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Industrialisation, exports and employment

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1. Introduction

Over the past few years the industrialisation of developing countries has figured prominently in the resolutions of the United Nations General Assembly concerning the Programme of Action on the Establishment of a New International Economic Order,[1] in the UNCTAD international development strategy[2] and above all in the 1975 Lima Declaration[3] (Second General Conference of UNIDO), which set a target whereby the developing countries' share in world industrial output should attain 25 per cent by the year 2000.

The first question that springs to mind is how this industrialisation can be brought about. Many developing countries are still quite unable—for reasons of production costs, market size, lack of infrastructure, shortage of skilled manpower, etc.—to carry out an industrialisation programme of the Latin American type, i.e. based on import substitution (Argentina, Brazil), or of the Asian type, i.e. based on international subcontracting (Singapore, Hong Kong).

Another question is what effect industrialisation may be expected to have on direct and indirect job creation. This is a crucial question since, as we shall see, over the past 20 years industrialisation has not on the whole led to a drop in unemployment or underemployment, quite the reverse.

In this article I shall attempt to provide answers to these two questions.[4] After briefly reviewing the changing pattern of production, exports and employment in the developing countries since 1960, I shall discuss the advantages and disadvantages of industrialisation strategies based on the local processing of raw materials for export.

2. Changing pattern of production, exports and employment in developing countries since 1960

Industrial production

In 1960 industrial production in the Third World countries amounted to 7 per cent of the world's industrial output. This proportion remained

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unchanged until 1970 despite the sustained growth of industry during the 1960s: 8 per cent a year in Africa, 7.7 per cent in Latin America, 8.4 per cent in south and east Asia and 10.1 per cent in west Asia.[5]

In 1977 industry in the developing countries accounted for 9 per cent of the world total, which was a marked improvement on 1970. This increase cannot be explained solely by the slower growth of the developed countries: it is also a result of the industrialisation efforts of the Third World whose industrial production increased at an annual rate of 6 per cent between 1973 and 1977—twice as fast as in the developed countries.

Performance varied considerably from one country to another for a number of reasons which I shall attempt to explain.

The share of industrial production in the economy is an important indicator of the stage reached by a country in its structural transformation process. World Bank statistics clearly show that between 1960 and 1976 it was in the countries with the lowest incomes that the changes were most noticeable since the share of secondary sector output increased by 7 per cent in the low-income countries as against only 5 per cent in the middle-income countries, whereas it dropped by 2 per cent in the developed countries.[6]

The World Bank also stresses the structural changes that accompany industrialisation in the developing countries. Initially it is labour-intensive industries such as food and textiles which occupy the dominant position. As development progresses, the capital-intensive sectors requiring more highly skilled manpower, such as the chemical and metal industries, assume increasing importance.

The World Bank report further shows that the countries that based their industrialisation on the export of processed products, using either local raw materials or imported semi-manufactures, achieved better economic results than those specialising in the export of raw materials. This finding is of crucial importance in view, as we shall see, of the considerable employment creation associated with the local processing of raw materials.

Exports

Exports from the developing countries have risen considerably (see table 1). In 1978 they were ten times higher than in 1963 in terms of current US dollars. The increase was particularly spectacular in Asia where exports rose fourteenfold over the same period, but it was less marked in Latin America where industrialisation strategies have long been based on import substitution.

The most interesting fact to emerge is that even in the developing countries that are not members of OPEC there was a rapid increase in exports; in addition, these countries seem to be less affected by the economic crisis in the developed countries, whereas exports from the

Table 1. Exports from developing countries
(in thousand million current US dollars)

Region	1963	1973	1975	1976	1977	1978
Africa	6.6	20.9	34.5	42.1	48.4	52.0
Latin America	11.3	29.5	47.7	53.3	60.8	64.4
Asia and other	14.0	60.0	127.6	158.2	179.3	189.2
Total	**31.9**	**110.4**	**209.8**	**253.6**	**288.5**	**305.6**
OPEC	9.2	42.1	111.0	134.0	146.7	142.3
Non-OPEC	22.7	68.3	98.8	119.6	141.8	163.3

Source: GATT: *International trade 1978/79* (Geneva, 1979), appendix table H.

petroleum producers fell off in 1978 compared with 1977. This greater imperviousness stems from the fact that between 1963 and 1978 trade between non-OPEC developing countries increased more than did their exports to the industrial regions, as can be clearly seen from table 2. Trade between developing countries is already one of the main determinants of their growth and is likely to become even more important in the future.

If we eliminate the influence of the fall in the dollar, we obtain different but highly instructive results from the point of view of the interdependence of the industrialised and developing countries.[7] From 1963 to 1973 exports from the developing countries increased at a rate of 7 per cent per year, i.e. faster than their gross national product. The growth in their exports of manufactured products was more spectacular: double the rate of growth of GNP. Since 1973 the situation has changed and the rate of growth of exports from the developing countries has dropped by half in terms of constant US dollars: between 1973 and 1978 it was only 3.4 per cent a year.

Table 2. Destination of exports from non-OPEC developing countries
(in thousand million current US dollars)

Destination	1963	1973	1975	1978
Industrial regions	15.5	47.2	62.9	107.5
Western Europe	8.9	22.0	28.3	48.3
Developing regions	4.7	14.8	25.0	41.4
Africa	0.8	2.0	4.2	6.1
Latin America	1.0	3.9	7.1	10.7
Asia and other	2.9	8.9	13.7	24.6
Other	2.5	6.3	10.9	14.4
Total	**22.7**	**68.3**	**98.8**	**163.3**

Source: As for table 1.

This reversal of the trend can be explained in a number of ways. The rapid growth of exports during the 1960s can be attributed to the creation of new production capacity, better utilisation of existing capacity, rapid expansion of domestic demand in the industrialised countries and non-protectionist trade policies. Since 1974 the developed nations have been experiencing enormous difficulties, with practically zero economic growth and very high inflation, and there can be no doubt that their current stagnation is holding up the growth of exports from the Third World countries and hence their development. This is an important aspect of the "North-South dialogue" which is worth bearing in mind.

Employment

Between 1960 and 1973 there was a considerable increase in unemployment in the developing countries: the number of people out of work rose from 36 to 50 million, as can be seen from table 3. While there was a similar deterioration in the situation in every region,[8] the unemployment rate was nevertheless higher in Africa: 8.2 per cent in 1973 as against 5.2 in Latin America and 7.0 in Asia. To the total of persons out of work should be added the number of underemployed, i.e. those who are involuntarily employed part time or on short time or who are engaged in an activity yielding an inadequate income. The ILO estimated the number of underemployed in 1975 at approximately 250 million, of whom 60 per cent lived in rural areas; this represents roughly 35 per cent of the labour force, with no great variations between the regions. In other words, if one adds the number of underemployed to that of the unemployed, there were 300 million people in 1975 without normal employment, or 40 per cent of the labour force.

Since 1973 the situation has not improved, far from it: in 1978 the number of unemployed in the developing countries was approaching the 60 million mark. Africa has been the hardest hit by the repercussions of the world economic crisis, which is only to be expected since it is a poor continent and industrialisation has only just begun in many African countries. Employment in the secondary sector accounted for only 14 per cent of total employment in 1978, with two-thirds of the labour force still working in the primary sector. In Asia unemployment has certainly increased considerably, apart from a few countries where industrialisation has been rapid (Singapore, Hong Kong, Republic of Korea). This, too, is a continent with a relatively low level of industrialisation on the whole; employment in the secondary sector accounted for only 20 per cent of total employment in 1978, with agriculture still employing 56 per cent. In Latin America, where the process of industrialisation is of less recent origin and has been taken further, the number of unemployed is only 7 million, but on the other hand underemployment is very widespread, particularly in the

Table 3. Population, employment and unemployment in developing countries (estimates in millions)

Item	1960	1970	1973	1975	1978
Population	1 388	1 791	1 934	2 036	2 211
Labour force	550	670	715	746	801
Employment	514	623	665	693	743
Unemployment	36	47	50	53	58
Unemployment rate (%)	6.0	7.0	7.0	7.1	7.2

Source: Y. Sabolo: "Employment and unemployment, 1960-90", in *International Labour Review*, Dec. 1975; and idem: "Occupazione e disoccupazione: prospettive per l'anno 2000", in *Affari Sociali Internazionali* (Milan), 1979, No. 1. New estimates.

urban areas. In 1978 industrial employment seems to have increased by comparison with 1975 despite the world economic crisis.[8]

The relationship between production, exports and employment

We may conclude, then, that despite rapid growth in per capita incomes, industrial production and exports since the 1960s, the employment situation has deteriorated on the whole in all regions of the Third World. Several factors are responsible for this.

First, there is the obvious but none the less basic point that international trade cannot create jobs directly any more than it is the actual goal of development. It follows that an increase in exports cannot guarantee that poverty will be reduced.

The links between international trade and employment are complex. Trade makes for a better utilisation of resources, which results in increased production while making investment more productive. Better utilisation of resources entails, nevertheless, a greater specialisation, an increase in the scale of production and encouragement of innovations and technological progress.[9]

An ILO study[10] has shown that the lower the level of development, the greater the number of jobs created by a given increase in exports. In addition, multiplier effects amplify the direct increase in employment by a factor of around two to five times the initial effect.

The growth of developing countries' industrial production and exports between 1960 and 1978 should therefore have boosted employment more than it did, especially as the product composition of exports has altered in a manner which is apparently favourable to employment. The share of primary products in the exports of the non-petroleum producing countries fell from 89.5 per cent in 1963 to 60.7 per cent in 1978, the decline being particularly marked in non-food items (raw materials, ores, mineral and other fuels, non-ferrous metals). Conversely, exports of manufactured

Table 4. Distribution of industrial production in developing countries by type of industry, 1960-76
(%)

Industry	1960	1965	1970	1976
Light industry				
All developing countries	62.5	56.8	52.8	48.9
Asia	69.0	61.0	57.9	55.0
Latin America	57.2	52.3	47.7	42.5
Heavy industry				
All developing countries	37.5	43.2	47.2	51.1
Asia	31.0	38.4	42.1	45.0
Latin America	42.8	47.7	52.3	57.5

Source: UNIDO: *World industry since 1960: progress and prospects* (New York, United Nations, 1979; Sales No. E.79.II.B.3), table III.1.

products rose from only about 10 per cent of the total in 1963 to reach almost 40 per cent in 1978.[11]

The increase in the developing countries' industrial production and exports has not been solely in the field of labour-intensive products, far from it. Table 4 shows that industrial growth was in fact higher in the heavy, i.e. capital-intensive, industries than in the more labour-intensive light industries.

Furthermore, since 1960 productivity has increased rapidly[12] as a result of foreign investment, transfers of technology and the improvement of skills. Given the high level of unemployment, it would seem logical to strive after a rapid growth of employment rather than of productivity. Nevertheless, increases in productivity are largely the result of "learning by doing" and non-capital factors associated with technological progress which occur in the initial stages of industrialisation. Moreover, during the different stages of industrialisation, the production function is not continuous but discontinuous. In a way, therefore, the choice of this or that type of production directly affects the rate of productivity and the volume of employment, since the possibilities of substitution between them are very limited in practice.

Consequently, the structural changes that have taken place since 1960 have scarcely been favourable to employment if one excepts one or two "economic miracles", such as that which has occurred in the Republic of Korea.[13]

3. Local processing of raw materials and employment

After discussing the methodological side of the question, I shall attempt to bring out briefly some of the theoretical aspects of industriali-

sation strategies based on the local processing of raw materials for export. Finally, I shall evaluate the performance of the developing countries in the field of exporting locally processed products.

Methodological aspects

One of the first methodological problems encountered when we consider the local processing of raw materials is that of definition. Raw materials undergo a series of transformations before reaching the stage of final consumption. Processing can be defined therefore as the entire sequence of stages between the raw material and the final product, but it still has to be decided at what stage processing really begins and when it finishes, since each stage results in the production of a final consumption commodity for the stage immediately following, even though it is customary to speak of "intermediate" consumption. Moreover, when one tries to apply the concept of processing to a group of products or countries, the definition rapidly becomes arbitrary since for each product the processing stages can differ widely from one country to another and also as regards the technology employed. Lacking scientific criteria, as David Wall observes,[14] we must therefore leave it to common sense. Wall also points out that only through individual case studies by product and by country can we identify possibilities for creating processing industries in a country on an internationally competitive basis.

This is the approach adopted by the ILO which, in studies it is currently carrying out, uses the concept of industrial "chains". For example, the studies on the cotton textiles chain cover every stage in the production and processing of the product, i.e. production of cotton seed, cotton fibre, threadmaking, spinning, weaving and garment and hosiery making. In this way the problems of definition have in fact been avoided rather than solved.

Advantages and disadvantages of industrialisation strategies based on the export of locally processed raw materials[15]

The developing countries, whose wealth resides chiefly in their ample supplies of unskilled labour, are at first sight at a disadvantage when it comes to establishing any processing industry requiring capital and skilled manpower (including management). These drawbacks must not, however, be exaggerated. First of all, the mobility of capital is growing with the rise in foreign investment and increasingly easy access to sources of international financing. Next, enterprise management does not generally pose insoluble problems because senior managers are very mobile. Finally, many processing industries do not require a highly skilled workforce. For example, in the industrial chain studies carried out by the ILO the lack of

skill of local manpower was not mentioned by the heads of undertakings interviewed as an insuperable obstacle. On the contrary, it appeared that for many operations a few months of in-plant training were sufficient to bring the workforce up to the required level of skill. Nevertheless, this implies that the technical characteristics of the processing industries to be established should be carefully chosen so as to avoid running into insurmountable vocational training problems.

The costs of producing and exporting processed commodities, however, do impose major constraints on the industrialisation strategies under discussion here. It is true that the difference in wage costs (direct and indirect) between developing and industrialised countries is generally greater than the difference in productivity.[16] At first sight this would appear to justify locating processing industries in developing countries which produce raw materials. A closer look will show, however, that this conclusion should be qualified.

First of all, the advantages of cheap labour are reduced when the share of wages in the value-added of the processed product is low. And while wages represent a major part of value-added in the processing of agricultural products, this is not the case with mining products, where cheap labour accordingly offers fewer advantages. Besides, not all Third World countries are in this position. For example, most of the undertakings covered by the ILO studies reported that labour costs were an important constraint on the international competitiveness of their exported products. It is true that the majority of these studies were carried out in French-speaking African countries where labour costs are higher than elsewhere, owing to the survival from colonial times of the grossly overvalued CFA franc.

Furthermore, even if capital has become less scarce than it was in 1960, its cost is very high. For various reasons—bank security regulations, distance, inefficiency of local administrations, difficulties in enforcing securities—the cost of loans is a good deal higher than in the developed countries.

Finally, transportation costs are generally high, although the situation is extremely complex in this regard. Given that the processing of raw materials reduces the weight of the product and raises its price, it would seem that the transportation costs per unit of output favour the local processing of raw materials. In fact, however, freightage and insurance are as a rule calculated not according to weight but value; their costs therefore tend to rise with the degree of processing. Here too, then, the conclusions are not as clear-cut as logic would like, especially since the raising of transportation prices by the shipping companies of the developed nations can in certain cases constitute an effective protectionist barrier.[17]

All in all, the trend in transportation (especially shipping) costs at each stage of the industrial chain is not such as to encourage processing activities in the developing countries.

Economies of scale also play a part in the location of processing industries. There is an abundant literature on the subject and I shall limit myself to two remarks. First, there must be a close relationship between the volume of raw material to be processed and the capacity of the processing plant, as determined by the technical characteristics of the branch. Frequently, there is no such relationship and this explains why many processing industries in the developing countries can only be competitive thanks to substantial imports of raw materials, which is somewhat paradoxical. Secondly, the role of economies of scale must not be exaggerated: the success achieved by such small territories as Singapore, Hong Kong and even Puerto Rico provides a convincing demonstration that commercial dynamism is much more important than economies of scale.

Local availability of the main intermediate consumption commodities is also an asset, as has often been observed, and from this point of view there is no doubt that the Third World countries are in a much less favourable position than the developed ones.

Much more important, however, are the protectionist measures adopted by the developed countries vis-à-vis imports from developing countries, especially since the preferential trade zones, such as those established under the Lomé Convention and the Generalised System of Preferences, have produced mixed results.[18]

Whatever the disadvantages and constraints attached to the processing of raw materials in the developing countries, there is no doubt that it is a major factor in employment creation and, as such, is perfectly justified. Moreover, as we shall see, the difficulties involved in establishing export-oriented processing industries have not impeded their growth over the past 15 years.

The performance of processing industries

It was mentioned earlier that the share of processing industries in the exports of developing countries has risen considerably, as the figures published by GATT and UNIDO clearly show. Nevertheless, the most interesting and innovative statistics in this field are those compiled by Alexander J. Yeats for UNCTAD; they appear in a World Bank research paper and are reproduced in detail in the appendix to this article (table B). They are based on the imports of selected industrial nations[19] from developing countries in 1964 and 1974 broken down by product and stage of processing of the raw product, with the values for 1974 (expressed in US dollars) adjusted so as to discount commodity price rises and the drop in the value of the dollar. The value of such data will be obvious. The over-all results (see the recapitulation at the end of table B in the appendix) permit two major conclusions regarding the evolution of exports from the Third World to the industrialised nations.

The first is that they have increased considerably (index 151 in 1974) but have suffered a slight decline in relative terms in the international trade

of the developed nations (28.9 per cent in 1974 as against 30.1 in 1964). It is extremely improbable that this reduction can be attributed to the protectionist measures adopted by the industrialised countries against processed commodities from developing countries.[20]

Secondly, the greater the degree of processing the greater has been the increase in exports: this conclusion is absolutely incontestable. The first two stages of processing expanded at a slower rate than the average of exports, while the opposite is the case with stage three and even more clearly so with stage four. Examination of the detailed results in table B shows that the pattern is the same for almost all the 21 product chains studied.

This last conclusion is crucial for evaluating the progress achieved and the future chances of success for the industrialisation of developing countries. To be sure, it is possible that more recent statistics would show a certain slackening off as a result of protectionist measures adopted by the industrialised nations, especially non-tariff barriers. Be that as it may, the trend observed is absolutely irreversible.

Notes

[1] Resolutions 3201 (S-VI), 3202 (S-VI) and 3362 (S-VII). *General Assembly official records: Sixth Special Session*, Supplement No. 1 (A/9559), and Seventh Special Session, Supplement No. 1 (A/10301).

[2] UNCTAD resolution 124 (V), 29 June 1979 (doc. TD/RES/124(V)).

[3] UNIDO: *Report of the Second General Conference of the United Nations Industrial Development Organization* (1975, doc. ID/CONF.3/31), Ch. IV: "The Lima Declaration and Plan of Action on Industrial Development and Co-operation".

[4] The subject will be developed in the first chapter of a study entitled *Industrialisation, international trade and employment in the developing countries* (ILO, forthcoming).

[5] UNIDO: *World industry since 1960: progress and prospects* (New York, United Nations, 1979; Sales No.: E.79.II.B.3). Here and subsequently the statistics cited exclude the People's Republic of China.

[6] World Bank: *World development report, 1979* (Washington, 1979).

[7] See *Address to the United Nations Conference on Trade and Development* by Robert S. McNamara, President, World Bank, Manila, Philippines, May 10, 1979 (Washington, World Bank).

[8] See table A in the appendix.

[9] See *Address* ... by Robert S. McNamara, op. cit.; and H. Hughes: *Trade and industrialization policies: the political economy of the second best*, Development Economics Staff Working Paper No. 143 (Washington, World Bank, 1973; mimeographed).

[10] H. F. Lydall: *Trade and employment* (Geneva, ILO, 1975).

[11] For 1978, GATT: *International trade 1978/79* (Geneva, 1979), appendix table G; for 1963, my calculations.

[12] See UNIDO: *World industry since 1960* ..., op. cit., pp. 233-246.

[13] Sung-Hwan Jo: *The impact of raw materials sector on employment generation in the process of South Korea's industrial growth (1955-1978)* (Seoul, 1979; unpublished).

[14] D. Wall: *Industrial processing of natural resources* (University of Sussex, 1979; mimeographed).

[15] I shall limit myself to just a few remarks here since this subject will be dealt with in greater detail in a volume to be published by the ILO (see note 4) when the results of all the

case studies are available. See also UNIDO: *World industry since 1960 ...*, op. cit., pp. 179-187; D. Keesing: *World trade and output of manufactures: structural trends and developing countries' exports*, World Bank Staff Working Paper No. 316 (Washington, World Bank, 1979); and K. Takeuchi and C. Chung, assisted by J. Chhabra: *Export-oriented processing of primary commodities in developing countries* (Washington, World Bank, 1979; mimeographed).

[16] See D. Germidis (ed.): *Transfer of technology by multinational corporations* (Paris, OECD Development Centre, 1977).

[17] See A. J. Yeats: "Do international transport costs increase with fabrication? Some empirical evidence", in *Oxford Economic Papers*, Nov. 1977; idem: "A comparative analysis of the incidence of tariffs and transportation costs on India's exports", in *Journal of Development Studies* (London), Oct. 1977; and J. M. Finger and A. J. Yeats: "Effective protection by transportation costs and tariffs: a comparison of magnitudes", in *Quarterly Journal of Economics* (Cambridge (Massachusetts)), Feb. 1976.

[18] The ILO has carried out a number of major studies in this field, the findings of which were discussed at the Tripartite Symposium on Employment, International Trade and North-South Co-operation held in Geneva in May 1980.

[19] The importing countries are as follows: Denmark, France, the Federal Republic of Germany, Japan, Sweden, the United Kingdom and the United States.

[20] See Wall, op. cit., pp. 9-17.

Appendix

Table A. Employment and per capita GDP in developing countries (estimates)

Region	1960	1970	1975	1978
Africa				
Total employment (millions)	103	126	139	149
Agriculture (%)	76.7	71.1	68.5	66.3
Industries (%)	8.8	11.6	12.9	14.0
Services (%)	14.5	17.3	18.6	19.7
Unemployment (millions)	8	11	13	14
Per capita GDP (US$ 1960)	130	165	195	215
Latin America				
Total employment (millions)	68	84	96	104
Agriculture (%)	47.7	41.3	38.2	35.7
Industries (%)	20.1	23.8	25.6	26.7
Services (%)	32.2	34.9	36.2	37.6
Unemployment (millions)	3	4	6	7
Per capita GDP (US$ 1960)	400	475	545	620
Asia				
Total employment (millions)	343	413	458	490
Agriculture (%)	69.8	62.5	58.7	55.9
Industries (%)	13.4	16.7	18.4	20.0
Services (%)	16.8	20.8	22.9	24.1
Unemployment (millions)	25	31	34	37
Per capita GDP (US$ 1960)	100	125	145	160

Sources: As for table 3.

Table B. Imports of seven major developed countries from developing countries for 21 product chains at various stages of processing, 1964 and 1974 (in adjusted US dollars)

Product and processing stage	1964		1974		Index 1974 (1964 = 100)
	Million US$	% of total imports	Million US$	% of total imports	
Meat products	*334.8*	*19.6*	*343.4*	*14.6*	*103*
1. Fresh or frozen	248.6	19.0	209.6	12.0	84
2. Meat preparations	86.2	21.6	133.7	21.9	155
Fish and seafood	*208.6*	*22.8*	*518.9*	*39.2*	*249*
1. Fresh or frozen	162.9	26.0	412.9	42.3	253
2. Preparations	45.7	15.9	106.0	30.5	232
Fruit and nuts	*832.4*	*43.7*	*909.2*	*37.7*	*109*
1. Fresh	711.6	46.7	747.5	41.5	105
2. Preserved	120.8	31.4	161.7	26.5	134
Vegetables	*238.2*	*25.8*	*355.0*	*25.2*	*149*
1. Fresh	179.7	24.5	256.8	25.0	143
2. Preserved	58.5	31.1	98.2	25.5	168
Cocoa and chocolate	*330.5*	*72.8*	*442.7*	*72.5*	*134*
1. Cocoa beans	300.5	98.8	263.3	95.7	88
2. Cocoa powder	29.5	40.0	176.5	67.0	598
3. Chocolate	0.5	0.7	2.9	4.0	580
Leather and products	*235.7*	*21.3*	*727.6*	*28.3*	*309*
1. Hides and skins	113.3	27.8	55.9	16.8	49
2. Leather	72.5	30.8	123.4	33.9	170
3. Leather goods	49.9	10.8	548.4	29.3	1 099
Groundnuts and oil	*158.9*	*75.2*	*116.0*	*73.0*	*73*
1. Groundnuts	123.8	91.6	52.7	62.4	43
2. Groundnut oil	35.1	46.1	63.3	85.1	180
Coconuts and oil	*226.6*	*96.3*	*144.4*	*90.7*	*64*
1. Copra	157.2	98.8	54.9	97.7	35
2. Coconut oil	69.4	91.2	63.3	85.1	91
Palm kernels and oil	*77.3*	*90.9*	*60.8*	*83.4*	*79*
1. Palm kernels	69.2	99.6	24.1	98.8	35
2. Palm-kernel oil	8.1	52.3	36.7	75.5	453
Rubber and products	*596.0*	*72.7*	*787.5*	*42.9*	*132*
1. Natural rubber	592.2	99.7	752.4	98.6	127
2. Rubber products	3.8	1.7	35.1	3.3	924
Wood and products	*228.2*	*11.7*	*542.6*	*16.1*	*238*
1. Wood in the rough	4.5	2.4	20.3	2.6	451
2. Plywood	214.5	13.3	416.6	19.0	194
3. Wood manufactures	9.2	5.9	105.7	27.8	1 149

Product and processing stage	1964		1974		Index 1974 (1964 = 100)
	Million US$	% of total imports	Million US$	% of total imports	
Paper and products	*18.0*	*0.6*	*61.0*	*1.3*	*339*
1. Pulpwood	4.8	6.7	7.1	9.5	148
2. Wood-pulp	6.7	0.6	13.6	0.8	203
3. Paper and articles	6.5	0.4	40.4	1.4	622
Wool and products	*144.6*	*8.8*	*50.3*	*5.0*	*35*
1. Raw wool	139.9	12.5	39.3	6.5	28
2. Wool yarn	1.7	0.9	3.7	3.2	218
3. Wool fabrics	3.0	0.9	7.2	2.5	240
Cotton and products	*977.8*	*47.4*	*2 207.7*	*47.0*	*226*
1. Raw cotton	634.8	63.4	515.7	61.9	81
2. Cotton yarn	21.9	36.2	80.6	44.6	368
3. Cotton fabric	136.6	31.3	253.3	35.2	185
4. Clothing	184.5	33.3	1 358.2	45.8	736
Jute and products	*270.9*	*88.7*	*184.0*	*92.3*	*68*
1. Raw jute	86.7	94.0	59.2	94.7	68
2. Jute fabrics	173.3	87.8	110.3	93.4	64
3. Sacks and bags	10.9	68.6	14.5	78.0	133
Sisal and products	*120.8*	*73.2*	*104.1*	*63.6*	*86*
1. Raw sisal	94.2	99.5	53.3	99.3	57
2. Cordage	26.6	37.8	50.8	46.2	191
Iron and products	*873.4*	*28.5*	*1 520.0*	*30.4*	*174*
1. Iron ore	811.2	55.8	1 392.0	47.9	172
2. Pig iron	55.9	12.9	79.4	22.1	142
3. Steel ingots	2.0	0.6	2.7	0.6	135
4. Mill products	4.3	0.6	45.9	4.3	1 067
Copper and products	*911.1*	*53.9*	*1 161.4*	*44.5*	*127*
1. Copper ore	108.6	65.2	400.5	59.3	369
2. Unwrought copper	792.3	59.3	757.2	48.8	96
3. Wrought copper	10.2	5.4	3.7	1.0	36
Aluminium	*210.6*	*22.7*	*403.4*	*19.2*	*192*
1. Bauxite	158.9	88.8	170.9	70.4	108
2. Alumina	28.0	22.1	104.1	23.9	372
3. Unwrought aluminium	22.2	4.6	121.4	13.6	547
4. Wrought aluminium	1.5	1.1	7.0	1.3	467
Lead and products	*78.7*	*30.6*	*60.9*	*21.9*	*77*
1. Lead ore	35.0	44.3	45.9	38.4	131
2. Unwrought lead	43.5	24.8	14.8	9.5	34
3. Wrought lead	0.2	7.1	0.2	7.7	100
Zinc and products	*98.3*	*28.5*	*135.7*	*22.6*	*138*
1. Zinc ore	71.6	50.0	105.2	37.9	147
2. Unwrought zinc	26.6	14.0	28.1	9.2	106
3. Wrought zinc	0.1	0.9	2.3	13.0	2 300

Product and processing stage	1964		1974		Index 1974 (1964 = 100)
	Million US$	% of total imports	Million US$	% of total imports	
Recapitulation					
Stage 1	4 809.2	46.0	5 639.5	41.1	117
Stage 2	1 920.6	25.4	2 683.3	24.2	140
Stage 3	251.2	5.9	1 102.5	14.0	439
Stage 4	190.3	12.4	1 414.0	29.6	743
Total	**7 171.3**	**30.1**	**10 839.3**	**28.9**	**151**

Note: The values in US$ for 1974 have been deflated to discount price rises between 1964 and 1974.

Source: Unpublished statistics compiled by Alexander J. Yeats of UNCTAD and partially reproduced in K. Takeuchi and C. Chung, assisted by J. Chhabra: *Export-oriented processing of primary commodities in developing countries* (Washington, World Bank, 1979; mimeographed), table A.1.