countries, regulation of the activity of the transnational corporations, and, above all, a strengthening of the spirit of international co-operation.

Industrialization of the developing countries

Secretariat of UNIDO

Introduction

The past few years have been marked by the emergence of a number of problems hampering economic and industrial progress. Endemic inflation, wide exchange rate fluctuations and the need to conserve energy, in particular petroleum, coupled with an uncertain climate in international trade, have profoundly affected both the developing and the developed world. Effective and equitable long-term solutions to these problems will undoubtedly require concerted efforts through international co-operation, regardless of the stage of development of the participants. It will require, in particular, national political will and the adoption of appropriate measures by individual developing and developed countries.

It was within this framework that the Second General Conference of UNIDO held at Lima in March 1975 strengthened the dialogue between industrialized and developing countries on ways and means of arriving at a more equitable distribution of resources in the field of industrialization, as had been called for by the international community during the sixth special session of the United Nations General Assembly.

In the Lima Declaration and Plan of Action on Industrial Co-operation and Development (ID/CONF.3/31, chap. IV),¹ a number of principles are set forth relating to the process of industrialization, comprising in essence a broad strategy of industrial development aimed at strengthening the industrial capacity of developing countries. In particular, it calls for the maximum possible increase in the percentage share of developing countries in total world industrial production, possibly to at least 25 per cent by the year 2000. Over the past two decades individual developing countries have increased their industrial production at different rates, yet taken as a whole the developing countries' share remained relatively static until the late 1960s. In this connection, it should be noted that the Lima Declaration and Plan of Action not only sets a global quantitative production target for the developing countries, but also stresses the qualitative aspects of industrialization. The latter aspects have been highlighted by a call for action along the following lines: policy measures aimed at achieving greater social justice through a more equitable income distribution and the optimum development and utilization of human resources, including women; sustained self-reliant and participatory development; and an integrated and multisectoral approach to industrial development, whereby the technological and the socio-economic implications of the process are fully taken into account at both the planning and implementation stages.

The Lima Declaration and Plan of Action calls for special efforts in various areas, with particular emphasis on the following: measures of national scope to promote industrial development, to be adopted by both developing and developed countries; co-operation among developing countries at subregional, regional and interregional levels, thereby bringing into focus the principle of collective self-reliance as a means

¹ Transmitted to the General Assembly by a note by the Secretary-General (A/10112). Also available as UNIDO public information pamphlet PI/38.

of achieving industrial development; co-operation between developing and developed countries, perhaps the most important factor being the urgent establishment of a system of consultations; mechanisms for the transfer of technology and know-how from developed to developing countries on equitable terms; and special measures of assistance to be undertaken by other countries and international organizations in favour of the least developed, land-locked and island developing countries.

Industrial growth

UNIDO has estimated the share of the developing countries in total world manufacturing production during the period 1960-1976. The estimates are based on data relating to value added in the manufacturing sector of 87 developing and 35 developed countries, expressed in constant 1970 United States dollars. The exercise revealed that during the 1960s the developing countries' share remained stable at about 7 per cent, exhibiting only minor fluctuations, after which it enjoyed a period of steady increase, rising to some 8.6 per cent in 1975. This increase in the share of the developing countries was recorded against that of the developed countries as a whole, but not against each one of the members of the latter group of countries. For instance, both the centrally planned economies and Japan have increased their share of world manufacturing in a much larger proportion than the developing countries. By contrast, the manufacturing sector of the developing market economies, especially during the period 1966-1975, increased much faster in relation to Northern America and Western Europe than in relation to the world as a whole.

This evolution of the developing countries' share in total world industrial production is determined by the relative growth rates of the manufacturing sector of the developed and developing countries. In this connection, it is interesting to note that the growth rates of manufacturing value added (MVA) of the developed countries are likely to be lower than in the past, not only during the period 1975-1980, but also during the next few decades. Factors likely to contribute to this reduction in growth rates in the developed market economies, at least during the period up to 1990, include an increasing share of the service sector in total economic activity, greater investment in such activities as environmental protection, and a cautious attitude on the part of governments in order to avoid a resurgence of undue inflationary pressure.

Thus, in contrast to a MVA growth rate of 6 per cent during the period 1960-1975, even an estimated growth rate of approximately 5 per cent during the period 1975-2000 would seem to be unreasonably high. Assuming that rate for the developed countries, the MVA growth rate required in the developing countries to achieve the 25 per cent target set in the Lima Declaration would be of the order of 10 to 11 per cent over the next 25 years. Although such a rate would on the whole be compatible with the growth rates planned by the developing countries in the various regions for the period 1975-1980, the question whether such high MVA growth rates can be sustained up to the year 2000 is debatable. As far as the near future is concerned, it should be noted that most developing country plans for 1975-1980 were formulated prior to the changes in the world economic situation that occurred in the mid-1970s. Consequently, many developing countries may find it more difficult than anticipated to balance their external transactions, and in particular to secure the requisite financial transfers from the developed countries in addition to the necessary increase in exports to those countries during the late 1970s.

Moreover, for the longer term, the experience of the most rapidly growing developed countries would tend to indicate that, after no more than one or two decades of accelerated growth, bottlenecks arise and further rapid growth becomes more difficult and requires greater effort. Thus, it would seem that for a period as long as a quarter of a century, the developing countries cannot take it for granted that high rates of MVA growth will continue without considerable effort on their part.

Attainment of the high rates of MVA growth in the developing countries required over the period 1975-2000 will be contingent upon substantially greater domestic investment and foreign capital inflows, increased regional and interregional trade and production arrangements, and a considerable development in the technological capacity of developing countries. Such high rates are unlikely to be attained within the framework of the world economic structure that has prevailed in recent decades. If the annual MVA growth rate of the developed countries can be assumed to be approximately 5 per cent during the period 1975-2000, and that of the developing countries between 7 and 8 per cent (on the basis of growth rates from 1960 to 1975), then the share of the developing countries in total world MVA will still amount to no more than 15 per cent in the year 2000. By contrast, industrial production in the developing countries will have to grow approximately twice as fast as that of the developed countries. Achievement of such growth rates, considerably higher than those obtained in the past fifteen years, will undoubtedly require considerable qualitative and quantitative changes in the mechanisms and forms of international co-operation.

Industrial financing: current trends and prospects

The industrial growth rates required to achieve the targets set in the Lima Declaration and Plan of Action depend on the financial resources made available by both domestic and foreign sources to meet the needs of the industrial sectors in developing countries. On the basis of the current work of UNIDO, the following points seem clear:

(a) Discussion on the financing of overall economic development generally does not take into account the specific characteristics of industrial financing, which requires the establishment of project viability and special consideration of the ratio between equity and loan capital;

(b) The requirements for industrial financing have increased as inflation has borne more heavily on the cost of capital equipment services than on other aspects of development;

(c) Although some new or non-conventional methods of providing industrial financing for developing countries have evolved in recent years, they have never been discussed in international forums;

(d) A sustained increase in the volume of capital goods sold by the developed to the developing countries is clearly in the interest of both parties (such sales reached over \$70 billion in 1976). The developed countries have the capacity to increase the output of capital goods, while the developing countries need them in order to achieve industrial development goals.

In order to attain the Lima target, the total annual investment required in the industrial sector, depending on the scenario chosen, would be 40-60 billion dollars between 1980 and 1990, and 120-140 billion dollars between 1990 and 2000.² It may be assumed that approximately 60 per cent of this sum would be required to finance the import of capital goods, technology and services (engineering), including 10 per cent to finance training and technical assistance. It would be useful to bear in mind the following line of argument:

(a) Assuming that the total foreign resources required by industry will amount to approximately 25-35 billion dollars per annum over the next decade, this means an annual requirement of 15-25 billion dollars more than at present;

(b) The total flow of official transfers and of private finance in 1976 was approximately \$60 billion, and, as in the past, industry received about 13 per cent, or \$8 billion, of the total;

(c) Assuming that 15-25 billion dollars more will be required on an annual basis, then the following options arise:

- (i) If the total flow remains at \$60 billion, then industry must receive 40-60 per cent of this total flow instead of only 13 per cent;
- (ii) The total flow of foreign resources must be increased to 200-270 billion dollars per annum if industry is to receive 13 per cent of the total flow and if other sectors also need more funds;
- (iii) The additional needs of 25-35 billion dollars must be provided by means other than the present conventional flows (for example, compensation and barter arrangements);
- (iv) Any combination of (i), (ii) and (iii) above could be tried.

With regard to external sources of finance available for industrialization purposes, it should be borne in mind that official transfers from OECD member countries increased at an annual rate of only 0.36 per cent of GNP between 1961 and 1974. The target of 0.7 per cent has not been, and is not likely to be, achieved, since it appears to have stagnated at about 0.3 per cent during the first half of the 1970s. So far as distribution is concerned, official transfers have been allocated increasingly to the least developed countries, largely for agricultural and infrastructural purposes. In this connection, it would be useful to know whether such allocations are due to the developing countries' own development priorities, or whether the donor countries excluded lending to industry for political or other reasons.

As regards the financial resources available through access to capital markets, the majority of developing countries face considerable difficulties, since potential lenders consider their creditworthiness insufficient, and since they cannot always afford the high cost of private market borrowing. In addition, access to national bond markets in developed countries is restricted by regulations that appear in practice to fall more heavily on the developing countries. Loans on euro-currency markets are in general of a short-term nature so that they are not ideally suited for financing industrial projects. However, there appears to be a trend towards longer-term transactions. Nevertheless, it should not be forgotten that industrialized countries themselves (in

² It is estimated that total investment in industry during the period 1980-2000 would have to amount to approximately \$2,000 billion. See "Background paper for the Expert Group Meeting on Industrial Financing" (ID/WG.287/8).

particular those with large balance of payments deficits) borrow on the same markets and are preferred by potential lenders to developing countries; competition for funds is expected to leave developing countries at a disadvantage.

With respect to direct foreign investment, which is largely earmarked for the industrial sector, it should be borne in mind that 75 per cent of direct foreign investment has taken place between industrialized countries themselves. Of the remainder, only about 30 per cent has been invested in the industrial sectors of developing countries, mainly 10-15 developing countries that appear to provide the appropriate conditions for such investment. In future, it is expected that more often than not private investors will not have sufficient confidence in the legislation or institutions of host countries, and will concentrate on manufactures involving very low value added. On the other hand, host countries have considerable misgivings regarding the activities of firms under foreign control, and insist increasingly on national majority participation or other forms of control.

Finally, it should be noted that only the more advanced developing countries, which are also the more creditworthy, appear to be able to continue financing their industrialization process with relative ease. Others will continue to face considerable difficulties in financing the purchase of equipment etc. (i.e. in financing the deficit on their balance of payments) upon which their growth is dependent. This implies that they may have to sacrifice growth rates rather than to risk the opprobrium of what lenders might consider to be over-borrowing. The consequence may be a high risk of political crisis when popular expectations are not met and austerity measures have to be imposed because imports cannot be financed.

The problems of industrial financing facing the third world were discussed in considerable detail at an Expert Group Meeting on Industrial Financing organized by UNIDO in December 1978. Representatives of international financial institutions, commercial banks etc., from both North and South, agreed that several issues required discussion in a global forum where all countries could participate on an equal basis.³

Industrialization and international trade

As industrialization progresses, many developing countries are emphasizing the importance of international trade in their industrialization efforts. Recent studies tend to indicate empirically that developing countries which emphasize export promotion have had, on the average, better growth performance than those emphasizing import substitution.⁴ However, while trade-oriented economies are specially vulnerable to rapid fluctuations of world market conditions and trade policies, the economies of many developing countries lack both the resources and skills, as well as the size and breadth of markets, to adjust to these changes independently. An alleviation of their vulnerability to such fluctuations can be achieved solely within the framework of the international community.

This problem is of particular importance to the development of the industrial sector in the developing countries, since most modern industrial enterprises are dependent in some way on foreign economies and international trade, relying not

³ "Final report of the Expert Group Meeting on Industrial Financing" (ID/WG.287/10).

⁴ J. N. Bhagwati and A. O. Krueger, "Exchange control, liberalization and economic development", *American Economic Review*, May 1973, p. 420.

only on foreign markets for their products, but also on imported raw materials or intermediate inputs, and imported capital equipment, technology and managerial know-how. It appears that the rhythm of progress of external sales of manufactures by developing countries is exposed to cyclical conditions. The clearest illustration of this is the radical drop recorded in the sales to developed areas in 1975. This experience, together with earlier examples of zero growth or years of stagnation, suggests a marked dependence of manufactured exports of developing countries on the state of the world economy.

While concentration of resources on the production of manufactured goods for export may not be an appropriate development policy for all developing countries, it will undoubtedly continue to play an increasingly important role in the industrialization strategies of many of those countries in the years to come. From 1960 to 1975, the exports of manufactures from developing areas, measured in current values, increased from 3.7 to 33.9 billion dollars (f.o.b.). Although the exports of manufactures from developed areas grew at a very fast pace during the same period, exports from developing areas expanded still faster, thus enabling them to increase their share of world exports of manufactures, which rose from 6.3 per cent in 1960 and 1965 to an average of 7.6 per cent in 1970-1972, and of 9.0 per cent in 1973-1975. Moreover, it is important to note that the improvement of the competitive position of developing areas in terms of total manufactures is due to their improvement in all broad manufacturing categories, including chemicals and engineering industry products.

It is clear that a continuing expansion of exports of manufactures from developing countries, especially to developed countries, forms a basic part of their industrialization process. They will have to continue to rely heavily on imports from developed countries for those products in respect of which the latter will enjoy an undisputed comparative advantage for a long period of time. Improved access to markets in developed countries and a progressive restructuring of world industry would thus seem to be important aspects of international co-operation which in the long term would be advantageous to both developed and developing countries.

Negotiations for the establishment of a generalized system of preferences (GSP) to be applied by the developed countries to tariffs on industrial goods exported by developing countries began in the early 1960s. Initially, it was hoped that the GSP would provide a major impetus to the industrialization of the developing countries through its favourable effect on investment decisions and on the international competitive position of their domestic manufactures. A substantial gap exists, however, between expectations and reality as regards the GSP. According to UNCTAD, the prevailing climate is not encouraging with regard to the concern expressed in the Lima Declaration and Plan of Action on the reduction of tariff and non-tariff barriers. The limited coverage and the restrictive conditions and qualifications imposed by the preference-giving countries in their respective schemes prevent the system from realizing its full potential. Furthermore, the benefits arising from the GSP have accrued mainly to a relatively small number, and the most advanced, of the developing countries. At the same time, in the field of non-tariff barriers, restrictions on exports of manufactures from developing countries have proliferated considerably and now form an alarming pattern of protectionism.⁵

⁵"Growing protectionism and the stand-still on trade barriers against imports from developing countries" (ID/B/C.2/194).

Mechanisms and forms of international industrial co-operation

Within the broad area of industrial co-operation based on interfirm relations, it appears fairly obvious that the latter evolved from the practice of commercial relations between nations at similar levels of development over a period of several hundred years, and more recently between colonial powers and their colonies. It therefore seems essential first to question some of the fundamental assumptions of today's world order, for example: that all countries can achieve their development objectives simultaneously; that all countries are in reality equal; that economic problems can be effectively regulated through free market mechanisms alone; that the existing world order cannot be changed without considerable adverse effects on the world economy. Secondly, an examination of the situation in the legal field appears to show that contractual *laissez-faire*, particularly at the enterprise level, has led more often than not to the perpetuation of inequalities between partners in industrial co-operation. Of equal importance is the need to reshape the thinking of contracting parties through gradual evolution, thereby taking into account the special requirements of industrial co-operation between partners at different levels of economic development and with different economic and legal systems.

It is necessary to clarify the concept of investment in the light of the special needs and requirements of developing countries with regard to industrial development, and to recognize that investment may be viewed within the wider context of its overall contribution to the industrialization effort of a developing country. Since the objective of industrialization goes beyond inter-firm relations and lies within the sphere of competence of governments, the form and scope of government intervention, either through national legislation or through international agreements, needs to be examined very closely with respect to its impact on industrial financing, especially foreign investment (for example the provision of appropriate guarantees to both partners, the clarification of the rules of the game, and the redressing of inequalities between partners).

Additionally, it has been possible to identify the main objectives of developed and developing countries with regard to international industrial co-operation. Partners from developing countries, the recipients, are primarily concerned with obtaining results rather than only services. It is important for them to acquire plants capable of functioning perfectly with domestic inputs, and to ensure that they acquire the capacity to reproduce, adapt and further develop the technological know-how. Furthermore, it should be borne in mind that the nature of developing country partners is often different from that of partners from developed countries. More often than not, they are public enterprises or government agencies that have the obligation to safeguard national interests, the success of which is measured not only in terms of profits, but also of the overall industrialization achieved. The partners from developed countries usually do not have this obligation; their objective is profit maximization, while tending to reduce to a minimum their involvement in, or commitment to, the overall development process of the host country. They would also require certain assurances and guarantees against non-commercial risks, such as nationalization, expropriation etc.

With regard to the use of intergovernmental agreements as a framework for contractual relationships between enterprises, it has been seen that this is the general practice between developed market economy countries and centrally planned countries. In relations between North and South, intergovernmental agreements are

often entered into by countries with developed market economies in order to protect the investments of their nationals. However, as in the case of the Lomé Convention, it seems that they would also conclude similar framework agreements suited to the specific requirements of both developed and developing countries in the field of international industrial co-operation. This would appear to have three main advantages, first, it may ensure that the package contained in industrial co-operation contracts conforms with the host government's development strategies and policies; secondly, it would provide a set of general principles or guidelines for co-operation in the fields of finance, technology, training and so on; thirdly, it would tend increasingly to involve the Governments of developed countries in interfirm relations, thereby providing an additional guarantee against malpractices on the part of their nationals and ensuring that such contracts are properly executed.

At a more specific level, it has been possible to determine the main inadequacies of the current legal framework for international industrial co-operation. These inadequacies fall into the following three main categories: (a) diffusion of the responsibilities of the foreign supplier; (b) difficulties faced by foreign suppliers in carrying out their responsibilities and obligations; and (c) problems relating to the solution of differences between partners.

International co-operation in the redeployment of productive capacity

In order to achieve the target of increasing the share of developing countries in total world production to at least 25 per cent by the year 2000, it has been envisaged that productive capacities in industries which are less competitive internationally will have to be redeployed from developed to developing countries, and that the application of technology in developing countries will have to be considerably increased. Both the redeployment of productive capacity and the building-up of technological capabilities in developing countries, as well as the transfer of industrial technology to those countries, will require new mechanisms of international co-operation. Selected UNIDO activities designed to increase international co-operation in these fields are outlined below.

The initial findings of UNIDO studies on the redeployment of industries from developed to developing countries indicate that at the enterprise level there would appear to be significant interest among the industrialists approached to redeploy certain parts of their companies' production and, through the transfer of technology, capital, resources or services, to participate in establishing manufacturing capacities in developing countries. However, the large and medium-sized industrial enterprises that were interested did not expect to close down their production capacities in developed countries as a result of the envisaged redeployment. Another finding of the studies was that redeployment potential exists in practically all industrial branches; it is by no means confined to structurally declining industries. The redeployment opportunities identified in these studies are being followed up by means of UNIDO promotional activities aimed at facilitating and supporting the redeployment of specific industrial product lines by interested enterprises.

The studies also indicate that most of the developed market economies have adopted policy measures conducive to foreign investment in developing countries. These include fiscal and financial measures, credit policies, investment information and promotion, subsidized pre-investment studies, investment insurance schemes,

guarantee arrangements and investment protection agreements covering commercial and non-commercial risks. It should also be noted that in certain developed countries studies have been initiated on long-term structural adjustment problems, with a view to identifying industries that might be suitable for future redeployment. Structural adjustments of certain industrial sectors are reported to have already taken place in some developed market economy countries. Certain countries have established adjustment programmes to provide assistance to firms and workers in industries adversely affected by increased imports. These adjustment assistance measures are designed to alleviate the effects of industry displacement, including unemployment, and to enable workers and enterprises that are less competitive internationally to move into more viable lines of production. Although such measures may indirectly encourage imports of industrial products from developing countries, the policies now being pursued in developed market economy countries do not appear to link specifically domestic structural changes to actual redeployment of production facilities to developing countries. Promotion of the industrial redeployment process might thus comprise not only decisions by the enterprises in question to undertake the resource transfers, but also the adoption of adequate policy measures and other supporting activities on the part of the Governments of the countries concerned, so as to permit resource transfers, access to their markets and adjustment of their structure, taking into account the long-term factors of economic development.

The UNIDO system of consultations

In order to facilitate the examination and discussion of problems connected with the changing structure of world industry and to support the aspirations of the developing countries to promote their industrial development, UNIDO launched in 1977 the system of consultations called for in the Lima Declaration and Plan of Action. The system of consultations is a scheme designed to achieve the full mobilization of international co-operation, so as to promote the sharing of world industrial capacity and the transfer of know-how, management and capital resources, thereby bringing about a significant increase in industrial production in developing countries. Whereas the political will and a conscious effort to reach agreement will ultimately be the decisive factors in the success of the system, its establishment has in essence created a new framework of international co-operation in the field of industrial development.

The consultation meetings convened in 1977 in the industrial sectors of fertilizers, iron and steel, leather and leather products, and vegetable oils provided a forum at which all concerned with the particular industrial sector under consideration—labour, industry, government and consumer groups—were able to exchange views on the future global development of the sector.

At the twelfth session of the Industrial Development Board held in May 1978, the Executive Director of UNIDO indicated the following four main reasons why the meetings have proved useful:

(a) For the first time, the future growth of the above-mentioned industries throughout the world has been discussed taking into account the interests of developing countries as well as those of the developed countries. Through frank discussion of this topic, the aspirations of the developing countries to increase their share in total world output by the year 2000 are now more widely understood by

Governments, industry and labour. Furthermore, the need for future consultation meetings to monitor the growth of world production capacities was agreed upon by all parties;

(b) The problems encountered by developing countries in establishing and expanding industry were discussed in practical terms. Preliminary consideration was given to specific forms of international co-operation needed to reach a solution. Through the follow-up activities and further consultation meetings, an opportunity is created to discuss these problems until solutions are found, even for the most complex among them;

(c) Both developing and developed countries now have an opportunity to assess the rapidly changing context in which industry is developing throughout the world, and hence the possibility to adjust their policy to the evolving world situation. As new elements arise in this changing context, consultation meetings provide a continuing opportunity to discuss these new elements in a world-wide forum;

(d) Since all the interested parties are represented, the consultation meetings not only identify the areas in which increased international co-operation is needed, but also provide a means of developing specific proposals to implement such co-operation. These proposals are more likely to be implemented, because the parties that will have to be involved in implementing them play a part in drafting their terms.

The further development of the system of consultations was the subject of discussion at the session of the Industrial Development Board held in May 1978. Of the additional sectors for which consultation meetings were being considered, it was decided that the agricultural machinery and petrochemical industries should be the subject of consultation in the biennium 1978-1979. The initial work undertaken on three other sectors—agro-based industries, capital goods and pharmaceutical industry—would be continued, with emphasis being placed on agro-based industries. Moreover, a second round of consultations was to be held on the fertilizer and the iron and steel industries in November 1978 and January 1979, respectively, and work was to be continued in the leather and leather products and the vegetable oils and fats sectors. In addition, an inter-secretariat working group is to be established by UNIDO, in co-operation with UNESCO and ILO, to examine ways of maximizing industrial manpower training facilities in developed and developing countries in relation to the needs of the developing countries, a topic that might become the subject of a special consultation meeting. Finally, consideration will also be given to the requirements for financing industrial development in developing countries, with a view to possibly convening a consultation meeting in this matter at an appropriate time.

International co-operation in the field of technology

Since its inception, UNIDO has been involved, through its technical assistance projects, in the development and transfer of technology required by the developing countries for their accelerated industrialization. However, the subject has recently been reconsidered and is now being approached in a more systematic and comprehensive manner. At its eleventh session, the Industrial Development Board further expanded the role of UNIDO in the field of the development and transfer of

industrial technology through its resolution 47 (XI) on International Co-operation in the Transfer of Technology. In this connection, at the same session the Board also endorsed two reports by the UNIDO secretariat outlining proposals for a co-operative programme of action on appropriate industrial technology, and for a pilot operation of the industrial and technological information bank. Pursuant to the above-mentioned resolution and the decisions of the Board, UNIDO has now launched a broad programme of work in the development and transfer of technology, concentrating on assistance to developing countries in technology policy and planning, indigenous capabilities, appropriate choice of technology, flow of information and technological advisory services. The report on UNIDO activities in this field was noted with appreciation at the 1978 session of the Board, which expressed satisfaction at the momentum gained by UNIDO in the field of technology development and transfer.

Given the imperfections of the market for technology, in particular the limitations on access thereto and foreign exchange costs, the choice of technology forms the central theme of the Co-operative Programme of Action on Appropriate Industrial Technology undertaken by UNIDO. A major effort in providing an integrated view of the problem was the International Forum on Appropriate Industrial Technology convened by UNIDO at the expert and ministerial levels in November 1978. This forum was considered to be of particular importance, since the above-mentioned Co-operative Programme of Action aims at identifying a framework of activities in the field of development and transfer of technology to be undertaken not only by UNIDO, but also by governments, private agencies and regional and international organizations.

The transfer of information on technologies is obviously a prerequisite for the transfer of technologies themselves. UNIDO, which has been engaged since its creation in a programme of industrial information centred primarily on a broadly-based and multidisciplinary industrial inquiry service and on technical assistance to industrial information services in developing countries, has been increasingly called upon in recent years to address itself to information needs related to the selection of appropriate technologies. In both the Lima Declaration and Plan of Action and the relevant General Assembly resolutions subsequently adopted, emphasis has been placed on the desirability of establishing an industrial and technological information bank, and in July 1977 steps were taken to initiate the establishment of such an institution.

Conceived as a pilot operation for a period of 18 months, the Industrial and Technological Information Bank (INTIB) has been initiated as a dual information and advisory facility, with the tasks of identifying sources of information and users of information and advice, and processing information material into a useful form for decision makers and their advisers in the fields of iron and steel, fertilizers, agro-industries and agricultural machinery.

Industrialization and social objectives

In the Lima Declaration and Plan of Action, attention is drawn to the need for developing countries to take into due consideration the characteristics of each country in the light of its social and economic structure when formulating industrialization plans and strategies. Other guiding factors in the endeavours to raise

living standards and eliminate social disadvantages and unemployment should be social justice and the principle of equitable distribution of the benefits of industrialization among all sectors of the population.

In national industrialization policies emphasis should be placed on intensive use of national resources, infrastructural development and internal regional development. In this connection, the Lima Declaration and Plan of Action emphasizes an integrated industrialization process entailing the establishment of production facilities covering all branches of industry. Basic industries, such as the steel, metallurgical and petrochemical industries, are seen as the indispensable basis for any industrialization, while integrated industries provide the necessary link between the different industrial sectors. At the same time, the creation of manufacturing and processing industries to satisfy the needs of the population for consumer goods is emphasized, in addition to the rapid development of local production for the purpose of replacing imports and increasing exports.

In the Lima Declaration and Plan of Action it is also pointed out that integration of different sectors of the economy can be furthered through the encouragement and support of small, medium-scale and rural industries which fulfil the basic needs of the local population. Experience gained in promoting rural development would seem to underline the necessity of an integrated approach. Not only must there be an increase in agricultural production, but also an improvement in transport, administrative and institutional infrastructures, including education. Rapid improvement of agricultural production itself requires long-term investments in such facilities as irrigation, land improvement, agricultural research and development, as well as the availability of inputs, including fertilizers, tools and implements, and, in many instances, tractors and machinery. Undertakings of this kind, which are slow to bear fruit, depend upon the availability of large quantities of products from the heavy industry sector, which confirms the importance of that sector to the fulfilment of basic needs, both individually and collectively. At the same time, appropriate industrialization of rural areas themselves would also form an important part of integrated rural development policies, since it would offer additional employment opportunities and help to meet the basic needs of the rural population.

In the long term, it would seem that the benefits of more decentralized industrial activities in developing countries could be far-reaching, not only in terms of employment and income redistribution, but also in terms of production and sustained growth. In a number of sectors, particularly those designed to meet rural consumption and production needs, small-scale production employing techniques significantly different from and less capital-intensive than those in industrialized countries may prove fully effective, with the resulting products offered at competitive internal prices.

For a considerable time, however, any new move towards the industrialization of semi-urban and rural areas would call for a substantial amount of additional investment, if the development of the heavy manufacturing sector is not to be affected and if the capability for sustained economic growth is not to be jeopardized. Moreover, the additional investments would be slow to yield returns, taking possibly one or two decades, during which time the corresponding increases in the production of consumer goods would be much lower than the effective increases in consumption.

Given the duration, magnitude and complexity of the required effort, it would seem that during the coming and possibly also the following decade, an endeavour of

this kind could not be made in many developing countries, especially the least developed and poorest ones, unless a substantially increased flow of resources were obtained from the developed countries. This large influx would appear to be a precondition for any sustained effort to spread more evenly the benefits of economic development, in so far as it is recognized that it would be neither advisable nor possible in practice to have any such effort accompanied by a lower rate of overall economic growth.

The Third General Conference of UNIDO

The estimates provided in this paper would appear to indicate that the developing countries are making some progress towards the achievement of the quantitative Lima target. From a level of around 7 per cent in the late 1960s the share of the developing countries in world industrial production has risen to a current figure of approximately 8.5 per cent. Nevertheless, preliminary observations made by UNIDO while monitoring the action taken by Governments towards achieving the Lima goals (from both a quantitative and a qualitative point of view) are unfortunately less encouraging. In a number of cases, there is still considerable scope for action on the part of governments in the establishment of the appropriate policy measures, as called for by the Lima Declaration and Plan of Action, to bring about accelerated and equitable industrial development in developing countries. During the Third General Conference of UNIDO, to be held at New Delhi early in 1980, high-level global consultations will take place on international co-operation for the industrial development of developing countries and other aspects of world industry. The Conference will have on its agenda an important item calling for a review of the world industrial situation, and in particular progress in the implementation of the Lima Declaration and Plan of Action, and the problems and obstacles affecting its implementation. The Conference will also consider strategies for further industrialization as an essential element in the development process in the 1980s, industrial co-operation among developing countries, redeployment of industries from developed to developing countries, the system of consultations, and the creation of appropriate industrial structures in the developing countries. Institutional arrangements, especially the effectiveness of the institutional arrangements for UNIDO to meet the challenge of industrialization in the 1980s and beyond, will also be reviewed at the Conference.

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Structural adjustment in developed countries

Secretariat of UNIDO

In response to the Lima Declaration and Plan of Action on Industrial Development and Co-operation (ID/CONF.3/31, chap. IV),¹ and to subsequent General Assembly resolutions² endorsing its principles and objectives, UNIDO embarked upon a programme of studies relating to redeployment of industries from developed to developing countries and to structural adjustments in developed countries. The General Assembly had specifically requested UNIDO *inter alia* to prepare studies which would include recommendations concerning policies for promoting redeployment and the identification of specific industries suitable for accelerated redeployment to developing countries. If the redeployment process (i.e. the transfer of certain industrial resources such as plant, capital, know-how, with a view to establishing industrial capacities in developing countries) is to be promoted, the developed countries' industrial production and employment structures will have to undergo substantial adjustment in order to accommodate the developing countries' new (import-substituting or export-oriented) manufacturing activities. The call for redeployment thus implies not only an increased industrial resource transfer to the developing countries, but also a corresponding shift in the international division of labour. To this end the developed countries would obviously have to accept a restructuring of world trade to enable manufactures from the developing countries to achieve increasing shares of their markets.

For the developed market economy countries this would imply not only a removal of various formal barriers to imports from developing countries, but also the granting of special, preferential treatment and support to manufactured imports of these non-traditional suppliers and later-comers to the international markets, to enable them to obtain access to the traditional market and distribution channels, to receive feedback from these markets, and gradually to overcome the various constraints at the production end. However, prevailing trends in the developed countries make it difficult to fulfil these requirements. Whereas manufactured exports from developed to developing countries are regarded as an increasingly important industrial development stimulant for the developed countries,³ a growing

¹ Transmitted to the General Assembly by a note by the Secretary-General (A/10112). Also available as UNIDO public information pamphlet PI/38.

² General Assembly resolution 3362 (S-VII), section IV, para. 21, and resolution 31/163.

³ In 1976 the proportion of some of the developed countries' exports to developing countries (including those belonging to the Organization of Petroleum Exporting Countries (OPEC)) in relation to their total exports was as follows: Canada, 7 per cent; France, 23 per cent; Germany, Federal Republic of, 18 per cent; Italy, 19 per cent; Japan, 41 per cent; United Kingdom, 24 per cent; and the United States, 37 per cent. These data would seem to confirm that those developing countries (including OPEC) which have emerged as exporters, and thus become foreign exchange earners, now represent important expanding markets for the industries of the developed countries. During the period 1970-1977, United States exports to the developing countries increased at a much faster rate (22.5 per cent) than its exports to the developed countries (15.2 per cent). In some of the industrial subsectors, the heavy reliance on developing country markets is quite apparent. In 1976 United States exports to developing countries accounted for about 45 per cent of its total exports of heavy and electrical machinery and steel.

range of manufactured imports from developing countries tend to be regarded as a disruptive factor, and sometimes as a form of dumping and a result of the international strategies of transnational corporations. This revival of protectionist trends in the developed countries may be attributed to a slackening of overall growth and employment in many developed countries and to a growing concern for structurally affected industrial subsectors. A general uncertainty seems to have emerged with regard to a continued international division of labour.

Two observations may be made at this point. First, it should be noted that while the ratio of total exports from developing countries to exports from developed countries slightly rose from 6.8 per cent in 1960 to 8.4 per cent in 1975, the share of developing countries in the manufactured imports of developed countries is still remarkably small, amounting to only 8.2 per cent in 1976. Secondly, it would appear that manufactured imports from developing countries have little impact on overall employment in the developed countries. As a recent UNIDO study⁴ shows, the total employment impact of imports of manufactures from developing countries was almost negligible in the past. Even in the industries most strongly affected by such imports, they are responsible for only a fraction of job losses observed during recent years, and are found to be less important than other factors. In future, the displacement effect will rise, but even assuming large increases in imports, job losses will be few compared to jobs lost due to rising productivity, to trade with developed countries, and to the effects of shifting demand.

The pressure on developed market economies to adjust their industrial production and employment structure thus appears to be only to a very limited extent due to increasing imports of manufactures from developing countries, and to arise more from the combined effect of technological evolution, shifts in demand and domestic policies, and changes in international trade with other developed countries, including the centrally planned economies. This pressure is particularly noticeable when it is concentrated in a specific industrial subsector and geographical subregion. In such cases, it is easier to measure *ex post facto* the direct impact on production and employment of the various determinants, including imports from developing countries, than the positive indirect effects of increased trade, which are generally spread over many other subsectors and regions.

Structural crises and disruptive developments in the developed countries obviously require appropriate policy measures by the Governments concerned. However, the implications of such measures would be serious if they consisted in disrupting resource flows to and trade with developing countries. First, there is clear evidence that the introduction of restrictive and protectionist measures by the industrialized countries individually or regionally represents a serious threat to the industrialization process of the developing countries, creating serious problems for their balance of payments and their undiversified industrial sectors. Secondly, the erratic and nationalistic measures that might be adopted by developed countries would undermine the confidence of the present partners in international trade and co-operation, and would thus weaken the spirit of co-operation upon which long-term international economic development should be based in an era of global interdependence. Thirdly, despite growing industrial competition from the developing countries, structural changes are continually taking place within the

⁴"The impact of trade with developing countries on employment in developed countries: empirical evidence from recent research" (UNIDO/ICIS.85).

developed countries. Ending this restructuring process would have serious economic repercussions both nationally and internationally.

It may thus be concluded that there is a need for the developed market economy countries to pursue a systematic adjustment policy. This policy should be anticipatory in nature so as to avoid disruptions and the use of instruments that might interfere, either directly or indirectly, with the smooth development of the international economy.

A large number of adjustment policy measures have already been or are being conceived in individual developed countries. These include measures designed to increase the adaptability of the labour force and decrease the negative effects of its mobility, training and retraining schemes, and the expansion of job opportunities. An essential question raised by the adoption of appropriate anticipatory adjustment policies concerns their consistency with related internal and external policies. Their effectiveness might be increased if they formed an integral part of a set of related policy measures concerning trade, the involvement of industrial and trade enterprises in developing countries, and official development transfers. The transfer or redeployment of industrial enterprises could then be seen as an essential element within the framework of anticipatory structural adjustment and official development aid, combined with appropriate trade policies ensuring access of redeployed products from developing countries to the markets of the developed countries.

Anticipatory adjustment policies would undoubtedly be facilitated by systematic analyses and forecasts of long-term changes in industrial structure in the individual developed countries. To this end, attempts are being made by UNIDO, in co-operation with Governments and research institutes in developed countries, gradually to arrive at a comprehensive assessment of likely future structural changes. Such studies are to be supplemented by the formulation of hypotheses regarding import substitution, the processing by developing countries of their own natural resources, and the prospects of trade among the developing countries.

The major objective of the studies is to show the likely direction and extent of adjustment in the developed countries in the light of changing patterns in the international division of labour and national development goals and policies. The studies are also expected to provide information that will enable the developing countries to draw up and assess their long-term industrial strategies, and to analyse the scope and forms of international industrial co-operation.

These objectives may be achieved by highlighting probable autonomous changes in the industrial production structure of the various countries. The immediate task is therefore to produce quantitative data on likely structural changes, including the potential for increased relocation of industrial capacities to the developing countries. These data may serve as a basis for the formulation of consistent policy measures affecting the individual country's internal industrial growth pattern, in addition to trade and industrial co-operation with the developing countries.

Each study will provide quantitative forecasts of the evolution of a country's industrial production structure for a 10-15 year period. On this basis, the impact of various determinants on the level and structure of employment will be described with an indication of the effects, on the one hand, of changes in trade with developing countries (i.e. the substitution of imports from developing countries for the products of certain industries), and, on the other hand, of growth opportunities created in specific industries by developing country export needs.

The analysis will be based as fully as possible on the method of disaggregation, in particular for heterogenous sub-sectors. An attempt will be made to outline major trends common to the whole series of country studies, and special consideration will be given to the scope for intra-industry trade. The studies will be built, *inter alia*, on hypotheses relating to the overall economic growth of the country in question, to the supply potential of the developing countries, and the structure of world demand.

The major determinants of structural change involve, on the one hand, market forces and commercial factors, and, on the other hand, national political considerations. The first set of determinants would include the following: domestic final demand and, more particularly, changes in private consumption patterns; international trade, especially with developing countries; technological developments; and availability of production factors. A second set of determinants relates directly to the attainment of internal socio-economic, subsector and distribution objectives, and to problems of independence. Various implications of alternative patterns of industrial development will also be investigated.

The study programme is covered partly from regular UNIDO resources, with the close co-operation of various research institutes, and partly from direct financial support by individual governments.

The current series of country studies was launched in late 1977 and the first stage is nearing completion. At this juncture, it is therefore possible to present only a preliminary account of the individual studies. Since no consolidated report of the findings can be given at present, a brief summary is provided of the research undertaken in each country, which varies in terms of scope, time horizon, methodology etc. An attempt, however, is being made to establish a common study concept and obtain fully comparable results.

Summary of country studies

Australia

No detailed study has been undertaken so far. However, the Australian Bureau of Industrial Economics, in co-operation with UNIDO, has planned an initial research project which is to be carried out in 1979. The project may include an analysis of recent trade flows with, and of private and public resource flows to, the developing countries. The role of government policies affecting structural changes will be examined.

Austria

The first phase of the research work on structural changes has been completed jointly by UNIDO and an Austrian institute.⁵ This research consisted in testing determinants of the competitiveness of various industrial subsectors, which showed that capital intensity alone is an insufficient explanation for the country's competitiveness. Labour qualifications were also found to be a major determinant measured on the basis of three indicators: skills in the actual production of the subsector in question; educational requirements in linked production areas; and total qualifications. By applying these indicators, it was shown that Austria enjoys a trade surplus with developing countries in production areas requiring high qualifications.

⁵ Study Group for International Analysis, Vienna.

However, it was also found that in a range of Austrian industries a large amount of technology is applied which could also be effectively used by developing countries. The branches that would thus be subject to increasing competition from developing countries were the clothing, leather, textile, iron and steel, foundry and non-ferrous metal production industries. On the basis of these initial findings, a more detailed analysis and forecast of structural changes in industry is being undertaken. An attempt will be made in particular to investigate the impact of the dependence on imports of raw materials and energy. Input-output data as well as enterprise interviews will be used in this second exercise.

Belgium

The first phase of the research was completed jointly by UNIDO and a Belgian research institute.⁶ This study identified Belgium's industrial subsectors, which display comparative advantages and disadvantages according to various indicators such as capital stock, manpower, and natural resource content. In the analysis, an initial review was made of the current state of theoretical knowledge concerning the determinants of an optimal division of labour between countries with different factor endowments. Isolating the variables with well-established resource allocation implications, they were quantified with respect to the Belgian economy. Subsequently, it was empirically verified that the quantified variables were significant in explaining the pattern of Belgium's revealed comparative advantage with respect to the developing countries. Using four degrees of relationship between the exogenous variables, the entire sample of industries was classified into categories which in general indicate, in ascending order, the above-mentioned comparative advantage. The available evidence on the possibility of factor intensity reversals and the degree of skill content were used to qualify the classification. It should be noted that owing to various factors, such as policy distortions, the actual performance of some of these sectors can vary from that suggested by the underlying structure of comparative advantage and disadvantage. It is also possible that particular branches within given sectors have characteristics that deviate substantially from the limits of each category. But subject to these reservations, the Belgian policy with respect to an optimal international division of labour should benefit by the consideration given to the pattern of specialization suggested by the results of study. This pattern is also viewed against declared government policy with respect to future industrial and economic development.

Research relating to future structural changes in Belgium is to be carried out on a more disaggregated basis, and it will include an investigation into the possibilities of directly linking anticipated structural changes in Belgium with development prospects and priorities in some developing countries.

France

An initial report on structural changes in France has been completed by J. de Bandt of the University of Nanterre. A multi-criteria analysis and a linear programming simulation model were used to forecast future structural changes in France according to different national development objectives, such as employment,

⁶Centre for Development Studies, University of Antwerp.

energy consumption, international competitiveness, overall growth, import penetration of developing countries and environment.

The first part of the study, which concerns the evolution of consumption and demand, was based not on original data, but on projections made elsewhere.

The second part of the study, relating to the international division of labour, is divided along the following lines:

(a) A positive part works out a model for extrapolating the international market shares of France and the internal market shares of imports. However, since there is no *a priori* reason why this should meet external balance and employment requirements, a more normative approach is needed;

(b) A normative part derives comparative advantage criteria from earlier work in this field, in order to integrate a more rapid rate of "required" structural change.

The third part of the study consists in a formulation of the various assumed socio-economic objectives which may have to be fulfilled, and an attempted assessment of the relative weights likely to be attached to them.

The fourth part of the study is concerned both with the optimization model itself and with the consistency requirements. The following three alternative ways of building the model are worked out, with varying degrees of sophistication;

(a) A model based on the weighted characteristics of the various sectors;

(b) A linear programming model, in which all but one of the objectives are transformed into constraints: though rather rigid, this model can be used as a simulation model, while changing the objective to be maximized or the levels of the constraints;

(c) A multi-criteria optimization model: because of the mathematical difficulties involved, some of the objectives will still have to be transformed into constraints in order to reduce the number of criteria.

The consistency requirements will depend partly on the transformation of objectives into constraints.

The fifth part is concerned with the more detailed study of the subsectors of sectors identified by means of the optimization procedure.

The rather comprehensive data and findings of the analyses are at present being consolidated for publication. The next phase of the research work, which is scheduled to begin in early 1979, is to include a further disaggregation of those subsectors which appear to be most sensitive to changes in objectives and in import penetration of developing countries. Furthermore, input-output consistency will be explicitly accounted for, and additional work on the optimization of competitiveness will have to be undertaken.

Federal Republic of Germany

An initial study is at present being completed by UNIDO and a German research institute.⁷ It seeks to gain insight into the adjustment problems that the Federal Republic of Germany, as an open economy, is facing at present. The first part of the study is designed to survey past economic growth and structural change in the Federal Republic of Germany and to analyse the adjustment requirements that have emerged. The analysis concentrates on changes in the international competitive

⁷ Institute for World Economics, Kiel.

position of the Federal Republic of Germany as compared with other high-income countries, and on the new role of less developed countries in the international division of labour and its impact on the Federal Republic of Germany. The study subsequently investigates in greater detail the nature of the division of labour between the Federal Republic of Germany and the developing countries with regard to trade in manufactures. On this basis, a consolidated view is obtained of future industrial production and employment structures. Finally, policy questions are considered. The emphasis is on whether conflicts arise between the further economic integration of the Federal Republic of Germany and third world countries, and the attainment of national goals, such as full employment, economic growth, and regionally balanced development or independence.

The final results of the study are scheduled for publication in 1979. Preliminary results already indicate, however, that in trade with developing countries the competitiveness of producers in the Federal Republic of Germany, taken together, scarcely differs from that of the OECD countries combined. On the whole, the Federal Republic of Germany shows similar comparative advantages and disadvantages in approximately the same product groups as other developed countries. These results would seem to indicate that, on the one hand, OECD countries have to overcome similar adjustment problems stemming from developing countries' imports, while on the other hand, the developed countries compete in the same product groups for import markets in the developing countries. Thus, not only performance in inter-OECD trade, but also performance in exports to developing countries, greatly depends on the ability of individual OECD countries to come to terms with the new role of developing countries in the international division of labour.

Furthermore, preliminary results show that the intensive utilization of human capital, energy, and research and development, combined with economies of scale, consistently give industry in the Federal Republic of Germany a competitive edge in trade with developing countries, whereas industrial activities characterized by the intensive utilization of unskilled labour and raw materials or a high degree of standardization are under adjustment pressure due to import competition from developing countries.

On the basis of the completed study, a second relatively comprehensive phase of structural research in the Federal Republic of Germany is being considered. It will be carried out at a greater level of disaggregation, with due regard to the views and plans of a number of individual industrial enterprises and to the anticipated penetration of manufactures from developing countries.

Hungary

A study of future structural changes and specialization in Hungarian industry and of the possibilities of increasing industrial co-operation with developing countries was recently launched. It is being undertaken jointly by Hungarian research institutes^a and UNIDO, and involves an analysis of present structures and an examination of anticipated structural changes. On this basis, long-term possibilities for industrial co-operation with developing countries will be outlined.

^a The Institute for Economic and Market Research, the Institute of Industrial Economy of the Academy of Sciences, the Planning Institute of the National Planning Office, and the Economic Research Institute of the Central Statistical Office.

Japan

A systematic review of ongoing research on structural changes in Japanese industry is to be launched in 1979. It will be supplemented by specific forecasts, and a consolidated report will appear in due course.

UNIDO has so far made only a partial compilation of the available data,⁹ indicating some of the industries which are expected to decline, including the following: non-ferrous metal smelting, iron and steel, open-hearth and electric furnaces, chemical fertilizers, textiles and garments, and home appliances. Domestic resource limits are also expected to lead to a decline in those industries which require high energy and natural resource inputs, such as the aluminium refining, synthetic-fibre, carton and polyvinyl chloride industries.

A slightly more disaggregated picture of the competitiveness of Japan in its trade in manufactures with developing countries can be obtained by applying the revealed comparative advantages approach.¹⁰ The figures show that during the last 15 years the Japanese position in trade with developing countries has deteriorated in many product groups. Thus, Japan lost comparative advantages, for example in products belonging to the following branches: medical and pharmaceutical industry, explosives and pyrotechnics, wood and cork manufacture, textiles, furniture, travel goods and handbags, clothing and footwear. The comparative advantage declined drastically in electrical machinery and appliances, and, to a smaller extent, in precision and optical goods, in addition to rubber manufactures. On the other hand, comparative advantages considerably increased in iron and steel and emerged in the field of transport equipment, while the disadvantages in leather and leather manufactures decreased significantly.

Sweden

A study has recently been initiated by UNIDO in co-operation with Swedish researchers. It is to start with an analysis of the comparative advantage of Sweden according to the product cycle and an approach based on the factor proportions theory, and the compatibility of certain trends with national socio-economic goals will be investigated. On this basis, projections will be made up to 1995 using a multisectoral model of the Swedish economy. An attempt will be made to draw up strategies for mitigating goal conflicts and to outline the scope for, and direction of, trade and redeployment with the developing countries.

Switzerland

A first phase of research work concerning structural changes in Swiss industry has recently been completed through co-operation between UNIDO and a Swiss research group.¹¹ The study analyses structural changes during the period

⁹ ESCAP, "Redeployment opportunities of Japanese industry in the context of industrial co-operation in the ESCAP region" (IHT/ERI/2).

¹⁰ In this approach, the competitiveness of a country in a given product group is judged by the extent to which its exports of goods exceed its imports. The foreign trade balances in specific product groups are scaled by the foreign trade balance of all manufactures taken together. The index is so formulated as to produce only values ranging from +100 (maximum competitiveness) to -100 (minimum competitiveness).

¹¹ Industrial Consulting and Management Engineering Co., Zurich, and S. Borner, University of Basel.

1968-1978, identifies their causes, and attempts to classify industries according to their competitiveness. To offset the shortage of data at a disaggregated level, a number of case studies were made. A survey of redeployment and trade relations with the developing countries is also included. It shows that Switzerland has a large balance of payment surplus with the developing countries (including members of OPEC). The ratio of exports to imports remains 2:1, and this has enabled the country to cover three fourths of its chronic balance of payments deficit with western industrialized countries. The OPEC countries and the more advanced of the developing countries account for the dominant share of Swiss exports to the third world.

On the basis of this first study, more comprehensive research work focusing on future developments is now being planned.

United Kingdom

Various partial studies have been carried out regarding structural changes in the United Kingdom. UNIDO, in co-operation with two United Kingdom research institutes, is launching a more comprehensive study of industry in the United Kingdom and its past and potential relations with developing countries. The study is to analyse past structural changes and to outline future trade and co-operation prospects with the developing countries. It is expected that the undertaking, which will include some specific case studies of individual industries, will be completed in late 1979.

Other countries

Research work is planned for a number of other countries, including Denmark, the Netherlands, and the United States.

Conclusions

The aim of the studies referred to above is to examine to what extent both developed and developing countries stand to gain in the long term from a restructuring of world industrial production. Relocation of industry and the expansion of world trade in manufactures, if properly conceived, may be mutually advantageous. Redeployment of industries thus implies long-term co-operation in the transfer of industrial capacities from developed to developing countries in keeping with the overall objectives and priorities of the countries concerned.

In its study programme on redeployment and structural adjustment, UNIDO is attempting to acquire an understanding of, and to draw the attention of the international community to, the changes in the international division of labour. The endeavours of UNIDO are therefore directed to forecasting structural changes in industry in developed countries, and to surveying the development prospects and constraints in developing countries. On this basis, it may be possible for Governments to achieve a more systematic perception of the nature of the changes, to anticipate them, and to design, as appropriate, a more coherent policy package, in which development goals are duly taken into account.

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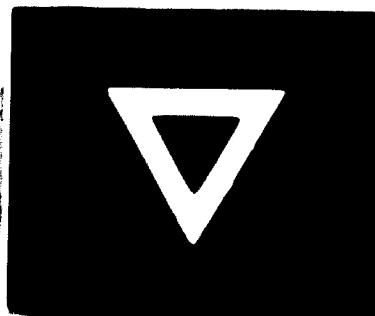
United Nations publication

78-8440 - April 1979 - 6,500

Sales No. F.79.II.B.2

ID/SER.M/3

B-386



80.04.12