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plant and equipment"<sup>29</sup>. These expenditures, which in contrast to the additions to stock referred to above include funds originating from domestic capital markets, rose from \$ 100 mn p.a. between 1966 and 1971 to an annual average of \$ 207 mn during the following six years.

As far as other performance criteria are concerned, little conclusive evidence is available. A capital-inflow/profit-outflow comparison, derived from IMF statistics indicates that past patterns, i.e. profit outflows exceeding substantially capital inflows, did not change significantly in recent years (cf. table 4). The statistical data base is, however, subject to considerable potential errors, data are not disaggregated by sectors, and special influences, e.g. nationalization of oil investments in Venezuela, create severe distortions. As a consequence a causal relationship between enforcement of the Andean Code and balance-of-pay-

<sup>29</sup> Cf. L. A. L u p o , Capital Expenditures by Majority-owned Foreign Affiliates of U.S. Companies 1977 and 1978, in: Survey of Current Business, Vol. 58, No. 3, p. 23.

ments flows originating from foreign-owned companies cannot be established, the more so as general political and economic developments may have a stronger influence on foreign investment behaviour than regulations, which are specifically applied to foreign investors.

After almost eight years of implementation the Andean Code on foreign investment has at least proved to be fairly resistant against political changes in the member states. Moreover, the swift adoption of the modifications to Decision 24 following the withdrawal of Chile from the Andean Pact shows a remarkable ability to flexibly adapt provisions to changing circumstances and reveals a considerable extent of agreement on the issue. This contrasts positively to the lengthy negotiations about industrial programming and trade liberalization. The common treatment of foreign capital, therefore, turns out to be the most important contributing factor to the Andean Group's cohesiveness and the viability of the approach to integration chosen by these countries.

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## INTERNATIONAL DIVISION OF LABOUR

# World Trade and Structural Adjustments

by Heinz Werner, Nuremberg \*

**The developing countries have to be involved more closely in the international division of labour if they are to be able to play their part in a New International Economic Order. Increased competition in semi-finished and finished products and internal substitution processes will pose new problems for the industrialized countries and force them to consider structural readjustments in their own economies.**

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**M**ore intensive international division of labour between industrialized and developing countries necessitates more active involvement of the less developed countries in international exchange relations. It poses a multitude of problems relating, for example, to international commodity agreements, development strategies in developing countries (import substitution or export diversification), technology transfer and input, protectionism, financial aid and debt redemption. Many of these questions require the taking of political

decisions with as yet unforeseeable characteristics, dimensions and consequences. The present article therefore attempts no more than to identify currently recognizable tendencies.

The past development of the world trade between industrialized and developing countries is used as a basis for discussion and the background for a consideration of the foreign commerce of the Federal Republic of Germany with the developing countries. This leads to an examination of the possible effects on employment of larger trade exchanges between the Federal Republic and the developing countries insofar as these can be ascertained at present.

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Trade flows can be represented in various ways. The evidential value of any figures will be affected by the choice of base year, averaging and aggregating methods, and the use of volume or value data. A comparison of the trade flows between countries and/or groups of countries as ratios of total world trade in a certain period of time (see table) offers a relatively objective and convenient means of measurement.

It will be seen that the western industrialized states accounted for about two-thirds of the world trade in the period under review (1968–1977). The outstanding change in world trade over these ten years was the rise of the share of the oil exporting countries (OPEC) from 5.9 % in 1968 to 13.1 % in 1977 – for the most part at the expense of the industrialized nations and to some extent at that of the oil importing developing countries. The non-oil exporting developing countries have regained their share of world exports as it was ten years earlier but their imports are now much larger than their exports, so that their global trade balance is heavily in deficit.

The share of world trade of the Federal Republic of Germany has remained by and large the same.

### Export Ramification by Groups of Countries

(Sum of world exports in \$ bn)

Target countries (groups)	Year	Developing countries			State-trading countries	World total
		Industrial countries	Oil-exporting developing countries	Other developing countries		
		%	%	%		
Countries of origin (groups)						
	Industrial countries	1968 49.5	2.6	10.5	2.7	67.6
	1973 51.1	2.8	9.2	3.2	68.1	
	1975 43.6	5.4	9.5	3.8	64.0	
1977 43.7	5.9	8.6	3.0	62.6		
Oil-exporting developing countries	1968 4.6	—	1.0	0.1	5.9	
	1973 5.7	—	1.4	0.1	7.3	
	1975 9.5	0.1	2.6	0.2	12.7	
	1977 9.8	0.1	2.7	0.2	13.1	
Other developing countries	1968 8.7	0.3	2.4	0.8	12.4	
	1973 8.3	0.4	2.2	0.8	11.9	
	1975 7.2	0.7	2.2	0.9	11.3	
	1977 8.2	0.7	2.3	0.8	12.3	
State-trading countries	1968 2.6	0.2	1.5	7.0	11.3	
	1973 2.7	0.3	1.2	5.7	10.0	
	1975 2.8	0.4	1.1	5.5	9.8	
	1977 2.7	0.4	1.2	5.4	9.7	
World total	1968 67.4	3.2	15.8	10.7	100.0	
	1973 69.7	3.6	14.4	9.9	100.0	
	1975 64.6	6.6	15.9	10.5	100.0	
	1977 65.9	7.3	15.2	9.6	100.0	
Federal Republic of Germany	1968 8.4	0.3	1.0	0.5	10.5	
	1973 9.4	0.4	0.9	0.7	11.7	
	1975 7.5	0.8	0.9	0.8	10.3	
	1977 7.8	1.0	0.8	0.6	10.5	

Source: GATT

The relative increase in trade with the OPEC countries and the centrally administered economies has caused structural shifts. The exports to non-oil exporting developing countries on the other hand have receded slowly but steadily in relative terms.

### Goods Exchanges between Developing and Industrial Countries

The trade in finished goods is of special relevance for the exchanges between developing and industrialized countries because more intensive international division of labour depends on an expansion of manufacturing exports from the former to the latter. Larger imports of such finished and semi-finished products into the industrialized states will however create competitive situations between domestic and imported goods and possibly give rise to restructuring processes in the developed countries.

The 422 manufactures exported by developing countries to western industrialized countries in the period from 1970 to 1976 have been examined in an UNCTAD study<sup>1</sup>. It was found that only 10 products accounted for as much as 44 %, and 50 products for 79 %, of the increase of such imports into the industrialized countries from developing countries. The exports of manufactures from developing countries consist mainly of goods which enjoy a comparative advantage over similar goods of industrialized countries, namely resource- (equipment-)related semi-finished and finished products and, to an increasing extent, labour-intensive articles. In the case of the resource-related products such as processed cocoa and coffee, timber, leather goods, trinkets, etc., the developing countries have been able not only to hold but partly to improve on their high earlier market shares; in labour-intensive articles like clothing, electrical goods and precision instruments they have increased their shares substantially, a fact which suggests that labour-intensive productions have – at least in part – been relocated from industrialized to developing countries.

Of interest is also the occurrence of over- and under-proportional export increases – the relative changes in “dynamic” and “stagnant” foreign trade products: the less developed countries recorded above-average increases – in relation to total world imports – in the “dynamic products” and below-average or relative declines in the “stagnant products”. Among the “dynamic products” were mainly chemical products, mechanical

<sup>1</sup> UNCTAD, Dynamic products in the export of manufactured goods from developing countries to developed market-economy countries, 1970–1976, UNCTAD/ST/MD/18, Geneva 1978.

engineering products, vehicles, electrotechnical and miscellaneous goods, i. e. articles which are normally produced by industrial manufacturing processes.

A geographical division of the trade flows reveals that about two-thirds of the increase of imports into industrialized states from developing countries between 1970 and 1976 (63 %) originated only in five countries – South Korea (22.1 %), Hongkong (18.3 %), Mexico (8.2 %), Brazil (7.9 %) and Singapore (6.2 %). Similarly, about two-thirds of the supplies from developing countries were absorbed by four industrialized countries – Japan, the USA, Great Britain and the Federal Republic of Germany: their share varied however widely between the 422 examined products.

#### **Goods Exchanges between the Federal Republic and the Developing Countries**

The Federal Republic of Germany has greatly increased its exports to non-European developing countries in the last ten years, in both absolute and relative terms, but there were differences between OPEC and non-OPEC states, and the special position of the OPEC group makes it advisable to leave them out of account for the present and to sub-divide the other developing countries as they are by no means a homogeneous group.

The general trend of relatively declining imports from developing countries masks widely diverging movements: the largest market losses of the non-OPEC developing countries by far were incurred by developing countries at a below-average level of development.

Rising national incomes and technical advances leading to raw material savings and substitution result in a relative decline of the demand for food

and raw materials (except oil) or raw material-intensive intermediate products. This general world trend also marked the foreign trade of the Federal Republic with the developing countries, with a difference however: food and raw materials still carry great weight in the export trade of the developing countries with the Federal Republic. They accounted for nearly two-thirds of the German imports from non-European non-OPEC developing countries in 1977.

The developing countries were able to raise their share of the imports of "traditional" merchandise like textiles and clothing into the Federal Republic further. A small group of "threshold countries" succeeded, besides, in increasing their activities in the German market for finished goods although their share of the imports, let alone the total supplies to the German market, is still diminutive. There are however unmistakable signs of an incipient structural change in the foreign trade with the developing countries, namely from a complementary to a substitutive trade, such as has also occurred within the group of the industrialized states. The constancy of the increase of finished goods imports during the past 15 years suggests that this trend will continue, the more so as in comparison with other industrialized countries the developing countries are so far supplying only a small share of the total imports into the Federal Republic.

The industrialization of the developing countries has repercussions above all on the sales of manufactures by the Federal Republic by inducing changes in current import and export flows. It may be assumed to entail increases in the exports of investment goods to the developing countries as the less developed countries are for the most part without an investment goods sector, and this is largely borne out by an analysis of the trade flows:

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the deliveries of investment goods to developing countries by the industrialized states, and the Federal Republic in particular, show a more than proportional increase; in 1975 they accounted for nearly 70 % of the exports of German manufacturing industries.

### **Industrialization Strategies of LDCs**

The industrialization of the developing countries may create problems for the manufacturing industries in the Federal Republic through the replacement of exports by products of local consumer goods industries and/or increased competition by imports from developing countries in the German market for industrial goods. Whether such shifts in trade show up mainly in exports or in imports depends upon the industrialization strategies of the developing countries:

The aim of export-oriented industrialization is to open foreign markets as outlets for industrial goods. The theoretical foundation for this is the "factor proportions theorem" of Heckscher and Ohlin. Instead of confining themselves to the areas in which they enjoy classical "natural" competitive advantages, the developing countries are advised to move into the commerce in goods in which they possess a relative advantage in equipment and prices as between the production factors of labour and capital. As the developing countries can draw on cheap labour while in the industrialized states labour is a scarcer and dearer production factor, the developing countries have a comparative competitive advantage in labour-intensive products with fully perfected and relatively simple manufacturing technologies.

In industrialization oriented towards the domestic market the aim is to develop substitutes for imports from the industrialized countries. Underlying this strategy is the idea that owing to insufficient transparency of the world market the production structure must be based on the requirements in the immediate vicinity, which means in the main on the national demand structure (Linder theorem). The domestic orientation of the production trend also determines which goods a country can offer for export. Exports of a particular product are thus not the starting point of a production phase but in a sense an extension of the (domestic) market expansion.

There are successful examples of both industrialization strategies. In distinction from the sixties when most developing countries focused on the domestic market, a growing number of countries have in recent years attached more weight to export-oriented industrialization. Small and densely populated states like Hongkong, Singapore, Tai-

wan and South Korea have been remarkably successful in the export trade; labour-intensive industrial manufacturing methods seem to offer to them a suitable strategy under development aspects as they have only slight opportunities for internal expansion. Other developing countries could orient the industrialization process, besides, to their domestic requirements because they have potentially larger national markets. This would however presuppose an increase in the purchasing power of the populace, for example by means of a land reform, new agricultural techniques and products, public works programmes, etc. — a politically difficult and lengthy process. This being so, it may be assumed that the tendency towards greater export orientation will continue in a number of developing countries, and this is confirmed by an analysis of the trade flows between industrialized and developing countries.

For both industrialization strategies the industrialized countries are expected to show themselves willing to accept structural changes in their own economies. Otherwise the developing countries have little chance of hastening their economic growth by exporting larger quantities of finished goods. But these structural changes in industrialized countries cannot be carried out in a short time — as some developing countries are still urging — and possibly even in advance. They must be engrafted in a longer development process which avoids the emergence of high-risk mono-industrial structures in the developing countries and the equally great dangers from the phasing-out of entire industries in advanced countries as a result of their abrupt relocation into developing countries. In the longer view a change of the world production structure as between industrialized and developing countries need not be altogether disadvantageous to the industrialized countries, for the more successful the developing countries are in securing a place in the international trade in industrial products, the greater will be the benefit to the industrialized countries as suppliers of products which developing countries need for the industrialization of their economies.

### **Effects of Sectoral Restructuring Processes**

For the Federal Republic of Germany as an industrialized country which depends on foreign trade it is important to know how such shifts in international trade may affect the structure of its economy and thereby employment. The analysis of the trends of foreign trade already indicated certain key areas: there has been a marked increase in imports of finished goods from non-oil exporting developing countries, especially from several

countries in South-East Asia, while on the other side the Federal Republic has exported more investment goods (machinery and road vehicles) to developing countries. This alone does not of course say much about the dimensions of the structural changes and the necessary shifts in employment.

If demand in a country is met by imported products instead of domestic ones, negative effects will make themselves felt in production and employment just as an increase of exports will engender positive effects. The force and sectoral distribution of these effects depend on what kinds of goods are imported or exported in larger quantities. They are affected not only by the (direct) effects in the industry immediately concerned but by the (indirect) effects induced in related upstream productions. The Deutsche Institut für Wirtschaftsforschung (German Institute for Economic Research) (DIW) has tried to estimate the direct and indirect effects of increased trade with the Third World on employment by means of an input-output computation<sup>2</sup>. Assuming that the export and import trade with the developing countries expands equally and that the internal economic ramifications remain unchanged while certain changes take place in the structure of foreign trade, this model computation leads to the conclusion that the redundancy effect will be almost nil on balance while considerable changes will be brought about in the employment situation in individual sectors.

The clothing and textile industries will have to cope with most of the redundancies (over 50 % and 30 % respectively) while 5 and 7 % of the necessary lay-offs will occur in the leather trade and the manufacture of musical instruments and toys. The largest positive effects on employment will be noted in mechanical engineering (37 %), road vehicles production (24 %) and steel construction (8 %). The remainder of the employment gains will be spread over a large number of industries.

The sectoral shifts in production and employment will entail structural changes in required vocational qualifications. In the DIW study an attempt was made to estimate the employment effects on different occupations and qualification levels; an industrial occupation matrix based on the population census of 1970 was used for this purpose. This showed 75 % of the redundant workers to have textile or clothing industry jobs while 10 % are engaged in leather production or leather or

hide processing. Of the additional jobs to be filled 40 % are for machinists, toolmakers and similar skills, a good 20 % in metal production and processing and nearly 10 % for engineers, chemists, physicists or technologists while 5–7 % are for fitters and electricians.

As far as the level of qualifications is concerned, an equal expansion of imports and exports would on balance release unskilled workers who would have to be retrained for employment in export productions; 70 % would require in-job training and 30 % vocational college courses, and one-third of the latter would have to attend a college of higher education<sup>3</sup>.

### Increasing Inter-Industrial Division of Labour

The investigations into the effects of increased trade with developing countries undertaken in other countries and by international organizations have yielded similar results as in the Federal Republic<sup>4</sup>. The overall (net) loss of employment is relatively small. The employment effects relate to sectoral restructuring with certain consequences on the types of jobs to be filled and the qualifications required. Problems may ensue because heavy redundancies often occur in a few industries and hit structurally weak areas and low income groups. Increased sales of goods by developing countries to the industrialized states provide the less developed countries with foreign currency earnings which will stimulate exports from the industrialized states. The investment goods industry will profit most from such exports; the jobs created by them will be spread more widely over various industries than the employment losses resulting from imports from the developing countries and will tend to be concentrated in sectors and regions with more highly qualified workforces. Unlike an expansion of the trade between industrialized states which involves a greater intra-industry division of labour, increasing trade with developing countries entails more intensive inter-industrial division of labour between industrialized and developing countries. There are normally no job opportunities in the same industry for the workers who are made redundant by increased imports from developing countries. They have to move to other industries, and restructuring problems will arise in consequence.

<sup>3</sup> These figures are based on model computations subject to certain assumptions. In the present case, for example, attention has to be paid to the limitations imposed on the input-output computation by inter- and intra-industrial ramifications observed in the past. To this extent the figures are to be regarded not as exactly reflecting the quantitative effects to be expected but merely as indicators of employment effects.

<sup>4</sup> Cf. UNIDO, The impact of trade with developing countries on employment in developed countries – Empirical evidence from recent research, Vienna 1978, UNIDO working paper on structural change No. 3.

<sup>2</sup> DIW Wochenberichte 5/1977 and 1/1978. On the problems encountered in input-output calculations for quantifying employment effects in foreign trade cf. Dieter E. L o u d a , Außenhandel und Beschäftigung (Foreign trade and employment), Beiträge zur Arbeitsmarkt- und Berufsforschung No. 14, Nuremberg 1976, p. 32 ff.