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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

INDUSTRIAL DEVELOPMENT SERIES

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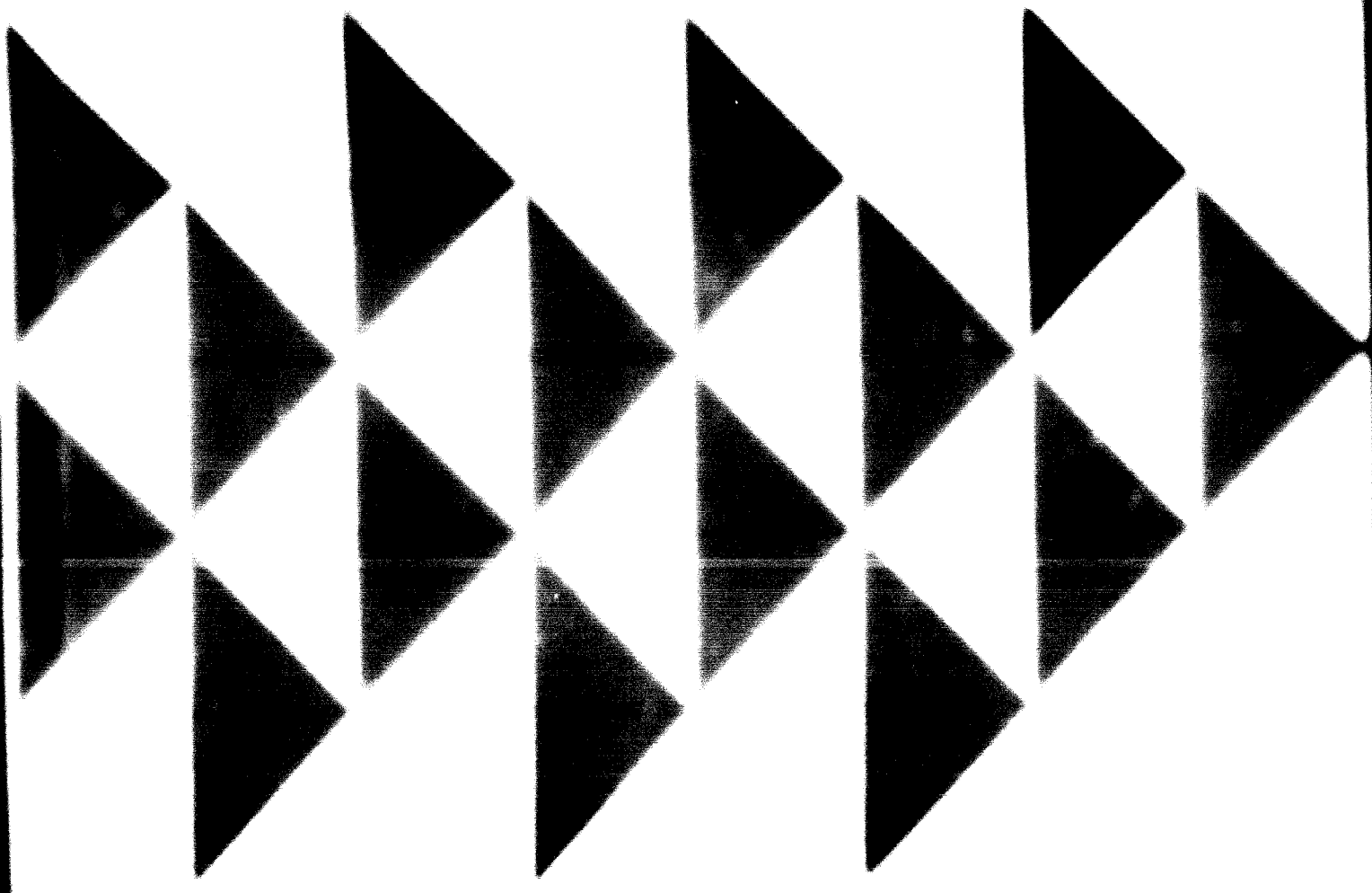

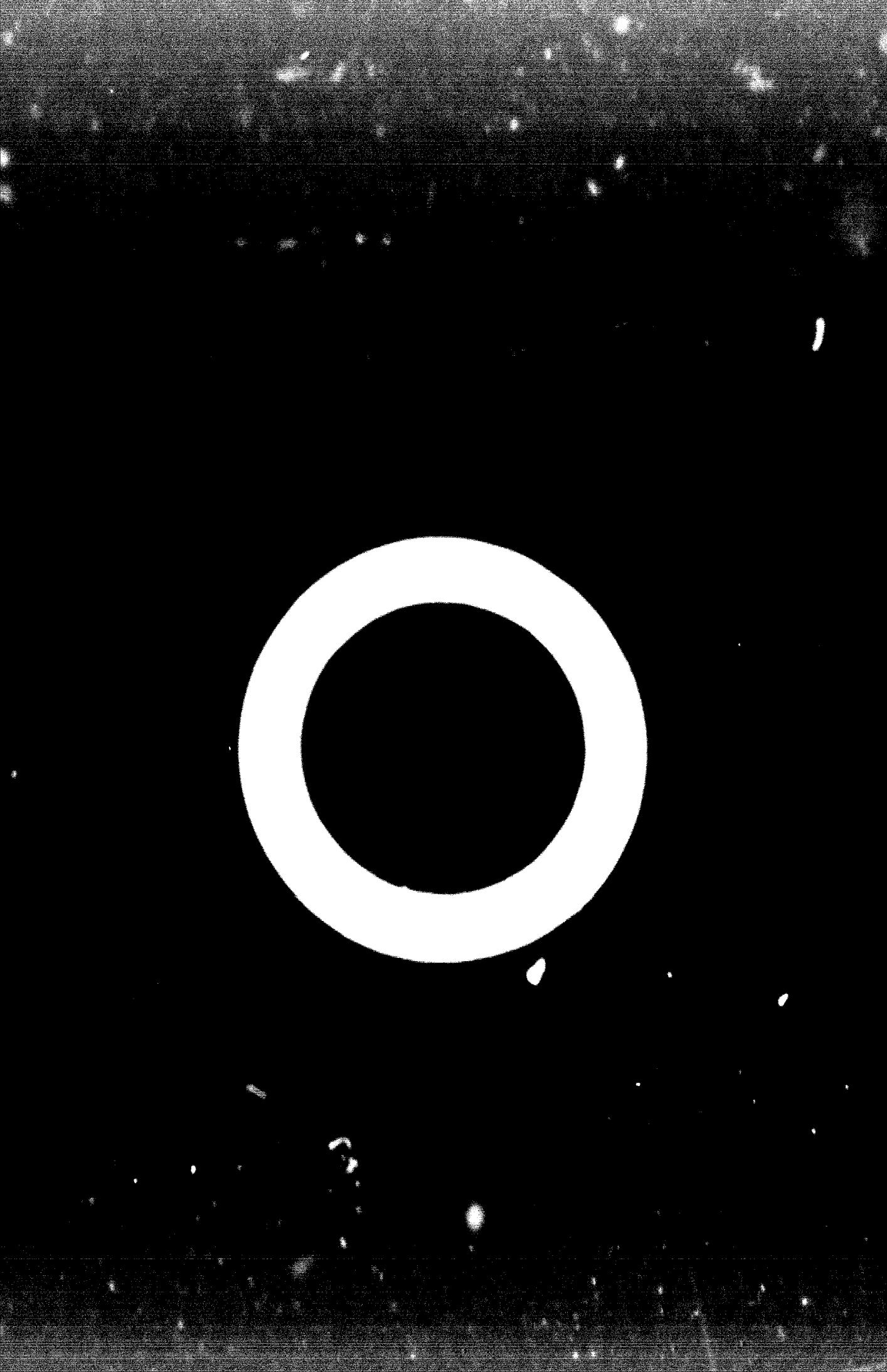

INDUSTRIAL DEVELOPMENT SURVEY

VOLUME II

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
VIENNA

INDUSTRIAL DEVELOPMENT SURVEY

Volume II

UNITED NATIONS
New York, 1969

ID/41

UNITED NATIONS PUBLICATION
Sales No.: E.70.II.B.5
Price: $ US 1.50 (or equivalent in other currencies)

Printed in Austria

Foreword

This survey is the second in a series of industrial development surveys and is prepared in response to Economic and Social Council resolution 1030 (XXXVII) requesting the Secretary-General to arrange for the preparation of periodic industrial development surveys, and in response to General Assembly Resolution 2152 (XXI) and Resolution 1 (I) adopted by the Industrial Development Board at its first session.[1]

This volume focuses upon trends and developments in and affecting industry in developing countries in the period 1960–1966 and in 1967 and 1968. It differs from Volume I in three respects. *First*, it is a much briefer document. Volume I contained a comprehensive analysis of industrialization problems and it is intended to produce such a major survey every four or five years; in the intervening years an annual survey will be produced. *Second*, the present volume concentrates in detail on the 1960s whereas Volume I focused attention on the period 1955–1964. Volume II thus presents as detailed an assessment as is currently possible of progress in industrialization during the First United Nations Development Decade. *Third*, Volume II focuses attention on the achievements and problems in one area of particular importance to industrial development, namely regional industrial co-operation. Subsequent surveys will spotlight other important industrial development problems.

In this volume it will be shown that the period under review was one in which the relatively high industrial development performance of the developing countries during the 1950s was not sustained in the 1960s. The average annual rate of growth of manufacturing output in the developing countries fell from about 10 per cent in the 1950s to about 6 per cent in the period 1960–1966. Furthermore, relative to the developed market economies and the centrally planned economies, both of which were able to maintain a high and increasing rate of growth of manufacturing output, a downward trend was in evidence in the developing countries. That trend, although apparent throughout the 1960s, was most evident in 1967, when the rate of growth of manufacturing output reached the very low level of 3 per cent. To some extent, the

[1] The first volume, *Industrial Development Survey*, vol. I, was published as United Nations publication, Sales No.: E.68.II.B.18.

sluggish performance of the developing countries in 1967 can be associated with the general slackening of the economic performance of some of the developed market economies in the latter part of 1966 and most of 1967. Provisional data for 1968 suggest, however, an improvement in the economic and industrial performance of both developed market economies and developing countries in 1968 as compared with 1967.

This is the general conclusion derived from an analysis of industrial development in 1960–1968. In the text which follows, the analysis leading to this conclusion is presented. After an examination of the trends in the growth of manufacturing output and of gross domestic product, the implications of these trends for employment and productivity, sources of industrial financing and investment are discussed. The role and implications of foreign trade for industrial development in the developing countries are also examined. Taking all these factors into account, it is hoped that this survey accurately portrays the progress of industrial development in the developing countries and the important factors influencing it.

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EXPLANATORY NOTES

Regional classifications, industrial classifications, trade classifications and symbols used in the statistical tables of this survey follow those adopted in the United Nations *Statistical Yearbook*, 1967.[1]

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

References to ISIC codes in the tables are accompanied by a descriptive title (e.g. ISIC 24: "Clothing, footwear and made-up textiles"). Space considerations, however, may sometimes result in a shortening of this description (e.g. ISIC 24 may be referred to simply as "Clothing").

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

A dash (—) indicates that the amount is nil or negligible.

A blank in a table indicates that the item is not applicable.

Dates divided by a slash (e.g. 1960/1961) indicate a crop year or a financial year.

Dates divided by a hyphen (e.g. 1960–1965) indicate the full period involved, including the beginning and end years.

Reference to tons indicates metric tons, and to dollars ($) United States dollars, unless otherwise specified.

The term "billion" signifies a thousand million.

Annual rates of growth or change, unless otherwise specified, refer to percentage rates calculated on a compound basis.

Details and percentages in tables do not necessarily add to totals, because of rounding.

The following abbreviations are used in this volume:

DAC	Development Assistance Committee of OECD
ECA	Economic Commission for Africa
ECAFE	Economic Commission for Asia and the Far East

[1] United Nations publication, Sales No.: 68.XVII.1.

ECLA	Economic Commission for Latin America
FAO	Food and Agriculture Organization of the United Nations
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Finance Corporation
ILO	International Labour Organisation
ISIC	International Standard Industrial Classification
OECD	Organisation for Economic Co-operation and Development
SITC	Standard International Trade Classification
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization

[illegible]

[illegible] AND

[illegible]

and 5 per cent respectively. The figures available for Africa show that the average annual growth rate of manufacturing output was 8 per cent, while the average annual growth rate of GDP was 4.5 per cent. The comparison between these rates of growth of output and of GDP at the regional level may give rise to some speculations as to the degree of association between the growth of manufacturing output and that of national income. However, the sample studies done at UNIDO show, as will be explained later, that the degree of relationship between the growth of manufacturing output and that of income is quite high.

Although growth was in general rapid and has been instrumental in increasing the share of manufacturing output in GDP in the developing countries, it should be remembered that at the end of that period the manufacturing share of GDP was only 16 per cent as compared with 14 per cent in the early 1950s.[1]

During the first half of the 1960s, the rate of industrial development as expressed by the average annual rate of growth of manufacturing output in the developing countries represented a dramatic decline as compared with the performance of those countries during the 1950s. The average annual rate of growth of their manufacturing output during the years 1960 - 1966 was only 6.2 per cent as compared with 6.5 per cent for the developed market economies and 8.3 per cent for the centrally planned economies. This means that the substantially higher average annual growth rate of manufacturing output achieved by the developing countries during the 1950s had tapered down to a rate similar to, if slightly less than, that achieved by the developed market economies and considerably lower than that achieved by the centrally planned economies. Hence the relative position of the manufacturing sector in the developing countries as compared with that in the developed market economies in total world manufacturing output had not improved and had certainly deteriorated as compared with that in the centrally planned economies.

This reversal pattern of growth only indicates the relative slowing down of manufacturing output in the developing countries and the difficulties facing its growth. In fact, the rate of manufacturing output during that period fell short of the aspirations of many of the developing countries as expressed in their industrial development programmes. It was also below the rate of growth of manufacturing output assumed for the first United Nations Development Decade. Among other objectives set for that decade, the manufacturing sector in the developing countries was assumed to grow by 150 per cent over the ten years, which meant an average annual rate of growth of 8.6 per cent.[2] Except for 1964, when

[1] However, while 14 per cent refers to the average for the years 1955 - 1959, 14 per cent refers to the average for the year 1960 - 1964.

[2] *The United Nations Development Decade: Proposals for Action* (United Nations publication, Sales No. 62.II.B.2), p. 51.

TABLE 1. GROWTH OF MANUFACTURING OUTPUT[a] BY MAJOR REGIONS AND ECONOMIC GROUPINGS[b], 1960 – 1968

(Average annual change in index numbers)

	Developing countries				Developed market economies	World (excluding centrally planned economies)	Centrally planned economies	World
	Total	Asia excluding Japan	Latin America	Africa[c] excluding South Africa				
Average annual change from preceding year								
1961	8	8	8	...	3	4	9	5
1962	4	8	2	...	7	6	9	7
1963	5	10	1	...	6	6	8	6
1964	9	8	10	...	8	8	8	8
1965	6	8	5	14	7	7	9	7
1966	6	6	6	9—10	7	7	9	8
1967	3	3	3	4—5	2	2	9	4
1968[d]	7	6	...	...	5	5	...	...
Average annual change between dates indicated								
1960 – 1963 and 1963 – 1966	6.2	8.0	5.2	4.2	6.5	6.5	8.3	7.0

Source: UNIDO, based on United Nations, *Statistical Yearbook*, and ECA, A Survey of Economic Conditions in Africa, 1967 (E/CN.14/409).

[a] Manufacturing output includes ISIC categories 2 and 3.

[b] In this table, and throughout the survey unless otherwise indicated, the following definitions have been adopted for the major economic groupings: "developing countries", including the countries of Latin America, Africa (excluding the Republic of South Africa) and Asia (excluding Japan); "developed market economies", including Australia, Canada, Japan, New Zealand, South Africa, the United States and the countries of Western Europe; "centrally planned economies", including the countries of Eastern Europe and the Union of Soviet Socialist Republics; "world", indicating the sum of the statistics for the above groupings. Unless otherwise indicated, data for the centrally planned economies exclude those for China (mainland).

[c] The growth rates for Africa are taken from the above-mentioned ECA survey. Since those data are not consistent with the data used to compute the growth rates of other regions, the growth rates of developing countries indicated here do not exactly reflect the weight given to the African output of manufacturing.

[d] Provisional. January-June 1967 to January-June 1968.

the rate of growth of manufacturing output was about 9 per cent (see table 1), the annual rates achieved by the developing countries in the 1960s were below that rate and the annual average was substantially below it. That average (6.2 per cent) was not enough to permit the achievement of the 5 per cent increase in the aggregate national income of the developing countries assumed for the first Development Decade.

This low level of manufacturing output in the developing countries has more significant implications when it is discussed in *per capita* terms. The wide gap between the *per capita* output of manufacturing in the developing countries and the developed market economies is put in better perspective when it is realized that the population of the former is twice as large as that of the latter. Further, the average annual rate of growth of population is estimated at roughly 2 per cent for the developing countries and 1.3 per cent for the developed market economies and the

TABLE 2. GROWTH RATE OF PER CAPITA GDP AND MANUFACTURING BY MAJOR REGIONS AND ECONOMIC GROUPINGS, 1960–1966

(*Average annual change in index numbers*)

	Per capita GDP	*Per capita manufacturing*
Developing countries	1.8	4.1
Africa (excluding South Africa)	1.1	2.2[a]
Asia (excluding Japan)	1.9	4.5
Latin America	1.8	2.9
Developed market economy countries	3.9	5.4

Source: UNIDO [illegible] United Nations, *Yearbook of National Accounts Statistics, 1966* and *Demographic Yearbook* [illegible] also ECA, A Survey of Economic Conditions in Africa, 1967 [illegible]

[a] Includes [illegible]

centrally planned economies. Given these population growth rates, it is immediately clear that the average annual growth rate of manufacturing output *per capita* in the developing countries during the years 1960–1966 was lower than that of the developed market economies and lower still than that of the centrally planned economies. Table 2 shows that these rates were 4.1 per cent for the developing countries and 5.4 per cent for the developed market economies. In the centrally planned economies, the rate was 7 per cent. Given the vast economic distance already existing in terms of *per capita* manufacturing output between the developed and the developing countries and the lower *per capita* growth rates of that output in the latter countries in the recent past, the conclusion is unavoidable that the trend is towards increasing that distance year after year.

The picture so far drawn of the growth of the manufacturing sector in the developing countries shows that the output of that sector has been low in level and slow in growth. Each of those countries faces specific and

unique problems of its own, but there are also factors impeding industrial development which are common to all those countries and are only too well known.

Examining specifically the downward trend in manufacturing output in the developing countries during the 1960s, it is seen to have been primarily caused by the slackening in the growth rate of manufacturing in the larger rather than in the smaller of those countries. It is interesting to note that over one-half of the manufacturing output of the developing countries during that period came from five of the larger developing countries, namely, Argentina, Brazil, India, Mexico and Pakistan. With the exception of Mexico and Pakistan, the growth rates of output of manufacturing in those countries were lower than the regional average growth. At the same time, in many developing countries, as shown in tables 4, 5 and 6, the growth rates during that period were more rapid than the regional average.

Examining further the reasons for the slackening of the growth rate of manufacturing output in the developing countries, it is noted that many of the African and Asian countries started their industrialization after 1950. Naturally, higher output and more concentrated effort on the part of those countries are required to maintain fast or faster growth rates as the industrial base expands. In addition, many of these countries, which have based their industrialization upon import substitution lines, have had to face problems such as the limited size of the domestic market relative to the scale at which modern technology operates economically, idle capacities resulting from shortages in skilled labour, and often lack of imported raw materials due to shortages in foreign exchange. Moreover, resource-oriented export industries in developing countries, with few exceptions, have been unable to expand their production mainly because the demand for processed primary products has not significantly increased in the 1960s. Finally, agricultural production in some developing countries, particularly in 1965 and 1966, has been low, resulting in shortages of raw material for industry, and a consequent reduction in income, exports and foreign exchange proceeds, which in turn have contributed to the slowing down of industrial production.

Among the developing countries themselves, the regional differences are quite striking. The annual growth rate of manufacturing output in Africa has been lowest, followed by Latin America, both of which recorded averages lower than the average for all the developing countries. Asia, on the other hand, has enjoyed an average annual growth rate of manufacturing only slightly exceeded by that of the centrally planned economies. Manufacturing output in Africa during the period under review increased at an average annual rate of 4.2 per cent; the corresponding rates for Latin America and Asia were 5.2 and 8 per cent, respectively.

Nevertheless, a downward trend in the growth rate of manufacturing output in the developing countries appears clearly from an examination

of the yearly rates of growth (see table 1). After decreasing from 9.3 per cent in 1960 to 8 per cent in 1961, it reached the low levels of 4 per cent in 1962 and 5 per cent in 1963. It then made a strong recovery and reached a level of 9 per cent, after which it declined to 6 per cent in both 1965 and 1966 and later reached the very low level of 3 per cent in 1967. The developed market economies and the centrally planned economies, on the other hand, were able to maintain their high rates of growth of manufacturing output during that period. Only in 1967 did the developed market economies record the very low rate of growth of manufacturing output of 2 per cent, which partly explains the slackening of manufacturing output in the developing countries. In that year, the decline in manufacturing output was most severe in Asia, which had recorded an average annual rate of growth during the period 1960–1966 of 8 per cent, as compared with 3 per cent in 1967. During the same period, the average annual rate of growth of manufacturing output in Latin America and Africa had been 5.2 and 4.2 per cent respectively, as compared with 3 per cent in 1967 in Latin America and between 4 and 5 per cent in Africa.

When these rates are compared with the rates of growth of GDP, no definite pattern occurs but some conclusions may be drawn. The growth rate of GDP in the developed market economies was only 3 per cent in 1967, representing a substantial drop from previous years and reflecting the sluggish economic performance of some of the countries included in the group during that year (see table 3). Paradoxically, however, the growth rate of GDP in the developing countries in 1967 was 5 per cent, as compared with 3 per cent in 1966. The extraordinary recovery of agricultural production in the developing countries in 1967, due to favourable weather conditions in some of the larger developing countries may provide an explanation for this rise in GDP.[4] The rate of growth of agricultural output in the developing countries in 1967 was 8 per cent as compared with 2 per cent in 1964 and 1965 and [illegible] per cent in 1966.

Given the growth rates in 1967 of the manufacturing sector and GDP in the centrally planned economies (9 and [illegible] per cent respectively),[5] given also the low growth rates of manufacturing output, agricultural production and GDP in the developed market economies (2, 2 and 3 per cent respectively), given further the low growth rates of manufacturing output in the developing countries but the extraordinary high growth rates of agricultural production and the relatively high growth rates of GDP, and given, finally, the close trade connexion between the majority of the

[3] [illegible] growth of industrial production [illegible] per cent, [illegible] as follows: 1966, [illegible] per cent and 1967, 4 per cent. [illegible] ISIC [illegible] (mining), ISIC [illegible] (manufacturing), ISIC [illegible] (electricity) and ISIC 512 (gas) (United Nations publication, Sales No.: [illegible]), p. [illegible], table 1.

[4] *Ibid.*

[5] *Ibid.*

TABLE 3. GROWTH OF GDP BY MAJOR ECONOMIC SECTORS, MAJOR REGIONS AND ECONOMIC GROUPINGS, 1960–1967[a]

(Average annual change in index numbers between the dates indicated)

			Developing countries					
			Total	Asia (excluding Japan)	Latin America	Africa[b] (excluding South Africa)	Developed market economies	World (excluding centrally planned economies)
Gross domestic product								
1960	1963 and 1963	1966	4.6	4.2	4.8	3.4	5.3	5.2
1966	1967[c]		5.0	...	...	...	3.0	3.0
Manufacturing (ISIC 2–3)								
1960	1963 and 1963	1966	6.6	6.9	5.9	4.2	6.8	6.7
1966	1967[c]		4.0	...	...	...	2.0	2.0
Agriculture (ISIC 0–1)								
1960	1963 and 1963	1966	2.1	1.3	3.6	1.3	1.7	1.9
1966	1967[c]		8.0	...	...	...	2.0	2.0
Construction (ISIC 4)								
1960	1963 and 1963	1966	6.0	7.8	4.7	3.7	5.0	5.1
1966	1967		...	...	...	...	...	...
Transportation and communication (ISIC 7)								
1960	1963 and 1963	1966	5.4	6.2	4.4	4.3	6.1	6.0
1966	1967		...	...	...	...	...	...

Source: UNIDO, based on United Nations, *Yearbook of National Accounts Statistics* and *World Economic Survey*; ECA, *Survey of Economic Conditions in Africa, 1967*.

[a] The growth rate is computed for the same 1960–1963 and 1963–1966 period as in table 1. The slight difference in the growth rate between this table and table 1 is due to the difference in the basic data used.

[b] The growth rates for Africa are taken from the above-mentioned ECA publication. These data are not consistent with the data and the composite growth rates of other regions. Consequently the growth rates of the developing countries above do not reflect exactly the weight given to Africa for each sector.

[c] Provisional. Data for less complete coverage. Mining, electricity and gas (ISIC 1 and 511–512) are included in manufacturing.

developing countries and the developed market economies, it may be assumed that the low performance of the manufacturing sector in the developing countries was largely affected by the low economic performance in the developed market economies in 1967.

The outlook for 1968, judging by whatever provisional data are available,* holds signs of recovery in world growth, including that of the manufacturing sector. The *World Economic Survey, 1967*, indicates that this recovery applies particularly to the developed market economies, since "signs of renewed upswing have been clearest in the countries in which the slowdown in 1967 was most pronounced".[7]

* The rate of growth of manufacturing output in 1968 indicated in this paragraph are estimates based on the growth of manufacturing output from January to June 1968 as compared with the manufacturing output in the same period in 1967.

[7] *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), p. 3.

With regard to the centrally planned economies, the same survey indicates that the planned rates of growth of national income in 1967 were similar to those actually achieved, although "most of the countries are expecting a higher increase in agricultural output, under normal climatic conditions, and a small deceleration in industrial growth as compared with 1967".[8] This being the case, and taking into account the impressive growth in agricultural output of the developing countries, the year 1968 may have witnessed a higher economic growth in those countries than that achieved in 1967.

As far as the manufacturing sector is concerned, the provisional data available for the developed market economies and the developing countries indicate an upswing in manufacturing output in 1968. The estimated rate of growth of that output in the developing countries is 7 per cent as compared with the low rate of 3 per cent recorded in 1967. The provisional estimates for Asia and Latin America are for a 6 and 7 per cent increase respectively in 1968 as compared with 3 and 4 per cent in 1967. Regrettably, no similar estimates are available for Africa. The manufacturing output in the developed market economies is also likely to grow at 5 per cent in 1968 as compared with only 2 per cent in 1967. No such provisional estimates are available for the centrally planned economies.

The major regions comprising the developing countries did not share equally in the average annual growth rate of manufacturing output of 6.2 per cent recorded for the period 1960–1966. The regional rates also differed in 1967. Those rates are shown in table 1. Average annual growth rates of manufacturing output for the period under review also varied considerably from one developing country to another, as shown in tables 4, 5 and 6. Some — for example, Mexico, China (Taiwan), the Republic of Korea, Panama, Tanzania and Thailand — showed growth rates markedly higher than world or regional averages. Of the forty-three developing countries for which the relevant data are included in tables 4, 5 and 6, fourteen recorded lower average growth rates during the period 1960–1966 than the average for all developing countries during the same period. Nevertheless, while the performance of the manufacturing sectors in some of the small countries was quite impressive, their total output was not large enough to influence substantially the average growth rate of the manufacturing sectors in the developing countries as a whole.

The slowdown of industrial development in the larger developing countries, to which reference has already been made, has obviously resulted, on the one hand, in a smaller share of manufacturing output for the developing countries in the world total and, on the other, in an increasing share of manufacturing output for the smaller developing countries in the total manufacturing output of all developing countries.

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[8] *Ibid.*

Whether this change in the relative positions of the developing countries will lead to a change in the structure of trade among those countries or between those countries and the developed economies is not certain for a number of reasons, notably the still apparent parallel rather than complementary development of manufacturing industries in the developing countries, and the fact that the smaller developing countries account for only a small share of the total manufacturing output of the developing countries as a whole.

In Asia, the manufacturing output increased at an average annual rate of 8 per cent between 1960 and 1966. The comparatively high[9] average rate for that period reflects the favourable industrial development in countries such as China (Taiwan), the Republic of Korea and Singapore. The average would have been higher but for the rather stagnant development of the manufacturing sector in some of the larger Asian countries. Meanwhile the yearly rates of growth within that period showed a steady increase without sharp fluctuations as compared with Latin America. The sharp decline in 1967 may be partly explained by the recession which hit some of the developed market economies and partly by the lagging of the agricultural sector in a few of the Asian countries. Provisional estimates, however, point to signs of recovery in 1968.

A considerable rise in manufacturing output has taken place in China (Taiwan), the Republic of Korea and Thailand since 1960 (see table 4). China (Taiwan) maintained the highest annual growth rate — 17 per cent — during the period 1960–1966. This high growth rate seems to have been achieved partly through exogenous factors.

It is noteworthy that China (Taiwan) has developed export industries such as synthetic fibres, plastics, plywood and cement. For example, exports of plywood increased from a monthly average of $180,000 in 1960 to $2,890,000 in 1966. The increase in the exports of cement was no less impressive than in those of plywood; the monthly average rose from $80,000 in 1960 to $840,000 in 1966.

Similarly, the development of the export industries in the Republic of Korea has considerably advanced the process of industrialization in that country, as reflected in an average annual growth rate of the manufacturing sector of 13 per cent. Exports of manufactured goods increased from a monthly average of $340,000 in 1960 to $12 million in 1966. This substantial increase is attributed by ECAFE to the adoption of a unitary rate of exchange, tax concessions and liberal credit facilities. The inflow of foreign capital and technical co-operation with the developed countries, notably the United States and Japan, have been attributed as

[9] As shown in table 1, the average annual rates of growth of manufacturing output during the same period were 6.2 per cent for all the developing countries, 5.2 per cent for Latin America and 6.5 per cent for the developed market economies.

TABLE 4. GROWTH OF GDP AND OTHER SECTORS, RELATIVE SIZE OF MANUFACTURING AND AGRICULTURE, AND GDP AND MANUFACTURING PER CAPITA: ASIA AND THE MIDDLE EAST,[a] 1960 – 1966

	Growth rates, 1960 – 1966, average annual				*Percentage of GDP, 1966*		*Per capita, 1966, dollars*	
	Manufacturing	*Agriculture*	*GDP*	*Per capita GDP*	*Manufacturing*	*Agriculture*	*Manufacturing*	*GDP*
Burma[b]	11.5[c]	4.8[c]	4.0[c]	1.9[c]	16[d]	33[d]	11[d]	66[d]
Cambodia[b]	5.0[c]	1.3[c]	4.6[c]	1.8[c]	9[e]	57[e]	11[e]	120[e]
Ceylon	7.4	2.6	3.3	0.7	7	41	10	140
China (Taiwan)	17.0	5.5	10.5	7.0	19	26	41	215
India	6.3	0.4	2.9	0.5	14	48	12	84
Indonesia[f]	−3.1	1.9	2.1	−0.2	11[d]	56[d]	10[d]	90[d]
Iran	8.5[g]	2.9[g]	6.4[g]	3.4[g]	29[e]	28[e]	70[e]	242[e]
Iraq	13.7[h]	5.3[h]	5.2[h]	1.8[h]	9[e]	21[e]	25[e]	283[e]
Korea, Republic of	12.8	6.0	7.5	4.6	17	39	21	123
Malaysia, West	11.0[g]	4.3[g]	6.4[g]	3.2[g]	10	29	28	281
Pakistan	8.4	3.0	5.3	3.1	11[e]	49[e]	11[e]	101[e]
Philippines[f]	6.9	3.6	4.8	1.4	19	33	49	259
Syria[f]	...	6.3	7.0	3.8	8[d]	34[d]	14[d]	170[d]
Thailand[h]	10.2[g]	4.6[g]	7.0[g]	3.9[g]	13	33	18	141
Viet-Nam, Republic of	...	...	...	...	11[e]	29[e]	13[e]	119[e]

Source: UNIDO, based on United Nations, *Statistical Yearbook* and *Yearbook of National Accounts Statistics*.

[a] GDP at constant factor cost.

[b] GDP at constant market prices.

[c] 1960 – 1965 growth rate.

[d] 1965.

[e] 1965.

[f] Net domestic product at constant factor cost.

[g] 1960 – 1965 growth rate.

[h] 1962 – 1964 growth rate.

[i] Net national product at constant factor cost.

TABLE 5. GROWTH OF GDP AND OTHER SECTORS, RELATIVE SIZE OF MANUFACTURING AND AGRICULTURE, AND GDP AND MANUFACTURING PER CAPITA: LATIN AMERICA[a], 1960 – 1966

	Average annual growth rates, 1950 – 1966				*Percentage of GDP, 1966*		*Per capita, 1966 dollars*	
	Manufacturing	*Agriculture*	*GDP*	*Per capita GDP*	*Manufacturing*	*Agriculture*	*Manufacturing*	*GDP*
Argentina	4.2	1.8	2.8	1.2	33	15	252	765
Bolivia[b]	5.3[c]	2.9[c]	5.0[c]	3.6[c]	14	24	24	170
Brazil[b]	4.9[k]	4.4	4.3	1.2	24	29	66	273
Chile[d]	6.7	5.0	6.4	4.2	25	11	136	545
Colombia	5.6[e]	2.8[e]	4.4[e]	1.2[e]	19	29	61	319
Costa Rica	8.7	0.4	5.3	1.7	15	30	59	393
Dominican Rep.[b]	1.7	0.4	2.7	0.8	17	24	41	242
Ecuador	5.5	3.3	4.3	1.1	17	35	35	206
Guatemala[b]	7.2	4.3	5.2	2.0	14	29	40	284
Guyana	5.5[e]	0.9[e]	2.7[e]	0.1[e]	16[e,l]	25[e]	48[e]	297[e]
Haiti	3.1[g]	2.2[g]	2.7[g]	0.4[g]	12[e]	47[e]	10[e]	86[e]
Honduras	7.7[e]	4.3[e]	4.6[e]	1.2[e]	15	41	32	214
Jamaica	6.7[h]	2.5[h]	4.0[h]	2.3[h]	16	13	77	483
Mexico[b]	7.9[e]	4.3[e]	6.0[e]	2.5[e]	29[e]	17	140	484
Nicaragua[b]	9.8[e]	7.3[e]	8.5[e]	5.1[e]	13	35	44	339
Panama	12.4	6.4	8.5	5.1	16	23	82	511
Paraguay[b]	4.3	3.1	4.0	1.0	15	35	32	210
Peru	9.1[h]	4.0[h]	7.2[h]	4.1[h]	20[e]	19[e]	49[e]	244[e]
Puerto Rico	7.0	2.5	4.2	2.4	23	6	276	1201
Uruguay		2.0[h]	0.2[h]	1.0[h]	23[e]	13[e]	127[e]	552[e]
Venezuela	7.2	6.2	4.5	1.0	13	7	91	914

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[10] ECAFE
cation, Sales No.
[11] ECLA
Sales No.: 69.II

High growth rates of manufacturing output were achieved by Ethiopia, the Sudan, the United Republic of Tanzania and Zambia, as shown in table 6. On the other hand, the growth rate of the manufacturing [illegible] slowed down in a number of other African countries. [illegible] persistent inflationary pressures. Some [illegible] suffered from high costs of production and [illegible] both on the home market and in [illegible]

[illegible] steadily until 1967. [illegible] Nigerian industries are [illegible] 10 per cent during the period [illegible] building materials [illegible] food and a [illegible] increased rapidly under various [illegible]

[illegible] growth rate of manufacturing was [illegible] textiles, wood, [illegible] products were reported to [illegible] period.

[illegible] at an average [illegible] 1966. Meanwhile [illegible] about 16 per cent [illegible] the manufacturing [illegible] the high growth rate [illegible] industrial base, although [illegible] Ethiopia for industrial [illegible]

[illegible] RELATION TO OTHER SECTORS

[illegible] the variations in the degree [illegible] GDP [illegible]

TABLE 5. GROWTH OF GDP AND OTHER SECTORS, RELATIVE SIZE OF MANUFACTURING AND AGRICULTURE, AND GDP AND MANUFACTURING PER CAPITA: AFRICA, 1960–1965[a]

	Average annual growth rates, 1960–1965				*Percentage of GDP, 1965*		*Dollars per capita, 1965*	
	Manufacturing	*Agriculture*	*GDP*	*Per capita GDP*	*Manufacturing*	*Agriculture*	*Manufacturing*	*GDP*
Ethiopia	4.7[b]	2.2[b]	4.7[b]	2.9[b]	7	64	3	49
Ivory Coast	...	...	...	...	9[c]	44[c]	20[c]	219[c]
Kenya	6.7	2.6	3.9	1.0	11	41	12	107
Libya	...	...	...	...	3	5	27	900
Malawi	...	...	...	...	5	47	2	49
Mauritius	...	...	...	...	15	24	33	220
Morocco[d]	3.7[e]	3.5[e]	3.4[e]	0.7[e]	14[e]	32[e]	25[e]	180[e]
Nigeria	4.2[f]	4.1[f]	4.5[f]	2.5[f]	6	53	5[e]	79[e]
Sierra Leone	...	...	...	...	6[e]	31[e]	9[e]	142[e]
Southern Rhodesia	3.7	6.3	3.7	0.4	18	20	39	219
Sudan	9.1[g]	4.7[g]	4.5[g]	1.6[g]	6[e]	56[e]	5[e]	91[e]
Tanzania[h]	11.9	3.1	3.9	2.4	4[e]	59[e]	3[e]	68[e]
Togo	...	...	...	...	6[e]	50[e]	6[e]	98[e]
Tunisia	6.4[e]	3.8[e]	5.8[e]	3.8[e]	14[e]	22[e]	27[e]	191[e]
Uganda	7.5	3.4	4.1	1.4	8	59[i]	7	88
Zambia	13.5	3.6	7.8	4.4	8	10	19	233

Source: UNIDO, based on United Nations, *Statistical Yearbook* and *Yearbook of National Accounts Statistics*.

[a] GDP at constant factor cost.
[b] 1961–1966 growth rate.
[c] 1965.
[d] GDP at constant market prices.
[e] 1960–1965 growth rate.
[f] 1960–1962 growth rate.
[g] 1962–1964 growth rate.
[h] Former Tanganyika only.
[i] Includes imputed value of subsistence activities.

In order to measure the degree of responsiveness of manufacturing output to GDP, the growth elasticity was computed from the data in tables 4, 5 and 6. It was found to be 1.43, which is very close to the finding derived from other studies.[15]

In order to examine industrial development in some depth, however, the rates of growth of other sectors should be examined closely. These are given in table 3, which shows that the sectoral rates of growth in the developing countries, except that for agriculture and construction were generally lower than those achieved in the developed market economies. The difference, however, does not seem to be substantial, considering that those rates are six-year averages and taking into account errors of statistical estimation of such aggregates.

The sectoral growth pattern was not the same in the different regions. Table 3 shows larger discrepancies between the growth rates of GDP and the manufacturing sector in the Asian countries than in Latin America. In the Asian countries, the rate of growth of the manufacturing sector as compared with that of GDP was higher than in the Latin American countries, which obviously means that the manufacturing sector in the Asian countries had increased its share in the national income more rapidly than the Latin American countries had increased theirs. The manufacturing sector in the Asian countries expanded at the rate of 1.6 per cent in response to every 1 per cent increase in GDP, whereas in the Latin American countries the corresponding rate was 1.2 per cent. This may be taken as a reflection of the present state of industrial development in some Latin American countries, where an import substitution policy has been adopted. In some of those countries the limits of such substitution seem to have been reached.

In Africa, on the other hand, the average annual growth rate of GDP was 3.4 per cent between 1960 and 1966, while the growth rate of the manufacturing sector was 4.2 per cent, whence it may be concluded that the growth elasticity of manufacturing in that region was in the vicinity of 1.2 per cent. Comparing the latter elasticity with that derived for the Latin American countries during the same period, it may be assumed that the manufacturing sectors in the African and Latin American countries responded to the growth of income in a similar way.

As regards the development of other sectors, table 3 shows that the average annual growth rate of the agricultural sector during the period 1960–1966 was far below the rates of the manufacturing sector or GDP during the same period, both in Asia and in Latin America, those rates being 1.3 per cent and 3.6 per cent respectively. The construction sector showed an average annual rate of growth of 7.8 per cent in the Asian countries during the same period, which was higher than the rates of

[15] United Nations, *The Growth of World Industry, 1938–1961 (International Tables and Analysis)* (United Nations publication, Sales No.: 64.XVII.8), and *A Study of Industrial Growth* (United Nations publication, Sales No.: 63.II.B.2).

the manufacturing sector and GDP and considerably higher than that of the agricultural sector. The case of the Latin American countries was quite different, since the average annual rate of growth of construction during that period was 4.7 per cent, a rate very much closer to that of GDP and not far from the growth rate in the manufacturing and agricultural sectors. In the transportation and communication sector, the average annual rates of growth during the same period were 6.2 and 4.4 per cent for the Asian and Latin American countries respectively. The sectoral picture for the developed market economies during the same period was more homogeneous, with the exception of the agricultural sector, which showed an average annual rate of growth of only 1.7 per cent.

TABLE 7. STRUCTURE OF GDP BY MAJOR REGIONS, MAJOR ECONOMIC SECTORS AND ECONOMIC GROUPINGS, 1966

(Percentages of GDP in each region)

	Manufacturing	*Agriculture*	*Other sectors*	*GDP*
Developing countries	17.3	30.3	52.4	100
Africa (excluding South Africa)	11.8[a]	35.6	52.6	100
Asia (excluding Japan) . . .	14.8	40.4	44.8	100
Latin America	23.5	20.1	56.4	100
Developed market economies	32.6	5.8	61.6	100
Total of above regions	30.1	9.8	60.1	100

Source: UNIDO, based on United Nations, *Yearbook of National Accounts Statistics*, and U.N., A Survey of Economic Conditions in Africa, 1967 (E/CN.14/409).

[a] Includes electricity.

The impact of the manufacturing sector on GDP may be measured by that sector's relative contribution thereto. Table 7 shows the relative magnitudes of the manufacturing and agricultural sectors in GDP, reflecting the level of industrialization. The contrast between the developing countries and the developed market economies needs no further emphasis. Even within the developing regions, Latin America stands distinct from Africa and Asia. In 1966, the contribution of the manufacturing sector to GDP in Latin America was 23.5 per cent as compared with 14.8 per cent and 11.8 per cent for Asia and Africa respectively. The contribution of the manufacturing sector in the developed market economies, on the other hand, was 32.6 per cent in 1966, indicating the substantive difference in economic structure between those countries and the developing countries of Africa, Asia and Latin America.

SECTORAL GROWTH IN MANUFACTURING

The average annual growth rate of 6.2 per cent of manufacturing output recorded by the developing countries as a whole during the period 1960–1966 was not uniformly achieved within the manufacturing sector.

[illegible]

TABLE 9. GROWTH OF SELECTED HEAVY MANUFACTURING INDUSTRIES BY MAJOR REGIONS AND ECONOMIC GROUPINGS, 1960–1968

(Average annual change in index numbers between the dates indicated)

ISIC	Paper products	Chemical [illegible] products	Non-metallic mineral products	Basic metals	Metal products (38)
Developing countries					
1960–1963 and 1963–1966	[illegible]	6.7	5.9	7.8	8.3
1966–1967	2.5	4.7	7.2	1.9	2.1
1967–1968	8.5	9.3	9.8	7.1	...
Asia [illegible]					
1960–1963 and 1963–1966	9.9	7.5	7.5	9.3	13.0
1966–1967	5.4	5.5	8.7	0.9	4.9
1967–1968	12.0	9.9	5.7	5.0	0.7
Latin America					
1960–1963 and 1963–1966	7.9	6.3	5.3	7.6	6.1
1966–1967	4.4	4.2	7.3	2.3	1.1
1967–1968			12.6	...	..
Developed market economies					
1960–1963 and 1963–1966	6.3	9.1	6.3	6.9	7.4
1966–1967	2.1	6.8	1.3	0.2	2.2
1967–1968	5.6	9.1	3.9	8.8	4.2
World [illegible]					
1960–1963 and 1963–1966	6.4	8.8	6.3	7.0	7.5
1966–1967	2.2	6.5	1.9	0.3	2.2
1967–1968	5.6	9.2	5.1	8.8	4.2
Centrally planned economies					
1960–1963 and 1963–1966	8.0	13.0	8.9	8.0	11.3
1966–1967	8.8	12.2	8.1	7.6	11.3
1967–1968					

[illegible]

[illegible] growth in the 1960s than in the [illegible] and developed market economies. [illegible] growth rate in the 1960s among the former [illegible] average annual growth rate of [illegible] per cent for developing countries and [illegible] [illegible] market economies.

[illegible] the average annual growth rates for both [illegible] declined, but the [illegible] larger fall in growth rates than [illegible] developed market economies. In 196[illegible], reflecting a world-wide

[illegible]

slowdown in the manufacturing industries, the growth rate of that sector declined in both economic groupings, as shown in Table 9. For the developing countries it was 2.5 per cent, as compared with 2.1 per cent for the developed market economies. Preliminary estimates of growth rates for 1968 show an upturn for both developed and developing countries. The estimated rates are 8.5 per cent for the developing countries and 5.6 per cent for the developed market economies.

The centrally planned economies showed quite a different growth pattern for that sector between 1960 and 1966. The average annual growth rate of output of the paper and paper products sector during that period was 8 per cent as compared with 8.8 per cent in 1967.

The output of that sector accounted for about 2 per cent of total manufacturing in developing countries (see table 10); this in itself may explain the fast growth of that sector in those countries. The consumption and production of paper products are highly concentrated in the developed countries. The developing countries as a whole produced about 20 per cent of the world total, excluding the centrally planned economies. It is estimated that some 50 to 60 per cent of the total output of the paper and paper products sector in the developing countries in 1967 was produced by Latin American countries.

The central problem for a developing country in considering the prospects for growth of the paper industry revolves around interrelated technological and economic factors. The essential requirement is the existence of forest resources and large amounts of fresh water. The unit production cost varies with the process used, the scale of the operating unit, the degree of integration of the operation, and its location relative to raw materials. The scale of operation depends on the size of the accessible market. The most efficient production plants are the large plants and integrated complexes, but these require heavy capital commitments, as well as large markets. These conditions are rarely fulfilled in the developing countries, where the market is generally small. Further, those countries do not have easy access to the export markets, since the developed countries supply most of the world demand. However, the growth of the level of income is expected to lead to an increase in demand for paper products. According to FAO, the income elasticity of paper products at a *per capita* income level of $ 100 is as high as 2.5 to 3; at a *per capita* income level of $ 200 to $ 400, it ranges from 1.5 to 2.5.[20] In many developing countries *per capita* income is below $ 100. This means that, as income increases, the demand for paper and paper products will increase 2.5 to 3 times as fast as income. When *per capita* income reaches the range of $ 200 to $ 400, the demand will slow down slightly but the income elasticity will still show a strong growth potential for paper and paper products.

[20] FAO, *The State of Food and Agriculture, 1962* (CL. 39/2), p. 94.

TABLE 10. STRUCTURE OF MANUFACTURING INDUSTRIES BY MAJOR REGIONS AND ECONOMIC GROUPINGS, 1967

(Percentages of total manufacturing output in each major region)

	ISIC	Developing countries	Asia excl. Japan	Latin America	Developed market economies	World excl. centrally planned economies	Centrally planned economies
Manufacturing total	2–3	100	100	100	100	100	100
Light	20–26, 28–30, 39	52	59	49	34	36	34
Heavy	27, 31–38	48	41	51	66	64	66
Food, beverages, tobacco	20–22	24	21	26	12	13	16
Textiles	23	10	13	8	4	5	5
Clothing, footwear and made-up textiles	24	5	7	4	4	4	4
Wood products, furniture	25–26	4	7	3	4	4	4
Paper products	27	2	1	2	4	3	1
Chemicals, petroleum products	31–32	16	13	17	13	13	9
Non-metallic mineral products	33	5	4	5	4	4	7
Basic metals	34	7	6	8	8	8	8
Metal products	35–38	18	17	19	37	36	40

Source: UNIDO, based on United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics*.

Latin American countries are well endowed with [illegible] supply of inexpensive timbers and other materials [illegible] straw, grasses, bamboo and sisal. However, 39 per [illegible] consumption of pulp was imported in 1966.[1] [illegible] not likely to drop in the near future owing to [illegible] supply for newsprint. Regional [illegible] and newsprint would seem to offer this industry [illegible] accelerated growth. As shown in table 9, the [illegible] and paper products sector in Latin America [illegible] growth pattern.

The Asian countries have had a low level of [illegible] of paper and paper products, although China, [illegible] of Korea, India and Pakistan have been [illegible] 1955. Although there are vast areas of forest land [illegible] bution is uneven as between the various countries. [illegible] frequently heterogeneous and rarely able to supply [illegible] quantities at low cost. This is a partial explanation [illegible] production in that region. FAO has estimated that [illegible] tion in the ECAFE region may increase at the rate [illegible] *annum* up to 1975.[22] In addition, a better use of non-wood [illegible] ses and straw, would open up new growth opportunities [illegible] in Asia.

In Africa, production of pulp and paper [illegible] of the large forest resources. For instance, in 1965 [illegible] countries produced 310,000 tons of paper and [illegible] Imports accounted for about 70 per cent of [illegible] estimated that future demand for paper and paper [illegible] as income increased and would reach [illegible] industry appears to present an excellent opportunity [illegible] tion. However, first, a competitive use of [illegible] in the light of alternative uses, secondly, [illegible] paper and paper products industry is made [illegible] wood or non-wood, natural forest or plantation [illegible] be determined.

Chemicals and petroleum products

The growth of this sector [illegible] followed the pattern of the manufacturing sector as a whole. In the 1950s the [illegible] were registered as 14 per cent for the developing [illegible]

[1] ECLA, [illegible] Sales No. 69.II.G.[illegible]

[2] FAO, [illegible] Nations publication, Sales No. [illegible]

[3] UNIDO, [illegible] 66.II.B.[illegible]

[4] *Ibid.*, pp. [illegible] and 88.

cent for the develop
average annual grow
market economies
cent) than did the
In 1967, the grow
is observed in
considerably high
1960 and 1966,

The output
for 16 per cent
countries. It is estim

TABLE 11

Country
Senegal[a]
United Stat
Argentina
Brazil[a]
Chile[c]
Colombia
Guatemala
Mexico
Peru
Uruguay
Venezuela
Ceylon[a]
China (T
India
Korea, R
Philippines

products of the
total world
that this sector
can countries
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This sector
sectors in th
that its prod
Many develop

which a growth rate of only 1.9 per cent was recorded. However, the provisional estimate for 1968 shows a substantial recovery of output. The growth rate during that year was 4 per cent. In contrast, the developed countries as a group recorded a higher average annual growth rate [illegible] than the average annual rate of 3.1 per

a fairly steady growth rate between 1960–1967. There are no accurate data on the share of output of this sector as between developed and developing countries. Taking production figures of major products in this sector, the developing countries' share could be estimated at between 7 and 9 per cent of total world production in 1967, excluding the centrally planned economies. Given the small difference in the growth rates between developed and developing countries, the latter are not expected to change their share of production in the near future and will remain largely dependent on the developed market economies for the supply of basic metals.

As shown in the previous paragraph, this sector recorded a high growth rate in the 1950s and a fairly high one in the 1960s in both developing and developed economies. The growth elasticity of output of this sector to *per capita* GDP is 1.99,[28] suggesting a good growth potential in the developing countries in this sector. However, the development of this sector is likely to face increasing difficulties and requires well co-ordinated plans. In the industrialized countries, the demand for basic metals comes largely from the metal-transforming industries, but the development of such industries is lagging in the developing countries. Without an adequate demand from steel-using industries, the main outlet for steel products is in construction, for items such as heavy and light sections, galvanized sheets, tubes and fittings. The expansion of basic metals production will thus be limited unless a large export market is opened, and that cannot be expected owing to the over-capacity in some basic metals, for example, steel, existing in the industrialized countries.

The technology of steel-making requires large-scale production for the attainment of maximum efficiency. Considering the internal demand in the various developing countries, this factor works against the efficiency of most mills presently established in those countries. The growth rates of crude steel production are shown in table 13 by selected individual developing countries.

The main problem in Latin America, next to that of the small domestic market, has been the distribution of raw material. A large share of the world's iron ore is to be found in the region, mainly in Brazil and Venezuela, but coal of a coking quality is scarcely to be found in Latin America except in Mexico. Although Argentina has an estimated 800 million tons of iron ore, much of it is located in remote regions where exploration is difficult. In spite of these obstacles, steel has been one of the fastest growing industries in Latin America, as shown in table 13.

The development pattern of the steel industry in some of the Latin American countries is interesting to note. Rolling mill capacity has been installed at a much faster rate than pig-iron capacity and this has resulted

[28] *Ibid.*

in substantial excess capacity in finished steel. Argentina, Colombia, Venezuela and the Central American countries began the production of finished steel products without the domestic presence of installed pig-iron capacity. The Central American countries still produce steel without pig-iron capacity.

In Asia, India is the only country producing crude steel on a large scale. Its average annual growth rate was registered as 7 per cent for the period 1960–1966. Small-scale crude steel production facilities exist, however, in Burma, China (Taiwan), the Republic of Korea, Pakistan, the Philippines and Thailand. Except in India, the main obstacle con-

TABLE I.3. CRUDE STEEL PRODUCTION IN SELECTED DEVELOPING COUNTRIES, 1960–1967

	Average annual growth rate (percentage)	Production in 1967 (1,000 tons)
Rhodesia, Southern[a]	7[a]	130[b]
United Arab Republic	6[c]	179[d]
China (Taiwan)	12	443
India	10	6,384
Korea, Republic of	30	320
Pakistan	2[c]	13[d]
Thailand[a]	3	6
Argentina	25	1,320
Brazil	10	3,672
Chile	5	596
Colombia	4	208
Mexico	11	3,060
Peru	5[a]	80[b]
Venezuela	50[a]	537[b]

Source: UNIDO based on United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics*.

[a] 1960–1966.
[b] 1966.
[c] 1960–1965.
[d] 1965.

fronting the development of the crude steel industry in the region is the smallness of the domestic market, resulting from the lack of steel-using industries.

In Africa, steel production is still at the embryonic stage, only the United Arab Republic having made advances in this industry. Small-scale steel works are in operation in Tunisia, Nigeria, Ghana, Uganda and Ethiopia. As in other developing regions, small domestic markets and lack of steel-using industries, combined with the inaccessible location of resources and the difficulty of transporting them, impede the development of iron and steel industries in most of developing Africa.

Metal products

The metal products sector has followed a slightly different growth pattern from that of the manufacturing sector as a whole. In the 1960s the average annual growth rate of this sector [illegible] developing countries [illegible] developing [illegible] from the average [illegible] per cent for the developed market economies [illegible] compared with [illegible]. This growth pattern [illegible] the developed countries [illegible] and the developing [illegible] rates of [illegible] for the former. In contrast, the centrally planned economies maintained a steady growth of [illegible] per cent throughout the period [illegible].

Table [illegible] shows the relative share of this sector in the total manufacturing of the developing countries [illegible] the second largest, following the food, beverages and tobacco sector. While this indicates the importance of the metal products sector within the manufacturing industries of the developing countries, these countries' share in world production, excluding the centrally planned economies, was less than 6 per cent in [illegible]. Imports of metal products by the developing countries were estimated to have accounted for [illegible] per cent of Africa's consumption of such products, [illegible] per cent of Asia's and [illegible] per cent of Latin America's.[32] At present, in most developing countries production in this sector comes from manufacturing activities such as repair and maintenance of machinery and transport equipment, production of metal containers, utensils, assemblies of electrical equipment and transport equipment. In some developing countries such as Argentina, Brazil, India and Mexico, advanced machinery has been produced. The estimated high growth elasticity of [illegible] GDP and the large import markets for metal products appear to provide an excellent opportunity for developing an import substitution industry. However, the wide variety of products and the large market required for each of them, in addition to the need for skilled labour, presents difficulties for this sector.

Light manufacturing industries[33]

The output of the light manufacturing industries in the developing countries expanded at an average annual growth rate of 8 per cent during the 1950s and slowed down to an average annual growth rate of [illegible]

31 UNIDO, *Industrial Development Survey*, vol. I (United Nations publication, Sales No.: E.68.II.B.18), pp. 28 and 29.
32 UNIDO, Sectoral Studies prepared for the Symposium, 1967: Engineering Industries (ID/CONF.1/[illegible]).
33 ISIC [illegible], 26, 28, [illegible] and 39.

urbanization is another factor accelerating the development of food processing. A vertically integrated system will in such cases be required, extending from harvesting, transportation and storage to marketing and distribution facilities. This will require large investment; on the other hand, such a pattern of development would seem to enhance the growth potential of the food processing sector in many developing countries.[36]

TABLE 15. GROWTH OF FOOD, BEVERAGES AND TOBACCO BY SELECTED COUNTRIES, 1960–1967

(Average annual change in index numbers)

	Growth rate
Kenya[a]	3.4
Morocco[a]	3.8
Rhodesia, Southern[b]	2.1
Senegal[c]	0.3
Tunisia[a]	6.2
United Arab Republic[a,d]	5.2
Zambia[illegible]	12.7
Argentina[b]	2.0
Brazil[a]	3.3
Chile	4.9
Colombia[b]	5.5
El Salvador[a]	7.2
Guatemala	1.0
Mexico	7.0
Nicaragua[b]	7.5
Panama	8.3
Peru[a]	6.7
Uruguay[a]	1.7
Venezuela	5.8
Ceylon[a]	4.1
India[a]	3.7
Korea, Republic of	9.3
Philippines	6.4
Syria[b]	7.3

Source: UNIDO, [illegible] United Nations Statistical Yearbook.
[illegible]

The growth rate of the food, beverages and tobacco sector in some developing countries during the period 1960–1967 is given in table 15. The table shows clearly that in many countries the growth rate of this sector was higher than the growth rate of *per capita* GDP. Evidence also

[36] UNIDO, Sectoral Studies prepared for the Symposium, 1967: Food and Food Processing Industries (prepared by FAO), ID/CONF.1/[illegible]

shows that there is no close association between the growth rate of this sector and the level of *per capita* GDP; this may be due to a variety of reasons, such as the different levels of development of the food processing industry and the size of domestic output.

Textiles

The textile industry is one of the industries most commonly established in developing countries and its output accounted in 1967 for 10 per cent of total manufactures in those countries. A domestic market exists for its products and the industry offers employment opportunities for a large body of unskilled labour. The output of this sector in the developing countries increased at an average annual rate of 8.3 per cent in the 1950s[47] and slowed down to a rate of 3.9 per cent during the period 1960—1966, as shown in table 14. This follows the general growth pattern of the manufacturing sector as a whole. On the other hand, the average annual growth rate of the output of textiles in the developed market economies was 4 per cent during the period 1960—1966, an increase over the yearly average of 2.8 per cent recorded during the 1950s.[48] This differs from the pattern of growth of other manufacturing sectors. In 1967, however, the growth rate decreased to 0.8 per cent in line with other manufacturing sectors. The centrally planned economies registered an average annual growth rate of 4.3 per cent during the period 1960—1966, and 8.4 per cent in 1967.

The growth rates of textiles production in selected developing countries are shown in Table 16. The development of the textile industry is often expected to increase employment substantially. Such increase, however, is subject to the constraints that the products be price competitive with import goods, and that the investment required does not impose too much strain on capital resources.[49] However, modern textile technology advances on the basis of labour saving processes and large scale operations. In many developing countries, owing to the [illegible] large domestic market, the production of textiles has taken place on the basis of small units which often run into the problems of high [illegible] products and slow growth. Some countries, such as [illegible] the Republic of Korea and Mexico, have achieved high [illegible] by adopting large-scale operations of [illegible]

Provided an adequate domestic market [illegible] industry offers an excellent opportunity for [illegible] facturing activities, as well as with other sectors [illegible] is related to the clothing and furnishing industries as well [illegible]

[47] UNIDO, *Industrial Development Survey* [illegible] Sales No.: E.68.II.B.[illegible], pp. 28 and [illegible]

[48] *Ibid.*

[49] UNIDO, Sectoral Studies prepared for the Symposium [illegible] tries (ID/CONF.[illegible] annex, p. 43.

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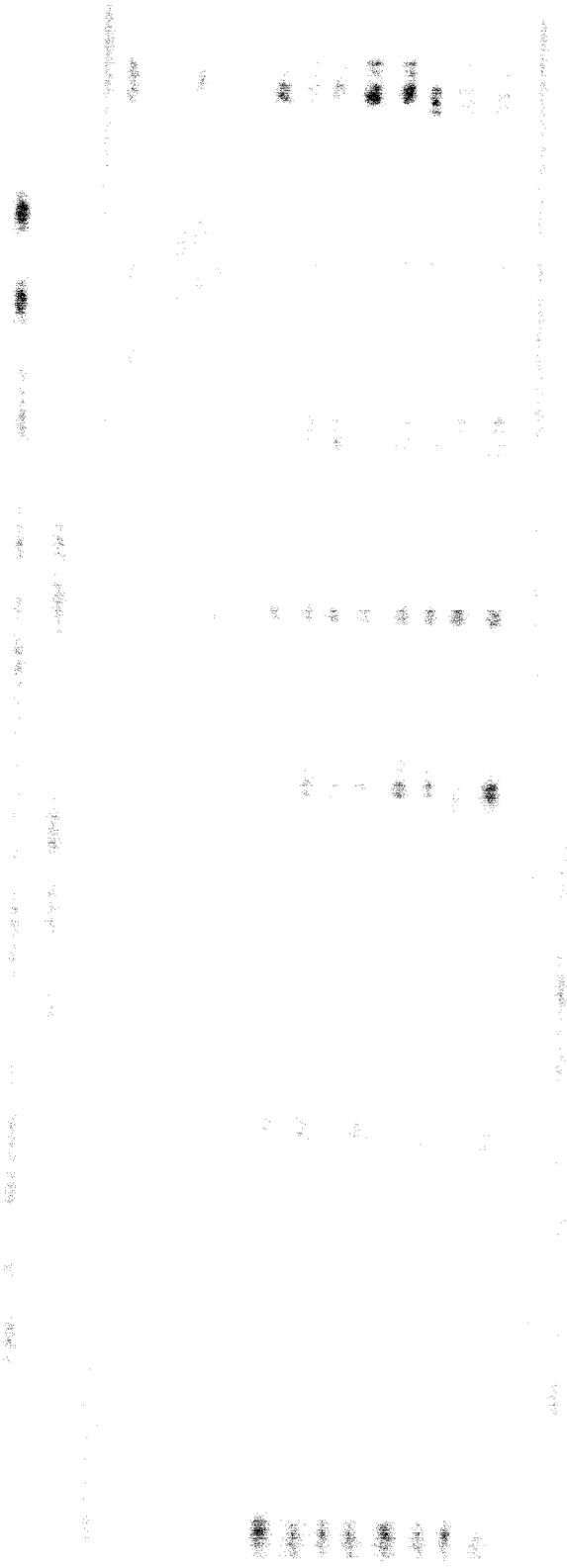

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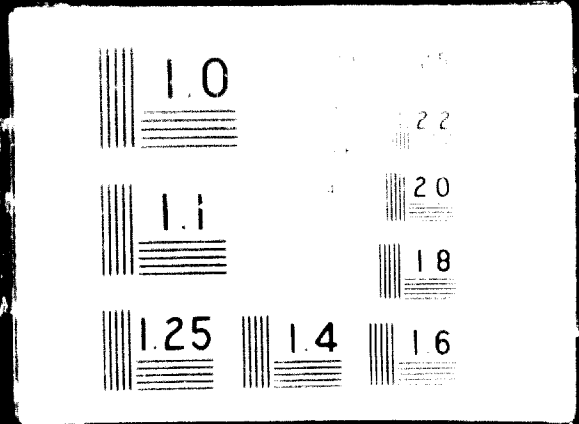

TABLE 19. WORLD EXPORTS, 1966 AND 1967
(Value in billion dollars f. o. b., at current prices)

Origin of exports	Value of total exports[a]		Value of manufactures[b]		Percentage share of manufactures	
	1966	1967	1966	1967	1966	1967
Developing countries	38.7	40.0	7.6	8.2	19.6	20.5
Developed market economies	111.5	149.2	101.0	108.2	71.4	72.5
Centrally planned economies	23.2	24.9	13.9	15.0	59.9	60.2
World	203.4	214.1	122.5	131.2	60.2	61.3

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics*.
[a] SITC 0–9.
[b] SITC 5–8.

In percentage terms, the year to year increment in the value of exports increased from 2.1 per cent in 1960–1961 and 6.4 per cent in 1961–1962 to 17.9 per cent in 1965–1966. In 1964–1965, the incremental change of 12.7 per cent was markedly less than the 16.5 per cent change in 1963–1964. In 1966–1967, the incremental change of 6.5 per cent was substantially below that of earlier years. The share of total exports accounted for by chemicals and machinery and transport equipment increased from 1.8 per cent in 1960 to 2.9 per cent in 1966 and 3.2 per cent in 1967. The conclusion follows that the participation of the developing countries in international trade in manufactured goods is concentrated primarily in outputs of light industry, and in manufactured consumer goods.

To date the developing countries have played a minor role in the export of capital goods. This may be explained by their stage of technical development and the fact that most of them only provide a small domestic market for these goods. Developing countries have concentrated on the production of consumer goods and other light industry outputs, industries for which a known local demand exists. Any reversal of this situation will be difficult. However, it may be important from the point of view of their future development that attempts are made in this direction.

Over the period under review, machinery and transport equipment became increasingly important, both absolutely and relatively, among the exports of manufactured commodities of the developed market economies (see table 21). From 1960 through 1965, the value of exports of "other manufactures" exceeded those of chemicals and of machinery and transport equipment. In 1966 and again in 1967, the value of exports of machinery and transport equipment from developed market economies was greater than the other components of manufactured exports; in 1966, the respective values of exports of chemicals, machinery and

TABLE 20. DEVELOPING COUNTRIES' EXPORTS OF MANUFACTURES[a] BY COMMODITY CLASS, 1960—1967

(Value in million dollars f.o.b., at current prices)

	Total exports (SITC 0 - 9)	*Exports of manufactures (SITC 5 - 8)*		*Chemicals SITC 5*		*Machinery and transport equipment SITC 7*		*Other manufactures (SITC 6 and 8)*		
	Value	*Value*	*Percentage of total exports*	*Value*	*Percentage of total exports*	*Value*	*Percentage of total exports*	*Value*	*Annual change*	*Percentage of total exports*
1960	27,350	3,840	14.1	290	1.1	190	0.7	3,360	—	12.3
1961	27,650	3,975	14.4	320	1.2	225	0.8	3,430	2.1	12.4
1962	29,060	4,260	14.7	350	1.2	260	0.9	3,650	6.4	12.6
1963	31,500	4,860	15.4	385	1.2	295	0.9	4,180	14.5	13.3
1964	34,610	5,655	16.3	460	1.3	325	0.9	4,870	16.5	14.1
1965	36,490	6,395	17.5	510	1.4	395	1.1	5,490	12.7	15.0
1966	38,740	7,590	19.6	620	1.6	500	1.3	6,470	17.9	16.7
1967	40,000	8.150	20.4	660	1.7	600	1.5	6,890	6.5	17.2

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics.*

[a] SITC 5 – 8.

TABLE 21. DEVELOPED MARKET ECONOMIES' EXPORTS[a] OF MANUFACTURES[b] BY COMMODITY CLASS, 1960–1967

(Value in billion dollars f.o.b., at current prices)

	Total exports (SITC 0–9)	*Exports of manufactures (SITC 5–8)*		*Chemicals (SITC 5)*		*Machinery and transport equipment (SITC 7)*		*Other manufactures (SITC 6 and 8)*	
	Value	*Value*	*Percentage of total exports*	*Value*	*Percentage of total exports*	*Value*	*Percentage of total exports*	*Value*	*Percentage of total exports*
1960	85.0	57.4	68	6.5	8	23.8	28	27.1	32
1961	89.8	60.6	68	6.9	8	26.2	29	27.6	31
1962	94.9	65.1	69	7.3	8	28.7	30	29.1	31
1963	103.6	70.7	68	8.1	8	31.1	30	31.5	30
1964	117.3	80.8	69	9.5	8	35.0	30	36.3	31
1965	128.2	90.0	70	10.6	8	39.2	31	40.2	31
1966	141.5	101.0	71	12.0	8	44.8	32	44.2	31
1967	149.2	108.2	73	13.0	9	49.0	33	46.2	31

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics.*

[a] Includes intra-regional trade.

[b] SITC 5–8.

transport equipment, and of other manufactures, were $ 12 billion, $ 44.8 billion and $ 44.2 billion. In relative terms, while exports of other manufactures accounted for approximately 31 per cent of total exports, and chemicals represented approximately 8 per cent of total exports, exports of machinery and transport equipment increased gradually from 28 per cent of total exports in 1960 to 32 per cent in 1966 and 33 per cent in 1967.

Exports of manufactures from the centrally planned economies followed a pattern similar to that of the developed market economies (see table 22). The value of exports of machinery and transport equipment increased from 25 per cent of the value of total exports in 1960 to 27 per cent in 1966 and 28 per cent in 1967, allowing, of course, for year to year fluctuations. Exports of chemicals accounted for 5 per cent of total exports from 1961 through 1967. The share of exports of "other manufactures" in total exports increased from 27 per cent in 1960 to 30 per cent in 1962, and then fell steadily to 28 per cent in 1966 and 27 per cent in 1967. In value terms, the centrally planned economies' exports of machinery and transport equipment equalled the value of their exports of "other manufactures" in 1966 ($ 6.4 billion). In 1967, exports from the centrally planned economies of machinery and transport equipment were slightly greater than their exports of "other manufactures" ($ 6.9 billion as compared with $ 6.8 billion).

At the regional level, the growth of exports of manufactures from developing countries in Asia obviously explains much of the 112 per cent growth in exports of manufactures of all developing countries in the entire period 1960–1967 (see table 23). Over the entire period, Asian exports of manufactures grew by 113 per cent; furthermore, those exports accounted for 25 per cent of all Asian exports. Although the index of growth of exports of manufactures from Latin America was somewhat higher than that of Asia in 1967 (216 as compared with 213), the share of total Latin American exports accounted for by manufactures was considerably less than that of Asia. The share of manufactures in total Latin American exports in 1967 was 15 per cent. Africa lagged behind both Asia and Latin America with respect to the growth of exports of manufactures, and behind Asia with respect to the share of manufactures in total exports from the developing countries. For 1967, the index of growth for African exports of manufactures was 175, and manufactures accounted for 21 per cent of total exports.

In Africa, unlike Asia and Latin America, the growth of exports of manufactures from developing countries and their share of total exports was not steady. In the three years 1960 through 1962, both the index of growth and the percentage share of exports of manufactures declined; the index of growth of exports of manufactures was 100 in 1960 and 1961 and 96 in 1962, and the share of manufactures in total exports fell from 19 to 17 per cent. African exports of manufactures continued to

TABLE 22. CENTRALLY PLANNED ECONOMIES' EXPORTS[a] OF MANUFACTURES[b] BY COMMODITY CLASS, 1960 - 1967

(Value in billion dollars f.o.b., at current prices)

	Total exports SITC 0 - 9	*Exports of manufactures SITC 5 - 8*		*Chemicals SITC 5*		*Machinery and transport equipment SITC 7*		*Other manufactures SITC 6 and 8*	
	Value	*Value*	*Percentage of total exports*	*Value*	*Percentage of total exports*	*Value*	*Percentage of total exports*	*Value*	*Percentage of total exports*
1960	15.0	8.5	56	0.7	4	3.7	25	4.1	27
1961	15.7	9.0	58	0.7	5	3.8	24	4.5	29
1962	17.5	10.4	60	0.8	5	4.4	25	5.2	30
1963	18.7	11.3	61	0.9	5	5.0	26	5.4	29
1964	20.3	12.4	51	1.0	5	6.0	27	5.9	29
1965	21.7	13.3	61	1.1	5	6.0	28	6.2	28
1966	23.2	13.9	60	1.1	5	6.4	27	6.4	28
1967	24.9	15.0	60	1.3	5	6.9	28	6.8	27

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics*.

[a] Includes intra-regional trade.

[b] SITC 5 - 8.

TABLE 23. GROWTH AND SHARE OF EXPORTS[a] OF MANUFACTURES[b] OF DEVELOPING COUNTRIES, BY MAJOR REGIONS, 1960—1967

	All developing countries		*Africa*[c]		*Asia*		*Latin America*	
	Index number	*Percentage of world exports of manufactures*	*Index number*	*Percentage of total regional exports*	*Index number*	*Percentage of total regional exports*	*Index number*	*Percentage of total regional exports*
1960	100	5	100	19	100	18	100	9
1961	104	5	100	18	107	19	104	9
1962	111	5	96	17	114	19	107	9
1963	127	6	106	17	132	20	123	10
1964	147	6	129	18	149	21	144	11
1965	167	6	146	19	168	22	162	12
1966	198	6	177	22	192	24	202	14
1967	212	6	175	21	213	25	216	15

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics*.

[a] Includes intra-regional trade.

[b] SITC 5 – 8.

[c] Excluding South Africa.

grow through 1966, and fell off slightly in 1967; the index numbers in 1966 and 1967 were 177 and 175 respectively. Similarly, the share of manufactures in total African exports increased from 17 per cent in 1963 to 22 per cent in 1966, and then declined to 21 per cent in 1967. That there has been growth in Africa's exports of manufactures is not questioned, although it is clear that the growth over the entire period has been modest compared with that of Asia and Latin America. Given the fluctuations in the percentage shares of manufactures in total exports, it is suggested that this share has on balance been constant, i.e., the growth of exports of manufactures from Africa has just kept pace with the growth of Africa's total export trade.

In Asia and in Latin America, the growth of exports of manufactures from developing countries has more than kept pace with the growth of total exports of those regions. The data in table 23 indicate that the shares of exports of manufactures in total exports from both Asia and Latin America have increased substantially and that those increases have been continuous from 1962 onward. In the case of Asia, the share of exports of manufactures in total exports increased from 18 per cent in 1960 to 24 per cent in 1966 and 25 per cent in 1967; for Latin America, the increase was from 9 per cent in 1960 to 11 per cent in 1966 and 15 per cent in 1967.

The data permit the conclusion that both Asian and Latin American countries are to an increasing extent developing foreign markets for their manufactured products. More important, perhaps, is the fact that those two developing regions are reducing to some extent, if only to a minor extent, their dependence upon exports of primary commodities as earners of foreign exchange. The data do not suggest that Africa has been able to benefit in the same way; the growth of the share of manufactures in total African exports does not indicate any definite trends.

The fact that all three developing regions are at least maintaining if not improving their relative positions with respect to foreign trade in manufactures must be considered in relation to the share of all developing countries in exports of manufactures. From 1960 through 1962, the share of developing countries in exports of manufactures was 5 per cent; from 1963 through 1967, 6 per cent. Although Asia and Latin America, in particular, have enjoyed substantial increases in both growth of exports of manufactures and share of total exports, and although Africa has maintained its relative position, the distribution of exports of manufactures among developed market economies, developing countries and centrally planned economies has not been significantly altered. The developing countries continued in 1967 to play a relatively insignificant role in total world trade in manufactures.

Having examined the growth of exports of manufactures, it is interesting to compare the available data for output and exports of manufactures during the period 1960–1966 for the three developing

regions. First, a word of caution is needed because the system of classifying the two sets of information is different; data on manufacturing output are derived from ISIC while data for exports are derived from SITC. In Latin America manufacturing output accounted for some 59 to 61 per cent of the total manufacturing output of the developing countries while its share in the total exports of manufactures from developing countries was some 20 to 21 per cent—even lower than that of Africa, whose manufacturing output accounted for only 6 to 8 per cent of the total manufacturing output of the developing countries. This makes Asia the biggest exporter of manufactures of the three developing regions, with a share of some 54 to 55 per cent of the total exports of manufactures, although its share in the manufacturing output of the developing countries was some 33 to 34 per cent. This situation can only be partially explained by the differing systems of classification and it looks as if most of the industries in Latin America are aimed at satisfying domestic demand and are not export-oriented.

Growth of imports of manufactures

For the world as a whole and the three major economic groupings, the period 1960–1967 was characterized by an increase in the growth of manufactured imports. As shown in table 24, the index of growth of imports for the world increased from 100 in 1960, the base year, to 175 in 1966 and 187 in 1967. For the developed market economies, the growth was much more dramatic; the index rose to 199 in 1966 and 214 in 1967. In the developing countries, the index rose to 147 in 1966 and 152 in 1967. In the centrally planned economies, the index rose to 154 in 1966 and 171 in 1967.

The data in table 24 indicate, also, an increase in the share of manufactures in total imports for the world and for the major economic groupings. For the world as a whole, the share of manufactures in total imports increased from 55 per cent in 1960 to 60 per cent in 1966 and 61 per cent in 1967. For the developed market economies, the increase in the share of manufactures in total imports was somewhat greater than for both developing countries and centrally planned economies; the share of manufactures in the imports of the developed market economies increased from 50 to 58 per cent in 1966, and to 59 per cent in 1967. The share of manufactures in the imports of developing countries increased only slightly, from 64 per cent in 1960 to 66 per cent in 1966 and 67 per cent in 1967. In the centrally planned economies, the share of manufactures in imports increased from 59 per cent in 1960 to 62 per cent in 1966 and 66 per cent in 1967.

Table 24 indicates that, from 1964, the share of manufactures in the imports of the world and of the three major economic groupings

TABLE 24. GROWTH OF IMPORTS OF MANUFACTURES[a] F.O.B., BY ECONOMIC GROUPINGS, 1960–1967

	Developing countries		*Developed market economies*		*Centrally planned economies*		*World*	
	Index of growth of imports of manufactures	*Percentage of imports of manufactures in total imports*	*Index of growth of imports of manufactures*	*Percentage of imports of manufactures in total imports*	*Index of growth of imports of manufactures*	*Percentage of imports of manufactures in total imports*	*Index of growth of imports of manufactures*	*Percentage of imports of manufactures in total imports*
1960	100	64	100	50	100	59	100	55
1961	104	65	107	51	99	57	105	55
1962	105	64	118	52	112	60	114	56
1963	112	63	131	52	120	60	125	56
1964	123	64	154	54	131	59	142	57
1965	136	66	175	57	144	61	157	59
1966	147	66	199	58	154	62	175	60
1967	152	67	214	59	174	66	187	61

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics*.

[a] SITC 5–8.

showed a tendency to increase. In the four years 1960 through 1963, the share of manufactures in total world imports increased from 55 to 56 per cent. The corresponding share for the developed market economies increased from 50 to 52 per cent; the 52 per cent share remained constant in 1962 and 1963. For the developing countries, during the same period, the share of manufacturing imports fluctuated at around 64 per cent. In the centrally planned economies, in this four-year period, manufactures as a share of total imports increased by 1 per cent; however, it is noteworthy that this share fell from 59 per cent in 1960 to 57 per cent in 1961 and then rose to 60 per cent in 1962, which level persisted through 1963. There do not appear to have been any significant tendencies for foreign trade to have been a vehicle for industrial development in the period 1960 to 1963. In the rest of the period under review, a trend seems to have developed in the direction of an increasing proportion of manufactures in total imports, indicating, therefore, a greater role for foreign trade in industrial development. The only exception seems to be the centrally planned economies, where the share of manufactures in total imports fluctuated somewhere between 59 and 62 per cent over the period 1960 through 1966.

The absolute values of the shares of manufactures in the imports of the three major economic groupings reflect long-run historical trends. The developed market economies typically have been importers of raw materials and agricultural products, and exporters of manufactured commodities. Although the data indicate an increasing share for imports of manufactures, this economic grouping as a market for foreign manufactures lags behind both the developing countries and the centrally planned economies. Given the pre-eminence in total world trade of the developed market economies (see table 19), and the fact that those countries import relatively fewer manufactures than do the other economic groupings, there is some cause for pessimism about the chances of foreign trade becoming a vehicle for the expansion of manufacturing in the world as a whole and in the developing countries in particular. In addition, the developed market economies have tended increasingly to trade among themselves in manufactures, as will be shown later in this chapter.

Long-standing historical patterns of trade also explain the values of the shares of manufactures in the imports of developing countries and of centrally planned economies. Developing countries typically have been exporters of raw materials and agricultural products and importers of manufactured commodities. The fact that the share of imports of manufactures has increased only slightly over the years 1960–1967 might indicate that those countries are becoming less dependent upon foreign manufactures. This is not to say that their dependence has declined; indeed, the data indicate that this is not the case. What is suggested is that, with industrialization, developing countries are supplying and will be able increasingly to supply out of local production some manufactures which had previously to be imported. An added factor in this trend is

the foreign exchange constraint facing the developing countries. As for the centrally planned economies, the share of manufactures in their imports has also been high relative to the developed market economies and to the world. Again, recent history explains this pattern: the centrally planned economies have become increasingly industrialized and have relied largely upon intraregional trade; consequently, their import bundles contain a large manufactured component.

In all three major economic groupings of the world, the change in the share of chemicals in total imports has been minor. For all intents and purposes, the share of chemicals in the imports of the developed market economies has been a constant 6 per cent (see table 25). For the centrally planned economies, there was an increase in the share from 5 per cent of total imports from 1960 through 1963 to 6 per cent from 1964 through 1966; the increase in the share of chemical imports in 1967 to 7 per cent is not necessarily indicative of another shift upward; in any case, the shift can only be described as very gradual. The developing countries imported relatively more chemicals than either of the other two economic groupings: 8 per cent from 1960 through 1964 and 9 per cent from 1965 through 1967.

In all three economic groupings, imports of machinery and transport equipment showed the greatest relative increase. In the developed market economies, the share of imports of machinery and transport equipment increased from 18 per cent in 1960 to 23 per cent in 1966 and 24 per cent in 1967; from 1962 through 1964, the share of these imports was a constant 20 per cent. In the centrally planned economies, the share of these imports increased from 26 per cent in 1960 to 30 per cent in 1966 and 31 per cent in 1967. As in the case of the developed market economies and of the developing countries as well, the period 1962 through 1965 was characterized by virtually no change in the proportion of machinery and transport equipment imports to total imports. In the developing countries, the increase in the share of machinery and transport equipment imports was less than in either the developed market economies or the centrally planned economies, and more gradual; it increased from 28 per cent in 1960 to 30 per cent in 1965 and 1966 and 31 per cent in 1967.

In the case of "other manufactures", which are generally products of light industry, the share of total imports of the developed market economies increased slowly, from 27 per cent in 1960 to 29 per cent in 1966 and 1967. Of the three country groupings, that of the developed market economies is the only one in which an increasing trend in imports of "other manufactures" can be discerned. In the developing countries, and in the centrally planned economies, there was a slight downward trend in imports of "other manufactures"; in both economic groupings, the share of imports of "other manufactures" fell from 28 per cent in 1960 to around 26 per cent in 1966 and 1967.

TABLE 25. DISTRIBUTION OF IMPORTS OF MANUFACTURES[a] AMONG OMCMODITY CLASSES BY ECONOMIC GROUPINGS, 1960–1967

(Percentage of total imports)

	Developing countries			*Developed market economies*			*Centrally planned economies*		
	Chemicals (SITC 5)	*Machinery and transport equipment (SITC 7)*	*Other manufactures (SITC 6 and 8)*	*Chemicals (SITC 5)*	*Machinery and transport equipment (SITC 7)*	*Other manufactures (SITC 6 and 8)*	*Chemicals (SITC 5)*	*Machinery and transport equipment (SITC 7)*	*Other manufactures SITC 6 and 8*
1960	8	28	28	5	18	27	5	26	28
1961	8	29	28	6	19	26	5	25	27
1962	8	29	27	6	20	26	5	27	28
1963	8	29	26	6	20	26	5	28	27
1964	8	29	27	6	20	28	6	27	26
1965	9	30	27	6	22	29	6	29	26
1966	9	30	27	6	23	29	6	30	26
1967	9	31	26	6	24	29	7	31	27

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics*.

[a] SITC 5–8.

If, as is generally assumed, chemicals, machinery and transport equipment comprise the outputs of heavy industry and of capital goods industries, it is clear that all three economic groupings are utilizing foreign sources of supply to an increasing extent for capital goods. In the developing countries, reliance upon foreign sources of these goods increased from 36 per cent of total imports in 1960 to 40 per cent in 1967. The centrally planned economies rank second; their combined shares of imports of chemicals and machinery and transport equipment increased from 31 per cent in 1960 to 36 per cent in 1966 and 38 per cent in 1968. The developed market economies rank third; their combined shares of imports of chemicals and machinery and transport equipment increased from 23 per cent of total imports in 1960 to 30 per cent in 1967.

Not only are all three economic groupings increasingly utilizing foreign trade as a vehicle for obtaining capital goods, but, on balance, all three are importing relatively fewer "other manufactures", which are assumed generally to be consumer goods. In 1966 and 1967, the share of total imports accounted for by chemicals and machinery and transport equipment into the developed market economies was approximately equal to the share of "other manufactures". In the case of both the developing countries and the centrally planned economies, the shares of imports of machinery and transport equipment and of "other manufactures" were about equal in 1960 (i.e. 28 per cent of total imports); in 1967, the share of machinery and transport equipment increased, while that of "other manufactures" decreased.

These trends suggest that the developing countries' capacity for increasing their exports of manufactures was limited. As indicated earlier in this chapter, developing countries are increasingly exporters of "other manufactures". From the paragraphs immediately preceding, and from the data in table 25, it is clear that only the developed market economies are increasing their share of imports of "other manufactures"; furthermore, this increase is relatively small, being of the order of 2 per cent over an eight-year period.

Because the developing countries are attempting to industrialize, and therefore have an increasing need for foreign capital equipment, the question arises why their share of total imports of chemicals and machinery and transport equipment has increased less than have the corresponding shares for the other economic groupings. As will be shown in another section of this survey, foreign investment has been sluggish, particularly foreign economic assistance. This explains to some extent the relatively minor increase in the share of imports of chemicals and machinery and transport equipment.

DIRECTION OF TRADE IN MANUFACTURES

Over the period 1960–1967, there was not much change in the direction of trade in manufactures (see table 26). The centrally planned

TABLE 26. DESTINATION OF EXPORTS OF MANUFACTURES[a] BY ECONOMIC GROUPINGS, 1960–1967

(Percentage of total manufacturing exports)

Exporters	*Importers*		
	Developed market economies	*Developing countries*	*Centrally planned economies*
Developed market economies			
1960	65	29	4
1961	66	28	3
1962	68	25	4
1963	70	24	3
1964	71	24	3
1965	73	23	4
1966	73	22	4
1967	73	22	4
Developing countries			
1960	67	30	3
1961	65	32	2
1962	67	30	2
1963	66	31	2
1964	66	31	3
1965	66	30	4
1966	68	28	4
1967	68	27	4
Centrally planned economies			
1960	11	9	79
1961	12	14	73
1962	11	14	73
1963	11	15	73
1964	13	15	72
1965	14	15	70
1966	16	15	68
1967	15	14	69

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics*.
[a] SITC 5–8.

economies, as noted earlier, tended to trade among themselves. The same pattern occurs among the developed market economies. The developing countries exported most of their manufactures to developed market economies, a pattern explained by their historical ties.

For the developed market economies, the trend during the 1960s seems to point to an increase in trade among themselves. Over the entire period 1960–1967, the share of the developed market economies' exports of manufactures to the developed market economies increased from 65 per cent in 1960 to 73 per cent in 1967. It should be noted that the 73 per cent share was reached in 1965 and continued through 1967, implying that a new plateau had been reached in 1965. That some stability had been achieved is indicated also by the constant 22 per cent share in exports of manufactures from the developed market economies to the developing countries in 1966 and 1967. The fact that the developed

market economies' exports of manufactures to the centrally planned economies stood at 4 per cent from 1965 through 1967 is not considered significant as establishing a stable pattern among trading partners; trade in manufactures between those two country groupings represented 3 to 4 per cent of the developed market economies' exports of manufactures over the entire eight-year period. The fact that the developed market economies tended to trade increasingly among themselves is explained in part by the development of regional co-operation among them. The European Common Market, for example, would have been reaching its potential during that period. Another obvious explanation is the wealth of those countries. As noted earlier, the developed market economies experienced in that period a relatively high rate of economic and industrial growth, implying a greater capacity to import.

The data in table 26 indicate a substantial decline in the share of exports of manufactures from the developed market economies to the developing countries. In 1960, 29 per cent of the developed market economies' exports of manufactures went to developing countries. In 1966 and 1967, the share was 22 per cent. In part, the explanation might be found in the ability of developing countries to replace imports of consumer goods, although, as was discussed above, manufactures other than chemicals and machinery and transport equipment were a small and declining share of the total imports of developing countries. A more important factor is the foreign exchange constraint.

The developing countries export their manufactures primarily to the developed market economies. Any changes over the eight-year period under review have been slight. From 1960 through 1965, the share of exports of manufactures from developing countries to developed market economies fluctuated between 65 and 67 per cent. In 1966 and 1967, it was 68 per cent. In part, the explanation lies in the fact that, of the three major economic groupings defined in this survey, only the developed market economies showed a trend, however slight, towards increased imports of "other manufactures". As noted above, "other manufactures" comprise the bulk of the exports of developing countries. The share of exports of manufactures from developing countries to centrally planned economies was very small, ranging between 2 and 4 per cent. It is noted that, from 1965 through 1967, the share of exports of manufactures from developing countries to centrally planned economies was 4 per cent, indicating a slightly rising trend. Nevertheless, both the absolute values of the manufactured exports of the developing countries and the share dispatched to the centrally planned economies suggest that the latter were not a significant trading partner for developing countries.

It is noteworthy that trade in manufactures among developing countries has decreased somewhat. From 1960 through 1965, such trade accounted for approximately 30 to 31 per cent of all exports of manufactures from the developing countries. In 1966, the share dropped to 28 per cent, and in 1967 it declined further to 27 per cent. In part, the

explanation lies in the categories of manufactures imported into developing countries. As discussed above, developing countries tended to import increasing amounts of chemicals and machinery and transport equipment. Because their manufactured exports consist mainly of "other manufactures", it is not surprising that their trade among themselves should have been relatively small. Secondly, and related to what has been said above, because the developing countries' demands for imports have been concentrated on categories of commodities which they do not produce, and, because they have experienced difficulty in recent years in obtaining foreign economic assistance, it is reasonable to assume that they would attempt to concentrate their efforts on increasing their total trade and in particular their trade in manufactures. A third, and by no means unimportant explanatory factor is the competitive rather than complementary pattern of industrial development in the developing countries.

The centrally planned economies have tended to trade in manufactures mainly among themselves, although there have been some changes. Such trade declined from 79 per cent in 1960 to 68 per cent in 1966; there was a slight increase to 69 per cent in 1967. In 1961, as compared with 1960, there was a substantial decrease in the share of such trade, from 79 to 73 per cent. The explanation lies mainly in the increase in the share of exports of manufactures from the centrally planned economies to developing countries; that share was 9 per cent in 1960 and 14 per cent in 1961. In the period 1961 through 1963, there was no substantial change. The centrally planned economies' exports of manufactures to developed market economies accounted for approximately 11 per cent of their total exports of manufactures; the share of those exports to developing countries was approximately 14 to 15 per cent; the share of trade among themselves was 73 per cent. From 1963 through 1966, the share of the centrally planned economies' exports of manufactures to developed market economies increased from 11 to 16 per cent; the share to developing countries was a constant 15 per cent; and the share of trade among themselves declined from 73 to 68 per cent. In 1967, the share of exports of manufactures from centrally planned economies to developed market economies declined slightly to 15 per cent, and to 14 per cent to the developing countries. This decline may be explained by the world-wide slowdown in industrial production and economic development.

MANUFACTURING OUTPUT AND FOREIGN TRADE IN MANUFACTURES

If indices of manufacturing production and exports of manufactures are compared, there would appear to have been a substantial increase in both indicators, and foreign trade in manufactures may have been a

TABLE 27. MANUFACTURING OUTPUT[a] AND EXPORTS OF MANUFACTURES[b] BY ECONOMIC GROUPINGS, 1960 – 1967

(Index numbers: 1960 = 100)

	Developing countries		*Developed market economies*		*Centrally planned economies*		*World*	
	Output	*Exports*	*Output*	*Exports*	*Output*	*Exports*	*Output*	*Exports*
1960	100	100	100	100	100	100	100	100
1961	110	104	103	106	109	106	105	106
1962	114	111	110	114	119	123	112	115
1963	120	127	116	123	128	136	119	125
1964	133	147	126	141	137	151	129	143
1965	141	167	134	157	149	163	138	158
1966	148	198	144	176	163	170	148	176
1967	153	212	148	189	178	185	151	188

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics*.

[a] ISIC 2 – 3.

[b] SITC 5 – 8.

stimulus to manufacturing industry. For the world, the respective indices of growth of output and exports stood at 151 and 188 in 1967 respectively as compared with the base year 1960 (see table 27). For the developed market economies, the two indices in 1967 stood at 148 and 189, respectively; for the developing countries, at 153 and 212; and, for the centrally planned economies, at 178 and 185.

Two problems arise, making the hypothesized relationship dubious. First, the indices are not comparable, because different criteria are employed in their construction. Output of manufactures is classified according to ISIC, while exports of manufactures are classified according to SITC. Secondly, there is the statistical base problem for both indices. Exports, being smaller than output, will tend to exhibit greater growth than output. In this connexion, it is noted that exports of manufactures in 1960 and 1967 accounted for a relatively small proportion of the total manufacturing output of the world and of its three major country groupings (see table 28). It may be concluded, then, that foreign trade in manufactures has had only a small impact upon industrialization.

TABLE 28. RATIO OF EXPORTS OF MANUFACTURES[a] TO TOTAL MANUFACTURING OUTPUT[b] BY ECONOMIC GROUPINGS, 1960 AND 1967

(Percentage)

	1960	*1967*
Developing countries	14.4	20.9
Developed market economies	21.3	27.4
Centrally planned economies	7.5	7.7
World	17.1	20.7

Source: UNIDO, based on United Nations, *Monthly Bulletin of Statistics.*

[a] SITC 5 - 8.

[b] ISIC 2 - 3.

To some extent, the data in table 27 indicate that the growth of foreign trade in manufactures could not or at least did not counteract the slowdown in economic and industrial activity in 1967. For the world as a whole, the index of growth of exports of manufactures rose by 6.8 per cent in 1967 over 1966, whereas the index of growth of manufacturing output changed by 2 per cent. Similarly, in the developed market economies, the 7.4 per cent rise in 1967 of the index of growth of exports of manufactures is viewed in relation to the 2.8 per cent rise in the index of growth of manufacturing output. The same general relationship obtains for the developing countries, where a 3.4 per cent growth in 1967 over 1966 in manufacturing output is matched by a 7.1 per cent change in the index of exports of manufactures. The two indices would seem to bear little relationship to each other for the reasons given above, and foreign trade in manufactures certainly had little or no effect upon the slowdown in manufacturing production.

Chapter III

EMPLOYMENT AND PRODUCTIVITY

GROWTH OF LABOUR RESOURCES AND MANUFACTURING EMPLOYMENT

In developing countries, industrial growth is confronted with a variety of labour problems. Generally speaking, manufacturing industries in those countries operate under conditions of excess supply of unskilled labour, but there are widespread shortages of skilled manpower. There is some evidence that labour productivity in the developing countries is improving and certain industries have managed to achieve a relatively high level of labour productivity; generally, however, low productivity still prevails in the manufacturing sector as a whole.

The manufacturing sector, which is still small in the developing countries, particularly as far as the more modern segment is concerned,[42] absorbs only a modest part of the available labour resources. In a large majority of the countries for which statistical data are available the whole manufacturing sector including very considerable artisan and handicraft employment absorbed between one-tenth and two-tenths of the total economically active population in the 1960s. Further, the share of manufacturing had not substantially changed in that respect from the position prevailing in those countries ten to fifteen years earlier, i.e., in the early post-war years.[43]

Recent developments in industry in developing countries show insufficient growth of output as well as a low increase in industrial employment. While, generally speaking, those countries have been able substantially to improve their educational and health standards in the last

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[42] Kailas C. Doctor and Hans Gallis, "Modern sector employment in Asian countries: some empirical estimates", *International Labour Review*, Vol. 90, No. 6, 1964, p. 544, and "The size and characteristics of wage employment in Africa: some statistical estimates", *International Labour Review*, Vol. 93, No. 2, 1966, p. 149. See also ECLA, *The Process of Industrial Development in Latin America* (United Nations publication, Sales No.: 66.II.G.4).

[43] UNIDO, *Industrial Development Survey*, vol. I (United Nations publication, Sales No.: E.68.II.B.18), pp. 248ff. and table 83.

ten to fifteen years and thus move towards an improvement in the over-all quality of the labour force, they have been unable as yet to achieve a comparable improvement in the utilization of available manpower and in the reduction of unemployment. Many social, economic and technological factors impede the efforts of developing countries to raise the level of employment in their manufacturing sectors. Those factors, as well as the general progress achieved in the expansion of employment in manufacturing and in other economic sectors, are reviewed in volume I of UNIDO's *Industrial Development Survey*.[44] Accordingly, only some of the current developments in manufacturing employment and productivity are reviewed in the present survey.

Manufacturing is potentially the dynamic sector of the economy. However, doubts are often raised concerning the ability of this sector to create new employment in sufficiently large numbers. In this respect it is important to consider, not only the direct effects, but also the indirect and secondary effects of new manufacturing investment in the creation of employment. The growth rates of the labour force given in table 29 provide a point of reference for measuring the adequacy of the recent growth of the manufacturing sector in the developing countries and its effect on employment expansion in those countries.

The estimates in table 29 indicate that, in the years 1960—1965, for which aggregate employment figures are available, the labour force increased at 2.5 per cent *per annum* in Latin America and at close to 2 per cent in Africa and Asia.[45] These figures provide only an over-all measure of the growth of manpower resources in the developing countries. Within these rates there are significant deviations in the various subregions, as indicated in table 29. The growth of demand for employment opportunities in manufacturing and other non-agricultural sectors could perhaps be better approximated by the high growth rate of the urban population, which in many Latin American countries exceeds 5 per cent *per annum*.[46] Not all the members of this rapidly growing labour force are fully prepared for many of the jobs in the manufacturing sector and may require training before they can be effectively employed in that

[44] *Ibid.*, chapter IV.

[45] In those estimates, the labour force is identical with the economically active population and the supply of labour. For details of the methodology of those estimates, see James N. Ypsilantis, *World and Regional Estimates and Projections of Labour Force* (United Nations document ISLEP/A/VII/4, presented at the Interregional Seminar on Long-term Economic Projections for the World Economy: Sectoral Aspects, held in Elsinore, Denmark, from 14 to 27 August 1966).

[46] UNESCO, *Urbanization in Latin America* (Proceedings of a seminar jointly sponsored by the United Nations, ECLA and UNESCO, in co-operation with the ILO, held in Santiago, Chile, July 1959), Paris, 1961, and *Urbanization in Asia and the Far East* (Proceedings of a joint United Nations/UNESCO seminar, in co-operation with the ILO, held in Bangkok, Thailand, August 1956), Calcutta, 1957. See also United Nations, *Proceedings of the World Population Conference*, Belgrade, 30 August to 10 September 1965, vol. IV: *Selected Papers and Summaries, Migration, Urbanization and Economic Development* (United Nations publication, Sales No.: 66.XIII.8).

TABLE 29. GROWTH OF LABOUR FORCE IN DEVELOPING REGIONS, 1950–1980
(Average annual percentage change between the dates indicated)

	1950–1960	1960–1965	1960–1970	1970–1980
Latin America	2.4	2.5	2.6	2.8
Tropical South America	2.6	2.7	2.8	3.0
Middle America	2.8	2.9	3.0	3.4
Temperate South America	1.5	1.5	1.5	1.5
Caribbean	1.6	2.2	2.2	2.3
Asia (excluding mainland China and Japan)	1.5	1.8	1.9	2.2
Other East Asia	1.4	2.7	2.8	3.1
Middle South Asia	1.3	1.6	1.7	2.0
South East Asia	1.9	1.9	2.0	2.5
South West Asia	1.5	2.7	2.7	2.7
Africa (excluding southern Africa)	1.4	1.9	2.0	2.1
Western Africa	2.3	2.1	2.2	2.3
Eastern Africa	1.1	1.7	1.7	1.8
Middle Africa	1.0	1.0	1.1	1.2
Northern Africa	0.5	2.3	2.4	2.6

Source: James N. Ypsilantis, *World and Regional Estimates and Projections of Labour Force* (United Nations document ISLEP/A.VII/4, presented at the Interregional Seminar on Long-term Economic Projections for the World Economy: Sectoral Aspects, held in Elsinore, Denmark, from 14 to 27 August 1966).

Note: In the estimates quoted above, the labour force is identical with the economically active population. Data for 1950 and 1960 are based on the labour force participation rates for one or more dates from 1948 to 1952 and from 1958 to 1962, as reported for more than 200 countries and territories.
The labour force for 1970 and 1980 has been estimated by applying the sex-age specific labour force participation rates estimated for each of the regions to the United Nations data on population by sex and age for the same region. The data for 1965 were derived by interpolation between the pattern of sex-age specific labour force participation rates in each region for 1960 and 1970.
For detailed notes on the methods used, see the above-mentioned source.

sector. Nevertheless, the estimates of the growth of the labour force are indicative of the rate at which jobs will have to increase to absorb the increased manpower resources.

The estimates of the growth of the labour force in the developing countries given in table 29 indicate further that, in the years 1970–1980, the rate of increase in the labour force in the majority of the developing subregions will be higher than in the period 1960–1970. An increase of close to 3 per cent *per annum* in the labour force is to be anticipated in the Latin American region and of more than 2 per cent in the African and Asian regions. Since agriculture is unable to absorb all these new supplies of labour, as experience has clearly shown, there has been a net movement of population away from agriculture, a rapid growth of the non-agricultural labour force and a high demand for industrial and other jobs in many of the developing countries. That is the context in which the recent advances of the manufacturing and other sectors capable of absorbing new labour should be considered.

RATES AND PATTERNS OF GROWTH OF MANUFACTURING EMPLOYMENT BY ECONOMIC GROUPINGS

Between 1960–1966, the progress of industrialization in the developing countries was reflected in a growth rate of 6.2 per cent *per annum* in the output of manufactures (see chapter I). Associated with this growth was an expansion of manufacturing employment of 4 per cent *per annum* (see table 30). During the same period, the developed market economies recorded steady although relatively low rates of employment expansion in their manufacturing industries. Their average growth rate of manufacturing output (6.5 per cent *per annum*) was associated with a 2 per cent *per annum* growth in employment, reflecting the continued reliance of these countries on improvements in productivity for increased output. In the case of the centrally planned economies, the average annual rate of growth of manufacturing output was 8.3 per cent. The expansion of manufacturing employment in the centrally planned economies at the rate of 4 per cent *per annum* could account for nearly one half of the increase in output.[47]

In the period 1960–1966 there was not much similarity in employment growth rates or in the patterns of the estimated relative shares of employment in the increase of manufacturing output among the developing regions (see table 30). The Asian region as a whole recorded a relatively high average rate of growth of manufacturing employment (5 per cent *per annum*) and this employment expansion contributed more to the relatively high rates of growth of the reported manufacturing output of that region than the likely over-all gains in output per man. The experience of the Latin American region in the same period seems to

[47] Considering that the output index is given by the employment index multiplied by the output per man index $\left(1+\frac{z}{100}\right)=\left(1+\frac{x}{100}\right)\left(1+\frac{y}{100}\right)$ where $\frac{z}{100}, \frac{x}{100}, \frac{y}{100}$ are the rates of increase in output, employment and output per man respectively, the proportion of the increase in output accounted for by the increase in employment is approximately estimated here as x/z. In turn, $1-x/z$ accounts for a share of a broadly defined over-all gain in labour productivity in the rate of expansion in output. Improvements in the ratio of total output per man-year reflect not only improvements in the ratio of output per man-hour, which is frequently referred to as labour productivity proper, but also changes in the product-mix, shifts in the structure of employment, as well as changes in hours worked per man during a year. It should be emphasized further that the estimates in this and the following paragraphs of the relative contribution of employment and productivity to the growth rates of output achieved do not imply one-sided causal relationship between input (labour, employment) and output. Given a demand for manufacturing output and a supply of inputs other than labour (equipment, materials, energy etc.), the proportion of the increase in output accounted for by the increase in employment indicates *ex post* how labour requirements for the attained output have been met, i.e., to what extent those requirements were met by increases in the volume of employment and by gains in the productivity of those already employed. When the productive capacity of equipment and manpower is fully utilized, both alternatives mentioned above may require some capital and other outlays.

TABLE 30. GROWTH OF TOTAL EMPLOYMENT IN MANUFACTURING, BY ECONOMIC GROUPINGS, 1960–1966

(Average annual percentage change between the dates indicated)

	Percentage change over preceding year							*1960–1963 and 1963–1966*
	1961	*1962*	*1963*	*1964*	*1965*	*1966*	*1967*	
Developing countries, total	4	4	5	5	3	2	...	4
Latin America	1	-	2	7	2	6	4	2
Asia (excluding Japan)	5	4	7	5	3	1	...	5
Developed market economies	2	2	2	2	2	2	..	2
Centrally planned economies	6	4	3	4	4	3	4	4
World, excl. centrally planned economies	3	3	3	3	3	2	...	3
World, total	3	3	3	3	3	2	...	3

Source: UNIDO, based on United Nations, *Statistical Yearbook* and additional data provided by the United Nations Statistical Office.

indicate that, while the growth rate of manufacturing output was lower than in Asia, the rate of expansion of manufacturing employment was far lower than in Asia. At times, the total volume of manufacturing employment in Latin America did not expand at all and even declined. It would thus appear that, despite some new investments in that region, requiring new labour to operate the newly created productive capacities, the recent sluggish advances in industrialization were possibly accompanied by improvements in output per man and thus, on balance, did not contribute much to the further expansion of the volume of the labour force engaged in the manufacturing industries.

On the other hand, Latin America experienced high growth rates of population and labour force. According to estimates and projections given in table 29, the labour force grew by 2.5 per cent *per annum* in the period 1960–1965. In the same period, manufacturing employment expanded at the rate of 2 per cent *per annum* (see table 30). It thus appears that the recent advances in industrialization in Latin America and the resulting demand for labour by the manufacturing sector have not sufficed to keep pace with the growth of the labour force, to say nothing of contributing to the reduction of the pool of unemployed and under-employed existing in that region.[48]

If the present trends influencing the expansion of the manufacturing sector and its demand for labour in Latin America continue, the resulting manufacturing employment gap will widen; the estimates of the growth of the labour force for the period 1970–1980 show that the labour force

[48] United Nations, *1967 Report on the World Social Situation* (United Nations publication, Sales No.: 68.IV.9) and *Proceedings of the World Population Conference* (United Nations publication, Sales No.: 66.XIII.8).

will grow at some 3 per cent *per annum* in that region (see table 29). The inability of Latin America's manufacturing growth to absorb a sizeable part of the new entrants into the labour force is particularly pronounced and calls for urgent policy measures aimed at increasing productive employment opportunities.

TABLE 31. PERSONS EMPLOYED IN MANUFACTURING AND IN NON-AGRICULTURAL SECTORS IN SELECTED DEVELOPING COUNTRIES, 1960–1966

(Average annual percentage change between the dates indicated)

	Source of labour statistics	Manufacturing[a] (ISIC 2–3)		All non-agricultural sectors[b] (ISIC 1–9)	
		1960–1963 and 1963–1966	1966–1967	1960–1963 and 1963–1966	1966–1967
Latin America					
Chile[c]	IV	2	—	...	...
Columbia	IV	1	—	...	...
Ecuador	IV	3	...	...	...
El Salvador[d,e]	IV	7	1	7	14
Guatemala[c]	IV	−1	1	...	...
Puerto Rico	IV/I	6	5	6	3
Trinidad and Tobago[f]	IV/I	5	...	3	3
Venezuela	IV	4	−4	...	...
Africa					
Gabon[g]	IV/II	—	...	6	...
Kenya[h]	IV	10	...	2	...
Sierra Leone	IV	17	6	5	−3
Zambia[h]	IV	7	...	2	...
Asia					
China (Taiwan)[i]	I	7	...	5	10
Korea, Rep. of[i]	I	13	27	9	9
Philippines	I	5	1	7	1
Ryukyu	I	10	7	4	6
Syria[e]	I	4	...	3	...

Source: UNIDO, based on ILO, *Yearbook of Labour Statistics 1967* and *Bulletin of Labour Statistics 1969*, 1st Quarter, Geneva.

[a] Including quarrying in Trinidad and Tobago.

[b] Excluding mining in El Salvador; government services in Gabon.

[c] Wage-earners only.

[d] Area of San Salvador.

[e] 1961–1963 and 1963–1966.

[f] Data for non-agricultural sector refer to 1964–1965 and 1965–1966.

[g] Data for 1960–1963 based on statistics of establishment (IV) while those for 1964–1966 are based on statistics of compulsory social insurance (II).

[h] 1960–1963 and 1963–1965.

[i] Computed from average size of civilian labour force employed between 1963–1964 and 1965–1966.

Note: The Roman figures in the table indicate the following main sources of employment statistics: I — Labour force sample surveys; II — Statistics of compulsory social insurance; IV — Statistics of establishments.

Aggregate data on the growth of manufacturing employment in the African region are not readily available. Some tentative estimates made by the UNIDO secretariat covering Africa indicate that manufacturing employment in that group of countries grew at the rate of some 5 per cent *per annum* in the period 1960–1966. Comparable data on the growth of manufacturing output in the same countries are not, however, available and prevent the assessment of the employment absorption pattern of the manufacturing sector there.

Some recent data on the rates of growth of employment in the manufacturing sector and in the non-agricultural sectors (including manufacturing) generally are presented in table 31. This information is available for only a small sample of developing countries but clearly brings out their diversified experiences. The group of Latin American countries represented in this sample, and for which relevant data are available, recently recorded a significant deterioration in employment expansion. In the period 1960–1966, three of the eight Latin American countries presented here failed to expand their manufacturing employment at the rate of the natural increase of the labour force. The same was true of five out of six in 1967. As regards the African countries, the sample is too small to warrant any specific comments. The group of Asian countries included in table 31 stands out as the one where the most steady expansion of manufacturing employment occurred in the period 1960–1966.

The relatively steady growth of the labour absorbed by the non-agricultural sectors in all the developing countries is worth noting. The latter sectors, however, cover quite diversified activities[49] and reflect the net result of many factors, including hidden unemployment.

GROWTH OF EMPLOYMENT IN MAJOR INDUSTRY GROUPS

Among the various industrial sectors there was a general tendency for mining and quarrying to develop and expand its output without any significant increase in the volume of manpower engaged in that sector (see table 32). This tendency was particularly pronounced in the developed market economies during the period 1960–1966, where advances of output at the rate of 2.6 *per annum* were associated with a steady contraction of employment at the rate of slightly more than 4 per cent *per annum*.

Within the manufacturing sector, the heavy manufacturing industries tended to expand during 1960–1966 at higher rates of output and employment than did the light manufacturing industries in all the major

[49] Employment changes in the relatively small manufacturing sector cannot appreciably affect the over-all growth rate of employment in the non-agricultural sector as a whole.

regions. Different patterns of employment and productivity changes prevailed, however, in the light and heavy manufacturing sectors among the major regions, as may be inferred from the respective growth rates of output and employment given in tables 32 and 33 (see also table 8).

In the developed market economies as a whole, both the light and the heavy manufacturing industries appear to have had not only relatively low employment requirements for the increased output achieved, but also to have shown no marked differences in the pattern of demand for new labour resulting from such expansion of output. This is illustrated by the fact that the recorded rate of increase of employment 3 per cent *per annum* for the heavy manufacturing and 2 per cent for the light manufacturing industries could be accounted for by about four-tenths of the increase in output in both sectors[50] (see tables 32 and 8).

TABLE 32. GROWTH OF EMPLOYMENT IN INDUSTRY BY MAJOR INDUSTRY GROUPS, 1960–1966

(Average annual percentage change between 1960–1963 and 1963–1966)

	Industry total	*Mining*	*Manufacturing*		
			Total	*Light*[a]	*Heavy*[b]
Developing countries, total	4	1	4	4	5
Latin America	2	−1	2	2	3
Asia (excluding Japan)	5	1	5	4	8
Developed market economies	2	−4	3	2	3
Centrally planned economies	3	1	4	2	5
World, excluding centrally planned economies	3	−2	3	3	3
World, total	3	−1	3	3	4

Source: As for table 30.

[a] ISIC: 20–26, 28, 30, 39.

[b] ISIC: 27, 31–38.

The centrally planned economies achieved a growth rate in employment of some 5 per cent *per annum* in the heavy manufacturing sector and slightly over 2 per cent in the light manufacturing sector. Fast growing employment in the heavy manufacturing industries was accompanied by

[50] Estimated approximately on the basis of x/z, where x is an average annual rate of growth of employment during 1960–1966 and z the respective rate of growth of output. Unrounded figures of rates of growth of employment and output were used in this and other calculations quoted in the following paragraphs.

greater over-all gains in output per man than in the light manufacturing industries, which expanded much more slowly in terms of output and employment.

The developing countries as a whole also experienced a faster expansion of employment in the heavy than in the light manufacturing industries sector (see table 33). It is, however, characteristic of the developing countries that additions to the volume of employment contributed relatively more to increased output than was the case in the developed countries. Increases in employment could account for nearly three-quarters of the increases in the total output of the light and heavy manufacturing industries in the developing countries.

The Latin American region's experience, however, was markedly distinct and, in terms of relative labour absorption, tended to follow the pattern of the more developed economies. Employment in both sectors of manufacturing grew at much lower rates than those attained in the developing countries as a whole. Further, the newly absorbed labour in the light and heavy manufacturing industries could account for about four-tenths of the increase in output, implying that a very significant part of the increase in output was contributed by over-all gains in output per man; the result was a relative net contraction in the aggregate manufacturing demand for new labour in that region.

In Asia, the heavy manufacturing industries recently experienced the relatively high rate of employment expansion of 8 per cent *per annum*. It is also characteristic of that region to rely markedly on newly absorbed labour for expanded output, particularly in the case of the heavy manufacturing industries, where increases in employment accounted for more than three-fourths of the increase in output (see table 33).

Cross-industry pattern of employment expansion

Recent growth rates of manufacturing employment in major industries in the developing countries as a whole are given in table 34. Within the over-all growth rate of employment of 4 per cent *per annum* for the period of 1960–1966, significant year to year fluctuations of the aggregate level of manufacturing employment occurred in those countries. There were also different growth rates of demand for new labour in various industries, resulting from changes in technology, scale of production and product-mix, affecting unit labour requirements of current output, as well as from changes in the degree of utilization of those already employed in manufacturing, including changes in hours worked per man per year and so on.

The clothing and footwear, basic metals and paper and paper products industries experienced the highest average annual growth rates of employment in the period 1960–1966, namely, 10, 8 and 7 per cent respectively; they were followed by the metal products, wood products,

TABLE 33. GROWTH RATES OF OUTPUT AND EMPLOYMENT IN LIGHT AND HEAVY MANUFACTURING INDUSTRIES IN DEVELOPING REGIONS, 1960–1966

(Average annual percentage change)

	Percentage change from preceding year						*Average annual percentage change between dates indicated 1960 – 1963 and 1963 – 1966*
	1961	*1962*	*1963*	*1964*	*1965*	*1966*	
Light manufacturing[a]							
Developing countries, total							
Output	5	3	4	7	6	5	5
Employment	4	3	5	5	2	1	4
Latin America							
Output	5	1	1	8	5	4	4
Employment	1	—	−1	5	2	5	2
Asia (excluding Japan)							
Output	7	6	7	6	8	6	7
Employment	5	4	7	5	2	—	4
Heavy manufacturing[b]							
Developing countries, total							
Output	11	5	6	11	6	7	7
Employment	5	5	4	8	5	4	5
Latin America							
Output	12	4	1	11	6	8	6
Employment	3	1	−4	9	3	7	3
Asia (excluding Japan)							
Output	9	11	13	10	8	5	10
Employment	6	7	8	7	7	4	8

Source: As for table 30.

[a] ISIC 20–26, 28, 30, 39.

[b] ISIC 27, 31–38.

and chemicals and petroleum products industries, where a higher than average rate of employment expansion prevailed. The textile, printing, and food, beverages and tobacco industries recorded the lowest rates of 2, 2 and 3 per cent *per annum* respectively (see table 31). A cross-industry examination of employment and output growth rates over the period 1960–1966 seems to suggest a tendency for the higher rates of growth of employment to occur in industries which were experiencing the highest growth rates of output.[51]

The data in table 31 on recent changes in the volume of manufacturing employment in Latin America and Asia indicate that those two regions differed not only in respect of recent over-all rates of manufacturing employment expansion, as pointed out earlier, but also in respect of the cross-industry pattern of employment growth as related to output. In both regions the chemical and petroleum products, basic metals, clothing and footwear, paper and paper products and metal products industries expanded their manufacturing labour at rates higher than the respective averages registered in those regions, but particularly striking differences occurred in the leather and leather products and textile industries. While in Asia those two industries recorded some employment expansion, although somewhat slower than the average for the whole manufacturing sector, in Latin America they recorded a shrinking volume of employment. At the same time, the output of the leather industry declined and the textile industry, which employed about one-seventh of Latin America's manufacturing labour, had been only sluggishly expanding its output. There are indications that behind the unfavourable employment trends within the old-established industries of Latin America may lie certain marketing and pricing policies as consumer staple products manufactured by those industries, as well of the present pattern of income distribution.[52]

An examination of the available information on the textile industry in Latin America seems to suggest that restrictive price policies may

[51] For the developing countries as a whole, Spearman's coefficient of rank correlation between the rate of growth of manufacturing output and employment during the period 1960–1966 was found to be equal to 0.73. In separate tests for Latin America's experience in the same area, Spearman's coefficient of rank correlation was found to be equal to 0.65 and the respective test for Asia's manufacturing industry brought Spearman's coefficient to 0.88. The sample consisted in all cases of thirteen pairs of observations of the average rates of growth of output and employment for 1963–1966 (1960–1963=100) for two digit industries; all the coefficients quoted above were associated with a sampling error equal to 0.29.

[52] A recent ECLA study finds, for instance, that the production capacity of Latin America's textile industry is "usually more than sufficient to meet the region's present level of consumption of textile products". It is indicated in the same study that many countries in the region are more or less self-sufficient as far as basic raw materials for this industry are concerned. Although the level of *per capita* consumption of fabrics in Latin America varies from country to country and the average is rather low (4 kg *per capita*) under the prevailing prices "the elasticity of demand for textiles is fairly low, at least within the present framework of income distribution among the economic and social sectors in Latin America". See ECLA, *The Process of Industrial Development in Latin America* (United Nations publication, Sales No.: 66.II.G.4), p. 94.

TABLE 34. GROWTH OF MANUFACTURING EMPLOYMENT IN DEVELOPING COUNTRIES BY MAJOR INDUSTRY GROUPS, 1960—1966

(Average annual percentage change between the dates indicated)

ISIC	Total manufactures 2–3	Food, beverages, tobacco 20–22	Textiles 23	Clothing 24	Wood 25–26	Paper 27	Printing, publishing 28	Leather 29	Rubber 30	Chemicals, petroleum, products 31–32	Non-metallic mineral products 33	Basic metals 34	Metal products 35–38	Other manufactures 39
Developing countries, total														
1964—1965	3	2	—	5	5	2	3	—	3	—	4	2	8	6
1965—1966	2	3	—2	2	2	8	1	—	3	5	1	8	5	1
1960—1963 to 1963—1966	4	3	2	10	6	7	2	4	4	5	4	8	6	6
Latin America														
1964—1965	2	1	—	4	4	6	3	—2	2	—4	—4	1	8	1
1965—1966	6	6	3	3	1	11	7	2	7	8	6	17	6	9
1960—1963 to 1963—1966	2	3	—1	2	1	4	1	—1	1	3	1	3	3	—
Asia (excluding Japan)														
1964—1965	3	4	—1	3	6	2	3	2	4	5	5	4	9	8
1964—1966	1	—	—3	4	3	6	—	—1	3	4	1	2	6	1
1960—1963 to 1963—1966	5	2	2	13	7	8	3	5	5	7	4	10	9	7

Source: As for table 30.

have contributed to the failure further to expand the domestic market. At the same time, the relatively high proportion of out-of-date and obsolescent machinery and high production costs noted in the ECLA study referred to in footnote 52 might hinder attempts to export manufactures of this industry even were the commercial barriers facing the developing countries' exports in this field eliminated.[53] The experience of Latin America's textile industry seems thus to indicate that the modernization of industry and attempts to promote improvements in labour productivity, under the market conditions prevailing in the area, tend to reduce the existing volume of manufacturing employment.

The recent experience of the clothing, footwear and made-up textiles industry, which also includes a considerable artisan and cottage industry sector, points to another development. Output in that industry in the period 1960–1966 expanded relatively fast, but employment rates, particularly in Asia, grew much faster than those of output, with a resulting substantial drop in productivity.

To summarize this brief review of recent patterns of cross-industry growth of employment in the Latin American and Asian regions for which aggregate data are readily available, it would seem that, generally, the most rapid percentage increase in demand for new manufacturing employment tended to come from industries which, with the exception of the clothing and footwear industry, were generally newly established, and was due to the small initial employment base of those industries in developing countries. Those industries do not require much labour per unit of output and do not directly generate a great volume of employment.[54] On the other hand, some of the older established, labour-intensive industries, which include a considerable artisan and cottage industry sector, tended to experience either a sluggish expansion of output and a stagnant or declining employment rate or, if there was still a favourable market for them, to attract a great deal of labour, perhaps owing to low technological and skill requirements; in consequence, they experienced a decreasing productivity.

TRENDS IN OUTPUT PER MAN IN MANUFACTURING

Over-all gains in output per man during 1960–1966 for the developing countries as a whole are shown in table 35. From that table it would appear that the developing countries recorded an average of 2 per cent

[53] In this context, it is worth noting that, at the Athens Symposium, the experience of one country was cited which clearly illustrated that modern equipment alone, if eventually secured, does not ensure satisfactory productivity if there is maladjustment between the "degree of machinery sophistication and the calibre of the labour and management". See United Nations, *Report of the International Symposium on Industrial Development* (United Nations publication, Sales No.: E.69.II.B.7), pp. 70–74.

[54] See table 36; also UNIDO, *Industrial Development Survey*, vol. I (United Nations publication, Sales No.: E.68.II.B.18), p. 265 and table 91, for the relative levels of productivity in various manufacturing industries in developing countries.

TABLE 35. OVER-ALL GAINS IN OUTPUT PER MAN IN THE MANUFACTURING SECTOR IN THE DEVELOPING COUNTRIES, BY MAJOR INDUSTRIES, 1960–1963 AND 1963–1966[a]
(Average annual change in index numbers)

ISIC	*Manufacturing industries*	*Developing countries, total*	*Latin America*	*Asia*
2–3	Total manufactures	2.0	3.0	3.0
20–22	Food, beverages, tobacco	1.9	0.8	3.5
23	Textiles	2.1	3.9	2.7
24	Clothing	2.9	2.0	–3.3
25–26	Wood products	1.4	3.0	2.6
27	Paper	1.9	3.3	1.9
28	Printing and publishing	2.7	4.3	–0.2
29	Leather	–1.2	0.5	2.4
30	Rubber	3.2	7.1	0.6
31–32	Chemicals, petroleum products	1.8	3.6	0.9
33	Non-metallic mineral products	1.8	4.2	2.9
34	Basic metals	0.3	4.2	–0.4
35–38	Metal products	2.1	2.8	3.9
39	Other manufactures	2.6	5.5	5.7

Source: As for table 30.

[a] Computed as a compound annual percentage change of a ratio of index numbers of manufacturing output and employment.

per annum over-all gains in output per man in the whole manufacturing sector over the period discussed, while Asia's and Latin America's gains averaged 3 per cent *per annum*. It should be stressed, however, that those over-all gains are measured here very crudely[55] and reflect not only the actual rise in output per man-hour in each group of manufacturing industry but also the effects of changes in the structure of manufacturing output and employment as well as changes in the number of hours effectively worked per man during a year.

Gains in output per man were unevenly distributed over various industries. The rubber, printing and publishing, metal products, textile, paper and paper products and food, beverages and tobacco industries achieved the highest gains – in the range of 2 to 3 per cent *per annum*. Some of those industries, when considered at the regional level, appear to have achieved even more impressive gains. In Asia, however, the rubber industry appears to have operated with small productivity gains and the printing and publishing and basic metals industries experienced a deterioration in labour productivity. Particularly striking is a significant drop in output per man in Asia's clothing industry, amounting to 3 per cent *per annum* during 1960–1966, as well as a negligible productivity gain in Latin America's leather industry. The factors which might have influenced these trends are discussed in an earlier part of this chapter.

[55] Index numbers of total manufacturing output for 1963–1966 (average 1960–1963 is taken as 100) are divided by index numbers of employment.

A preliminary examination of the gains in labour productivity does not point to any clear cross-industry pattern of association, as for instance between the level of productivity per man in various industries and the percentage gains achieved in productivity. Some simple tests seem to suggest a tendency for productivity gains in Latin America to be much more closely related to changes in output than in Asia.[56] In the more industrialized region of Latin America, economies of scale seem to acquire a greater role in affecting productivity, due perhaps to the smaller — relative to the Asian region — spread of artisan and handicraft techniques throughout the manufacturing sector and to the greater impact of more developed manufacturing supporting services. Consequently, expansion of output tends to bring about greater gains in productivity in Latin America than it does in Asia.

Although labour productivity in the developing countries has somewhat improved, its level in the whole manufacturing sector is still low. United Nations estimates for 1963 show that the developing countries reached less than one-fifth of the world average of output per person engaged in manufacturing (see table 36). The disparity in the level of labour productivity is even greater when it is compared with relevant estimates for the developed countries. Average manufacturing output per person engaged in countries with centrally planned economies and in developed market economies was six times higher than in developing countries.[57]

A variety of factors may have contributed to these big differences in output per man. Utilization of more efficient and less labour-absorbing technologies, a higher scale of manufacturing production, availability of manufacturing supporting and related services, an improvement in the general quality of labour, greater industrial skills and higher standards of living are usually credited for higher productivity in the developed countries. The small, more modern segment of manufacturing in the developing countries is handicapped in attaining those sources of high labour productivity. The widespread existence of traditional modes of production in the large artisan segment of the developing countries' manufacturing sector also contributes to the low average labour productivity of the whole manufacturing industry.

Among the developing countries there were significant differences in the level of output per man. The Latin American region was the major

[56] With y denoting productivity gains during 1960 – 1963 and 1963 – 1965 and x the output growth rates in the same period, the following equations of regression have been found for Asia: $y = 0.02 - 0.22\,x$ with coefficient of correlation (r) equal to 0.29 and standard error of estimate (Sxy) equal to 2.28; for Latin America: $y = 1.04 + 0.48\,x$ coefficient of correlation (r) was found equal to 0.64 and standard error of estimate (Sxy) equal to 1.41. These coefficients are statistically insignificant and the results cannot be regarded as conclusive.

[57] However, if the less industrialized countries of Europe are excluded, the average manufacturing output per person engaged in the developed market economies was seven times higher than in the developing countries.

TABLE 36. VALUE ADDED PER PERSON ENGAGED IN MANUFACTURING, BY MAJOR INDUSTRIES, MAJOR REGIONS AND ECONOMIC GROUPINGS, 1963

(In percentages of value added per person engaged, estimated for the world)

ISIC	Total manufactures 2 - 3	Food, beverages, tobacco 20 - 22	Textiles 23	Clothing 24	Wood 25 - 26	Paper 27	Printing, publishing 28	Leather 29	Rubber 30	Chemical and petroleum products 31 - 32	Non-metallic mineral products 33	Basic metals 34	Metal products 35 - 38	Other manufactures 39
Developing countries, total[a]	22	30	27[b]	22[b]	15	36[c]	22[c]	39	38[d]	43[d]	17	36[e]	21[e]	18
Latin America	58	66	117	43	43	62	44	90	85	60	63	58	40	69
Africa	33	40	53	27	36	44	31	43	48	35	38	43	33	36
Asia and other unspecified areas[f]	11	15	17[b]	13[b]	9	18[c]	12[c]	16	28[d]	30[d]	10	24[e]	10[e]	8
Developed marked economies	134	135	195[b]	136[b]	144	114[c]	125[c]	113	127[d]	123[d]	158	110[e]	114[e]	109
Centrally planned economies[g]	134	180	190	137	178	93	115	133	130	94	156	113	107	213
World, total of the above	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: UNIDO, based on United Nations, *The Growth of World Industry, 1967 Edition*, vol. I: *General Industrial Statistics, 1953 - 1966*, United Nations publication, Sales No.: 68.XVII.13, and additional data compiled by the United Nations Statistical Office.

[a] Estimated on the basis of a residual of value added and number of persons engaged between the total of all less industrialized countries and the sub-total of four European less industrialized countries, the distinction between industrialized and less industrialized being made at $ 125 of *per capita* value added in manufacturing in 1958.

[b] For Portugal: ISIC 23 includes ISIC 24.

[c] For Portugal: ISIC 28 includes ISIC 27.

[d] For Portugal and Spain: ISIC 31 - 32 includes ISIC 30.

[e] For Spain: ISIC 35 - 38 includes ISIC 34.

[f] Estimated on the basis of a residual of value added and number of persons engaged of the total of developing countries, indicated under [a] and the relevant sub-totals of Latin America and Africa (excluding South Africa).

[g] Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland, Romania, USSR, Yugoslavia.

producer of manufactures among the developing regions, contributing close to 4 per cent of the world manufacturing output,[58] and recorded the best productivity performance. In 1963, the average output per man reached nearly two-thirds of the world average. The relatively high level of labour productivity prevailing in the Latin American manufacturing industries is illustrated by the fact that in 1963 it surpassed significantly, in all industries, the level recorded for the less industrialized developed market economies of southern Europe.[59]

The African region, with its very small manufacturing sector — less than one per cent of the world manufacturing output — and only recently established, ranked second among the developing regions in relative labour productivity level in manufacturing. A latecomer in industrialization, and a region known for deficiencies of industrial skills and manufacturing supporting services, it attained an output per man only slightly lower than that recorded for the less industrialized developed market economies in southern Europe.

Asia, with its huge labour resources, was a minor producer of manufactures, contributing only slightly more than two per cent of the world manufacturing output; its average output per man in the manufacturing sector was estimated as being the lowest among the developing countries in 1963. The average output per man amounted there to about one-third of that in Africa's manufacturing sector and about one-fifth in Latin America's.

No uniform level of output per man prevailed among the various industries listed in table 36. The estimates of value added per person engaged in manufacturing given in that table seem to suggest, however, a certain pattern of differentiation of output per man in the more industrialized countries and diversified experience in developing countries.

The textile industry appears to have recorded the highest value added per person employed in 1963 in both the industrialized developed market economies and the centrally planned economies when compared with the relatively low world average. Further, it would appear that, in both regions, the non-metallic mineral products, wood and wood products, food, beverages and tobacco and clothing industries enjoyed the highest level of labour productivity. On the other hand, in both regions, the paper and paper products and basic metals industries appeared at the bottom of the list, together with the metal products industries in the case of the developed market economies and the chemical and petroleum products industries in the case of the centrally planned economies.

A certain similarity in the pattern of differentiation of output per man could possibly be taken as a reflection of a growing similarity

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[58] United Nations, *The Growth of World Industry, 1967 Edition*, vol. I: *General Industrial Statistics, 1953–1966* (United Nations publication, Sales No.: 69.XVII.13).

[59] In the countries included in this group, the *per capita* value added in manufacturing in 1958 was less than $ 125.

between those two regions in factor proportions and in the main tendencies of technical progress within the manufacturing sector.[60]

There were significant differences in the level of output per man among various industries in the developing countries. The highest level of output per man relative to the world average and conversely the lowest labour requirements per unit of output prevailed in the chemical and petroleum products, leather and leather products, rubber and rubber products, paper and paper products and in the food, beverages and tobacco industries. In turn, the lowest levels of output per man were recorded for wood and wood products and non-metallic mineral products industries.

The textile industry, frequently cited as typically labour-intensive and recommended as a potential source of manufacturing employment, turned out to have rather low labour requirements per unit of output in the Latin American and African regions, when compared with the relatively high world average labour requirements prevailing in this industry; the same was true of the developed market economies and the centrally planned economies. Relatively high levels of output per man and conversely low labour requirements per unit of output prevailed also in the food, beverages and tobacco industry in Latin America and in the leather and leather products industry of Latin America and Africa. The rubber and rubber products and paper and paper products industries also fared well above the respective average output per man in the Latin American and African regions. In Asia and the Middle East, a different set of industries — mainly heavy industries — acquired an outstanding level of labour productivity. The cross-industry differentiation of labour productivity seems also to be more pronounced in the Asian than in the Latin American or African regions.

Preliminary examinations of productivity trends in developing countries seem to indicate that no uniform pattern of production technique was applied in those countries in the manufacturing sector. And while in the more industrialized Latin American region some of the old-established industries, such as textiles, leather and food, led in productivity, a similar pattern seems to have prevailed in the much less industrialized African region.

The Asian region seems to have followed a different pattern of industrial growth. Productivity was low there and only some of the

[60] It is not unlikely, however, that those similarities are in large measure only apparent, resulting from imperfect methods of value added estimates in dollars for the centrally planned economies. It is significant, for instance, that some of the major consumer goods industries which usually carry the highest rates of turnover taxes in countries with centrally planned economies have been credited by the estimates with the highest value added per person engaged. For an explanation of methods of estimates of value added in dollars for the centrally planned economies, see United Nations, *The Growth of World Industry, 1967 Edition*, vol. I: *General Industrial Statistics, 1953–1966* (United Nations publication, Sales No.: 69.XVII.13).

newly established industries, such as chemical and petroleum products, rubber and basic metals, paper and paper products, appear to have obtained the preferential benefits of industrial development effort and acquired high productivity. Those are, however, only tentative conclusions, warranting much more detailed and systematic study.

Chapter IV

SOURCES OF FUNDS AND CAPITAL ALLOCATION IN MANUFACTURING

External financing

In the field of external financing, the period 1960–1966 was characterized by the slow growth of official assistance, compensated by a rapid advance in foreign private capital flows and especially export credits within this last category. Financial resources provided by multilateral agencies to developing countries increased sharply, although their share of all external resource flows to these countries remained below 10 per cent. With respect to aid policy, there was a noticeable shift from project aid to general development assistance.

As indicated in table 37, between 1960 and 1966 the net financial resources received by developing countries from all sources[61] (including the centrally planned economies) increased at an average rate of 6 per cent *per annum*. In 1966, this total was $11.2 billion, rising from a figure of $7.8 billion in 1960. Provisional figures for 1967 show a small increase, to $11.7 billion. Among major categories of capital exporters, there was very little change in the relative position of the centrally planned and the developed market economies. The latter continued to account for most of the external finance provided to developing countries. A substantial effort, however, was made by multilateral agencies, which more than doubled the amount of resources made available to developing countries during the period 1960–1966.

Official flows[62]

Total official flows of external resources received by developing countries, as shown in table 38, rose at a rate of only 2.3 per cent *per*

[61] According to OECD estimates.

[62] Refers only to DAC member countries, which include Australia, Austria, Belgium, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, Norway, Portugal, Sweden, Switzerland, the United Kingdom and the United States. These nations accounted for 90 per cent of total net financial resources received by developing countries from 1960–1966.

TABLE 37. NET FINANCIAL RESOURCES[a] RECEIVED BY DEVELOPING COUNTRIES FROM ALL SOURCES, 1960 – 1966 AND 1967

(Average annual disbursement)

Source	*Net financial flow (millions of dollars)*			*Percentage of total[b]*			*Percentage growth rate*
	1960–1963	*1963–1966*	*1967[c]*	*1960–1963*	*1963–1966*	*1967*	*1960–1966*
DAC member countries	7,936	9,159	10,310	92	89	88	4.9
Other developed market economies[d]	6	9	10	–	–	–	15.6
Centrally planned economies[e]	319	356	350	4	3	3	3.8
Multilateral agencies	395	819	1,000	5	8	9	27.5
Total	8,656	10,343	11,670	100	100	100	6.1

Source: UNIDO, based on *OECD Observer*, "The Flows of Development Assistance: 1967 and Recent Trends".

[a] Total of official and private flows on a net disbursements basis.

[b] Components may not add to total because of rounding.

[c] Provisional.

[d] Finland, New Zealand and South Africa.

[e] Estimates of OECD secretariat.

TABLE 38. NET FLOW OF FINANCIAL RESOURCES[a] TO DEVELOPING COUNTRIES AND MULTILATERAL AGENCIES FROM OECD COUNTRIES, 1960–1966 and 1967

(Average annual disbursement)

	Net flow (millions of dollars)			*Percentage share of total official and private flows*[b]			*Percentage growth rate*
	1960–1963	*1963–1966*	*1967*[c]	*1960–1963*	*1963–1966*	*1967*	*1960–1966*
Total official and private	8,666	9,713	11,360	100	100	100	3.9
Total official	5,767	6,168	6,970	67	64	61	2.3
Total private	2,899	3,544	4,390	33	36	39	6.9
Official bilateral	5,191	5,738	6,200	60	59	54	3.4
Grants	3,980	3,875	...	...	...	...	...
Lending	1,211	1,863	...	...	...	...	...
Official multilateral	525	430	770	7	4	7	−6.4
IBRD, IDA	171	182	...	...	...	...	...
United Nations	183	201	...	...	...	...	...
Others	171	47	...	...	...	...	...
Private investment and lending	2,248	2,587	2,760	26	27	24	4.8
Direct	1,677	2,078	...	...	...	...	...
New investments	1,035	1,274	...	...	...	...	...
Reinvested earnings	641	804	...	...	...	...	...
Portfolio	571	509	...	...	...	...	...
Private export credits	649	955	1,630	7	10	14	13.7
Guaranteed	573	815	...	...	...	...	...
Non-guaranteed	76	140	...	...	...	...	...

Source: UNIDO, based on OECD, *Flow of Financial Resources to Less Developed Countries, 1961–1965*, and *OECD Observer*, "The Flows of Development Assistance: 1967 and Recent Trends".

[a] Gross disbursements minus repayments on earlier borrowing.

[b] Components may not add to total because of rounding.

[c] Provisional.

annum. These funds amounted to $6.2 billion in 1966 compared with $5.8 billion in 1960. The largest recipient of official external resources was Asia, with approximately one-half of the total (see table 39). There was a noticeable decrease in official contributions to multilateral agencies (see page 83 below).

With respect to bilateral official flows, it is impossible to determine the size of official external resources allocated to the manufacturing sector in developing countries. As regards the portion of bilateral official flows specifically tied to capital projects, the share committed to industry (including mining) by the DAC countries rose from 11 per cent in 1962 to 15 per cent in 1966, amounting to $900 million. This was accompanied by a general shift from project to non-project aid in bilateral assistance.[63] Non-project aid amounted to almost 50 per cent of total bilateral assistance in 1966.

The financial terms and conditions of bilateral assistance have undergone some change in recent years. The figures in table 40 would indicate that the importance of grants tended to decline relative to total bilateral lending between 1962 and 1965. Over the same period, loans became more expensive. In 1962, the proportion of grants to total bilateral assistance was 67 per cent, and 14 per cent of total official loans were committed at interest rates of less than 1 per cent. The corresponding figures for 1965 had declined to 55 per cent and 3 per cent respectively.

Foreign aid provided by the centrally planned economies increased over the period 1960–1966. Compared with an average annual growth rate of 2.3 per cent for the flow of official financial resources from OECD countries, similar aid from the centrally planned economies rose at a rate of 3.8 per cent (see tables 37 and 38). Table 41 shows the distribution of commitments by the centrally planned economies between 1963 and 1966. Traditionally, these commitments have tended to be more concentrated geographically than other sources. However, the fact that Asia, Africa and Latin America were all recipients in 1966 would suggest a greater dispersion than in the past. Beginning in 1963, Africa received the largest share of funds. In 1966, however, loans to Asia were increased by almost $600 million over the previous year, making it the main beneficiary for the four-year period. Despite the fact that these loans tend to be associated with industrialization projects, only about one-fourth were allocated to easily identifiable industrial projects in 1966.[64]

Since the developing countries are increasingly engaged in more aggressive efforts at expansion in the manufacturing sector, the preceding figures do not offer particularly optimistic prospects. Request for foreign assistance may be expected to increase in frequency and magnitude as

[63] OECD, *Development Assistance Efforts and Policies Review* (various issues).

[64] United Nations, *The External Financing of Economic Development* (United Nations publication, Sales No.: E.68.II.D.10), p. 16.

TABLE 39. GEOGRAPHICAL DISTRIBUTION OF NET OFFICIAL FINANCIAL FLOWS FROM DAC COUNTRIES[a] AND MULTILATERAL AGENCIES, 1960—1966

	Total receipts (millions of dollars)			*Relative distribution*			
				Percentage of world total			*Per capita dollars*
	1960	*1963*	*1966*	*1960*	*1963*	*1966*	*1966*
Developing countries	3,777	5,617	6,137	89	88	89	4.0
Africa	1,285	1,663	1,595	30	26	23	5.3
Asia	2,168	2,859	3,348	51	45	49	3.4
Latin America	324	1,095	1,194	8	17	17	4.8
Other countries[b]	361	468	494	8	7	7	5.3
Unallocated	131	293	263	3	5	4	—
World (total of above)	4,269	6,378	6,894	100	100	100	4.2

Source: UNIDO, based on OECD, *Development Assistance Efforts and Policies Review* (various issues).

[a] DAC countries include Australia, Austria, Belgium, Canada, Denmark, Federal Republic of Germany, France, Italy, Japan, Netherlands, Norway, Portugal, Sweden, the United Kingdom and the United States, which account for close to 90 per cent of the total financial resources received by developing countries from all sources.

[b] Essentially Greece, Spain, Turkey and Yugoslavia.

TABLE 40. PERCENTAGE DISTRIBUTION OF TOTAL BILATERAL COMMITMENTS TO DEVELOPING COUNTRIES AND MULTILATERAL AGENCIES FROM DEVELOPED MARKET ECONOMIES BY GRANTS, LOANS, INTEREST RATE AND LOAN MATURITY, 1962–1965

	1962	1963	1964	1965
Grants	61	57	57	55
Loans: interest rate				
less than 1 per cent	14	16	1	3
1 per cent to less than 3 per cent	1	2	22	13
3 per cent to less than 6 per cent	17	21	18	26
6 per cent and above	7	4	2	3
Loans: maturity				
40 years and over	32	35	49	28
25 years to 40 years	...	9	11	10
15 years to 25 years	...	37	24	26
Less than 15 years	...	19	16	36

Source: United Nations, *The External Financing of Economic Development* (United Nations publication, Sales No.: E.68.II.D.10), p. 99.

development efforts begin to reflect these desires for manufacturing development. At the same time, the most obvious possibility, that of shifting foreign assistance away from other sectors and into industry, would appear to offer slim hopes of relief in view of most developing countries' over-all capital requirements.

Bearing this trend in mind, two points are worth noting for an evaluation of future prospects for foreign assistance to manufacturing development. First, during the initial stages, both the absolute magnitude of foreign funds required to sustain a given rate of growth and the ability to accelerate growth by absorbing more funds are likely to increase. While this is true of an entire developing economy, it is particularly characteristic of the manufacturing sector. The reason for this lies in that sector's capacity for greater levels of capital absorption relative to other activities (e.g. agriculture and services). Secondly, since it is apparent from the above figures that a "hardening" of terms for loans has occurred, increasing amounts of future aid will be offset by the accumulation of interest and amortization payments; that is, net contributions will be decreased owing to the problem of debt service. It can only be concluded that a substantial increase in bilateral assistance is greatly needed in the developing countries.

Inflationary pressures and related balance of payments problems in lending countries would have to head the list of reasons for a hardening of lending terms during the period of the 1960s. As these problems per-

TABLE 41. COMMITMENTS BY CENTRALLY PLANNED ECONOMIES TO DEVELOPING COUNTRIES BY REGION, 1963–1966

(Millions of dollars)

	1963	*1964*	*1965*	*1966*[a]
Africa	242	874	204	6
Asia	99	372	391	1,041
Latin America	—	—	—	100
Total	341	1,246	595	1,147

Source: United Nations, *The External Financing of Economic Development* (United Nations publication, Sales No.: E.68.II.D.10), pp. 16 and 17.

[a] Preliminary.

sist, Governments naturally become more reluctant to increase their share of long-term commitments to "soft" loans. It can only be hoped that, as related difficulties are remedied, the trend in lending terms will be reversed.

Official multilateral aid

Contributions by developed countries to multilateral agencies declined during the period 1960–1966 by 6.4 per cent (see table 38). However, their total lending activities to developing countries increased substantially over the same period. This was accomplished by drawing on funds obtained in previous years and mobilizing additional resources on the international capital market. Financial resources provided by multilateral agencies rose from $260 million in 1960 to $930 million in 1966, at an average growth rate of 27.5 per cent *per annum* in the period 1960–1966 (see table 37). These agencies' share of financial resources increased from 5 to 9 per cent over the 1960–1967 period.

Among the multilateral agencies, the share of IBRD loans and IDA credits allocated to manufacturing in developing economies has risen in recent years (see table 42). For all developing countries, this share of the cumulative total amounted to 13 per cent in 1965–1966, increased to 33 per cent in 1966–1967 and accounted for 20 per cent during 1967–1968. Relative to other regions, IBRD and IDA credits to Asia have tended to emphasize manufacturing; in 1966–1967, 65 per cent of all such loans and credits were channelled into that sector. Figures on loans and credits to Africa through the same agencies would suggest that increasing attention was being paid to manufacturing. In contrast, the proportion of such funds allocated to Latin American manufacturing was considerably smaller during the same years.

Private capital flows

Foreign private investments were the most dynamic component of total external resources during the period 1960—1966, increasing from

TABLE 42. IBRD LOANS AND IDA CREDITS FOR MANUFACTURING AND OTHER PURPOSES[a] CUMULATIVE TOTAL TO 1965/66 AND RECENT YEARS

(Millions of dollars)

	Manufacturing	*Other*	*Manufacturing*	*Other*	*Manufacturing*	*Other*	*Percentage share of manufacturing in total loans and credits*		
	Cumulative total to 1965/1966		*1966/1967*		*1967/1968*		*Cumulative total to 1965/1966*	*1966/1967*	*1967/1968*
Developing countries, total	1,050	7,232	350	707[b]	168	662	13	33	20
Africa	62	1,328	30	148	10	130	4	17	7
Asia	899	3,323	320	176	124	182	21	65	41
Latin America	88	2,582	—	284	34	350	3	—	9
Other countries, total[c]	478	2,189	25	148	23	100	18	14	19
World, total	1,529	9,420	375	855	191	762	14	30	20

Source: UNIDO, based on IBRD and IDA, annual reports.

[a] Loans and credits to manufacturing have been estimated by subtracting mining from "industry" loans and credits. However, the IBRD category "industry" also includes development finance companies, which are in turn partially used for non-manufacturing purposes. Loans and credits to development finance companies in developing countries amounted to a cumulative total of $478 million up to 1965/1966 and to $75 million and $169 million in 1966/1967 and 1967/1968 respectively.

[b] Includes a $100 million loan to IFC.

[c] Developed market economies and centrally planned economies.

$3.3 billion in 1960 to $4 billion in 1966, with a slight decline during 1962 and 1963. According to table 38, the average annual growth rate for this type of funds was approximately 7 per cent as compared with a 4 per cent rate of growth for total external funds. Among the various types of private capital flows, export credits have grown rapidly, at an average rate of 13.7 per cent *per annum* for the time period considered. Given the short-term nature and comparatively high cost of such credits, this trend is of particular significance to manufacturing development.

In general, the tendency of private direct investment and foreign aid to lag behind growing demands for the financing of capital goods has prompted this growth in export credits. Within the context of private capital funds, the interests of both developing and developed countries in expanding their trade in capital goods has generated the demand for additional financial mechanisms. These mutual interests have prompted a growing tendency to employ export credits not only as a means of promoting exports but also as an instrument of aid policy. The disadvantage is that relatively short maturities may enlarge foreign indebtedness, aggravating the already serious problem of debt-service payments. When coupled with the trend towards a hardening of bilateral loans, debt-service payments may be expected to continue to plague the efforts of the developing countries.

Against this background of rapidly increasing total inflows of external private capital in the developing countries, there was a noticeable reduction in the investments in manufacturing in those countries by some major private capital exporters. In a number of cases, such retrenchment of foreign private investment in manufacturing may be ascribed to balance of payments difficulties in industrialized countries and to the competition for investment funds among industrialized nations.

United States private investment in manufacturing in developing countries for example, rose steadily from 1960 to 1965, reaching a peak in that year of $504 million. Substantial declines occurred in 1966 and 1967, when investment amounted to $417 million and $364 million respectively. In the mid-1960s, United States manufacturing investments in developing countries were approximately 20 per cent of total United States investments in those countries. The sum was concentrated in Latin American manufacturing, which received more than 70 per cent of the total.[65] By sector, the largest recipients were chemicals and petrochemicals (ISIC 31 – 32) and transportation equipment.[66]

Some sluggishness was observed in the pace of private manufacturing investment in developing countries by the United Kingdom. The flow of such funds remained stable, averaging about $100 million *per annum*

[65] United States Department of Commerce, *Survey of Current Business*, Washington, D. C., issues of September 1965, September 1966, September 1967 and October 1968.

[66] *Ibid.*

during the 1960—1966 period.[67] This amounted to approximately 41 per cent of the United Kingdom's total private investment in developing countries. With respect to sectoral distribution, a strong concentration was evident in food, beverages and tobacco (ISIC 20—22) and various household products. Together, these industries claimed almost one-half of the country's total investment in manufacturing in developing countries.

The upward trend in private foreign manufacturing investment by other industrialized nations compensated in some degree for the sluggishness of United States and United Kingdom activities during the 1960s. Japanese private manufacturing investments in developing countries are particularly noteworthy. Between 1959 and 1966, the cumulative total of these investments was $1.14 billion and amounted to 40 per cent of total Japanese capital exports to developing countries. Almost all private Japanese investments in manufacturing were located in Latin America and South East Asia—35 per cent and 60 per cent respectively. Food, textiles, iron and steel were the most important recipient sectors.

Domestic savings

Available data do not allow any comprehensive survey regarding the flow of capital funds (domestic and foreign) into manufacturing enterprises. A sample of forty-one developing countries, however, indicates that a typical (median) country featured total savings amounting to slightly more than 16 per cent of GDP, with approximately 80 per cent attributable to domestic savings and 20 per cent to foreign sources. Despite this comparatively small figure for foreign funds, such funds may be expected to be particularly pertinent to the early stages of manufacturing development, when large capital outlays, importation of alien technologies and the creation of a new industrial structure are required. In volume I of the *Industrial Development Survey* it is pointed out, on the basis of a sample survey of developing countries, that, once private corporations became self-sustaining, their net savings and depreciation accounted for one-third to two-thirds of total domestic savings. Corporate savings are particularly important to manufacturing investments in developing countries because of the absence of organized capital markets and the weakness of financial institutions. Household savings, including savings of unincorporated enterprises, were found to play only a minor role, the total contribution amounting to less than 50 per cent of depreciation in one-half the countries examined. The performance of government savings varied considerably among nations, but very few Govern-

[67] United Kingdom, *The Board of Trade Journal and Commercial Gazette*, London, 19 July 1968.

ments managed to improve their savings ratios over the period 1960-1966.[68] This pattern of availability of domestic finance can be explained by the fact that, owing to increasing pressure on current government expenditures in developing countries and their narrow revenue base, a high proportion of domestic savings must originate in the private sector. In addition, owing to low incomes, most of the private savings are generated in the business sector.

Capital allocation

From the preceding discussion it is apparent that further development in manufacturing will require a continually increasing flow of capital to be channelled into that sector. External funds have served primarily to supply the impetus for the importation of advanced technologies and updated equipment and for the creation of new firms. Once these entities have become self-sustaining, they have made valuable contributions to the meagre levels of domestic saving. As manufacturing development progresses, its very existence will lead to the availability of resources. Concomitantly, uses of and demands for capital funds in manufacturing will change as industrialization progresses. It is the purpose of this section to examine how some portions of the available funds have been allocated to manufacturing development.

Capital formation in manufacturing may take one of two forms: fixed capital or investment in stocks (inventories). Very little information is available regarding the latter component. There are indications, however, that during the early stages of industrial development many firms in developing countries rely upon overseas sources for inventory supplies, and this component may constitute more than one-half of total manufacturing capital formation.[69] With the continued growth of the industrial sector and improvements in over-all efficiency, some economies in inventory investment may be achieved. In the discussion which follows no attempt is made to deal with this particular topic; the reader is referred to volume I of the *Industrial Development Survey*.

The data appearing in table 43 record the recent experiences of selected developing countries in the allocation of fixed capital among various sectors of the economy. Investment ratios varied widely for both

[68] See United Nations, *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1).

[69] See the data on fixed capital and total capital formation in manufacturing industries provided in United Nations, *The Process of Industrial Development in Latin America* (United Nations publication, Sales No.: 66.II.G.4), statistical annex (document prepared for the Latin American Symposium on Industrial Development, Santiago, Chile, March 1966), and United Nations, *Economic Survey of Asia and the Far East, 1965* (United Nations publication, Sales No.: 66.II.F.1).

TABLE 43. FIXED CAPITAL FORMATION IN DEVELOPING COUNTRIES, BY MAJOR ECONOMIC SECTORS, 1960–1963 AND 1963–1966

(Percentages of total fixed capital formation)

	Period	Agriculture, forestry, fishing	Mining and quarrying	Manufacturing	Infrastructure[a]	Other sectors[b]	Fixed capital formation as percentage of GDP
Venezuela	1964–1966	16	11	14	21	38	18
Jamaica	1960–1963	10	13	13	21	57	19
	1963–1966	11	1	21	35	32	19
Fiji[c]	1963–1964	6	1	20	11	62	13
British Honduras[d]	1962–1964	36	...	44	11	9	34
Lebanon[e]	1964	1	...	16	26	57	22
Mauritius	1960–1963	10	—	16	30	44	18
	1963–1966	10	—	14	33	43	16
Iraq[f]	1962–1963	8	...	24	34	44	12
	1963–1965	11	10	15	20	44	11
Philippines	1960–1962	6	2	27	26	39	12
Southern Rhodesia	1960–1963	6	2	6	14	78	18
	1964–1966	7	2	4	3	85	18
Tunisia	1960–1963	20	2	14	15	49	20
	1963–1966	22	3	25	14	36	25
Zambia	1960–1963	3	41	4	24	28	18
	1963–1966	6	25	7	18	44	18

China (Taiwan	1960 – 1963	18	2	22	30	28	16
	1963 – 1966	17	1	28	27	27	16
Korea, Rep. of	1960 – 1963	11	1	21	35	32	13
	1963 – 1966	12	1	28	31	38	16
Bolivia	1960 – 1963	2	14	47	28	9	14
	1963 – 1966	4	10	38	37	11	14
Thailand	1960		20	6	24	34	16	14
Sudan	1960 – 1962	26	–	16	7	51	14
Togo[f]	1960		9	...	10	19	62	15
Lesotho[g]	1964 – 1965	17	...	18	7	58	10
Ethiopia	1961 – 1963	4	4	10	24	58	12
	1963 – 1966	5	5	12	27	51	12
Malawi	1960 – 1963	12		7	29	52	14

Source: UNIDO, based on United Nations, *Yearbook of National Accounts Statistics, 1967*.

[a] Construction, electricity, gas, water, transport and communication.

[b] Wholesale and retail trade, banking, insurance and real estate, ownership of dwellings, public administration and services.

[c] Infrastructure does not include transport, storage and communication.

[d] Infrastructure does not include construction, which is included in manufacturing; the latter covers also mining.

[e] Manufacturing includes mining.

[f] Infrastructure does not include transport, storage and communication, which are included in manufacturing; the latter also includes mining.

[g] Infrastructure does not include construction, which is included in manufacturing.

Note: Countries are classified according to *per capita* GDP in 1963.

manufacturing sectors and total fixed capital formation as a percentage of GDP. A median value of 16 per cent was found for the proportion of GDP allocated to total fixed capital formation, with a range of from 10 to 34 per cent; the corresponding figure for manufacturing was also 16 per cent, with a range of between 4 and 47 per cent.

Estimates based upon the data presented in table 43, but expressed in dollars, suggest several simple relationships. First, a close relationship was found between the level of development achieved, measured by *per capita* GDP, and investment efforts in developing countries. Estimates based upon simple linear regression analysis suggest that, for every dollar of *per capita* GDP, approximately 19 cents were channelled into fixed capital formation.[70] Secondly, investigation showed that investment in agriculture, mining and manufacturing bore a close relationship to the level of *per capita* fixed capital formation. For every investment dollar, 37 cents were allocated among these three sectors; 21 cents were provided for investment in infrastructure.[71]

Apart from the problems of data accuracy and aggregation, these estimates cannot be expected to be representative for more than a very short period of time. Shifts in investment patterns are quite dynamic, and therefore would have repercussions upon the sources and magnitudes of future domestic corporate saving. As a result, these sources of domestic finance may well prove to be as highly volatile as external sources.[72] For example, during 1960–1963, agriculture, mining and manufacturing claimed an average of 35 per cent of total fixed capital formation, while infrastructure received 25 per cent. In subsequent years, the share of the former group rose to 38 per cent and that of infrastructure declined to 21 per cent of total fixed capital formation. Manufacturing industries appear to have been the main beneficiaries of this shift.

A degree of complementarity and interdependence among the various sectors of the economy appears to underlie recent allocation patterns in investment resources. There is some evidence that investment in agriculture, mining and manufacturing may have been related to a broadening of the infrastructure's capacity for services in developing countries.[73]

[70] Relating gross domestic product (X) in 1963 and 1966 with estimates of fixed capital formation (Y), both in *per capita* terms and dollars, yields the following equation: $Y = 4.97 + 0.19X$. The standard error of the function was 7.42 and the coefficient of correlation equal to 0.98. In this and following calculations, British Honduras was omitted.

[71] The regression equation for *per capita* fixed capital formation (X) and investment in these three sectors (Y) yielded the following equation: $Y = 0.42 + 0.37X$. A standard error of 3.8 and a coefficient of correlation of 0.96 were calculated. The equation for investment in infrastructure (Y) was $Y = 0.92 + 0.21X$, with a standard error of 2.6 and a coefficient of correlation of 0.94.

[72] The former may generally be expected to exhibit a distinct upward trend; that is not always true for external finance.

[73] The correlation coefficient between *per capita* investment in infrastructure and *per capita* investment in manufacturing was 0.88.

TABLE 44. INCREMENTAL FIXED CAPITAL/OUTPUT RATIO BY MAJOR INDUSTRY GROUPS IN SELECTED DEVELOPING COUNTRIES, RECENT YEARS

	Total industry	*Mining and quarrying*	*Gas and electricity*	*Total manufactures*	*Light manufactures*	*Heavy manufactures*
Latin America						
Jamaica (1961–1965)	2.85	3.40	3.72	2.46	...	...
Panama (1962–1966)	...	...	...	1.35	1.24	1.66
Trinidad and Tobago (1961–1962)	...	7.18	...	1.87	...	...
Africa						
Nigeria (1963–1965)	...	0.82[a]	25.35	0.75	0.63	0.96
Rhodesia (1961–1965)	2.20	6.06	2.91	1.59	1.43	1.78
Zambia (1961–1965)	...	1.84	−5.97[b]	0.78	0.74	0.87
Asia						
Korea, Rep. of (1961–1966)	...	0.51	1.74[c]	0.96	...	...
Philippines (1961–1966)	...	...	9.66[d]	1.99[e]	2.15	1.70[e]
Singapore (1961–1965)	...	0.87	...	1.01[f]	1.62[f]	0.74

Source: UNIDO, based on national data reported for United Nations Statistical Office's general industrial statistics questionnaire.

[a] 1964–1965. [c] 1964–1966. [e] Excluding 31 and 32 (chemicals and petroleum).

[b] 1961–1964. [d] 1962–1965. [f] Excluding 29 (leather).

Note: The incremental fixed capital output ratio shown in this table was calculated as the ratio of fixed capital formation in current prices to the increase in value added in current prices in the periods indicated.

TABLE 45. INCREMENTAL FIXED CAPITAL OUTPUT RATIOS BY MAJOR INDUSTRIES IN SELECTED DEVELOPING COUNTRIES, RECENT YEARS[a]

(Ratios of individual industries expressed in relation to the ratio for total manufacturing, taken as 1.00)

ISIC	Total manufacturing 20–39	Light manufactures 20, 23, 29, 30, 39	Heavy manufactures 21, 22, 24–28, 31–38	Food, beverages, tobacco 20–22	Textiles 23	Clothing 24	Wood 25	Paper 26	Printing, publishing 27	Leather 29	Rubber 30	Chemicals, petroleum 31, 32	Non-metallic minerals 36	Basic metals 37	Metal products 28, 38	Other manufactures 39
Latin America																
Panama (1961–1966)	1.00	0.92	1.23	1.26		0.66	0.89	1.16	1.25	1.76	1.76	0.75	2.33	0.42	0.56	0.37
Africa																
Nigeria (1962–1965)	1.00	0.84	1.28	0.29	1.44	1.49	6.31	0.24	7.47	0.17	1.08	1.19	2.17	0.28	1.04	0.09
Rhodesia (1960–1965)	1.00	0.90	1.12	1.83	1.25	0.36	0.63	0.91	2.36	...	0.23	1.42	0.73	1.42	0.55	0.41
Zambia (1960–1965)	1.00	0.95	1.12	0.83	0.64	...	0.65	...	1.53	...	1.06	...	0.86	1.06	0.88	2.05
Asia																
Philippines (1960–1966)	1.00[b]	1.08	0.85[b]	0.77	2.06	0.90	1.72	1.05	7.19	4.02	0.62	...	1.07	1.23	0.61	−0.15
Singapore (1960–1965)	1.00[c]	1.60[c]	0.73	0.93	...	1.19	1.02	2.39	1.49	...	0.25	0.58	0.41	0.37	1.11	0.71

Source: UNIDO, based on national data reported for the general industrial statistics questionnaire (provided by the United Nations Statistical Office).

[a] The incremental fixed capital output ratios shown in this table were calculated as the ratio of fixed formation in current prices to the increase in value added in current prices over the periods shown in this table.

[b] Excluding ISIC 31 and 32.

[c] Excluding ISIC 29.

Estimates based upon simple linear regressions indicate that, for every $1 of investment in infrastructure, more than $0.50 was spent on manufacturing investment.[74]

Some recent figures on fixed capital formation in developing countries are included in table 44. In the small sample of countries included, the manufacturing sector required from 0.7 to 2.5 units of fixed capital for each additional unit of output. In four of the nine countries shown, the incremental fixed capital-output ratio was close to or slightly less than unity, indicating the relatively high productivity of that investment. No clear pattern of differences between light and heavy manufacturing is apparent. It should be borne in mind that these figures do not reflect total capital requirements, as they exclude investments in inventories.

The gas, electricity, mining and quarrying industries have generally recorded much larger fixed capital requirements per unit of output than has manufacturing. A comparison of the ratios for gas and electricity with manufacturing indicates that values for the former sector exceeded those of the latter by margins of 2 to 25 units of fixed capital for one additional unit of output. Incremental fixed capital-output ratios in mining and quarrying were 1 to 7 units greater than the corresponding figures for manufacturing. These figures, should, however, be interpreted with great caution as they relate to observations over a relatively short period of time and cover activities whose gestation periods for investment are known to be usually longer than in the manufacturing industry. Accordingly, simply calculated capital-output ratios for the gas and electricity sector and the mining and quarrying sector may be expected to be less indicative of the actual situation than the ratios in manufacturing.

Table 45 shows a detailed breakdown of incremental capital-output ratios for ISIC categories within manufacturing. The highest unit capital requirements prevailed in the textiles and printing and publishing industries. The clothing and wood industries recorded the lowest such requirements. Country to country variations in these figures were largest for textiles (ISIC 23), followed by leather (ISIC 29), and printing and publishing (ISIC 28). The range in values was smallest for chemicals and petroleum (ISIC 31—32).

[74] Calculations concerning the relation between *per capita* investment in infrastructure (X) and *per capita* investment in manufacturing (Y) yielded the following equation: $Y = 1.48 + 0.56X$. The standard error was 2.52 and the correlation coefficient 0.86.

Chapter V

REGIONAL INDUSTRIAL CO-OPERATION

NATURE AND POTENTIAL OF REGIONAL CO-OPERATION IN THE FIELD OF INDUSTRIALIZATION

Regional co-operation may be defined as all types of joint and co-ordinated action in the economic field taken by countries of the same region to pool their resources and secure a better allocation of those resources in order to achieve a faster and self-sustained rate of development, that is, essentially, a more efficient structure of production accompanied by higher levels of *per capita* income. Construed in this fashion, the concept of regional co-operation encompasses a much broader range of activities than the well-known trading arrangements and other formal schemes of integration.

From the point of view of industrial development, the most important argument in favour of regional co-operation is perhaps the need to enlarge markets for manufacturing goods in order to take advantage of potential economies of scale. In 1965, for example, as evidenced by table 46, only nine developing countries had a GDP exceeding $5 billion, while more than fifty such countries had a GDP under $2 billion. Moreover, the effective size of their national markets for manufactures is further restricted by "internal economic boundaries"[75] such as high transport costs, unequal distribution of income and backwardness of the agricultural sector and certain regions. On the production side, modern technology borrowed from developed countries tends to require a large minimum scale of production for efficient operation of a large number of industries, including many of the more dynamic ones.[76] Since the

[75] ECLA, Notes on Industrial Development Strategy in Latin America, 1967 (ID/CONF.1/B.33), pp. 10 to 12.

[76] For evidence on the association between economies of scale, inter-industry effects, income elasticity of output and technological dynamism in certain branches of industry, see United Nations Centre for Industrial Development, Criteria for the Development of Manufacturing Industries in Developing Countries, 1966 (E/C.5/111 and Add. 1).

TABLE 16. DISTRIBUTION OF DEVELOPING COUNTRIES AND REGIONAL GROUPINGS BY GDP, 1965[a]

(Dollars)

Over 5 billion	*2 – 5 billion*	*1 – 2 billion*	*0.5 – 1 billion*	*Under 0.5 billion*
Argentina	Algeria	Afghanistan	Bolivia	Barbados
Brazil	Chile	Burma	Cambodia	Burundi
India	China (Taiwan)	Ceylon	Cameroon	Central African Rep.
Indonesia	Colombia	Congo, Dem. Rep.	Costa Rica	Chad
Iran	Iraq	Ethiopia	Dominican Rep.	Congo (Braz.)
Mexico	Korea, Rep. of	Ghana	Ecuador	Dahomey
Pakistan	Kuwait	Guatemala	El Salvador	Gabon
Philippines	Malaysia, Fed. of	Libya	Ivory Coast	Gambia
Venezuela	Morocco	Uruguay	Jamaica	Guinea
	Nigeria	Sudan	Kenya	Guyana
	Peru	Viet-Nam, Rep. of	Lebanon	Haiti
	Saudi Arabia		Madagascar	Honduras
	Thailand		Nepal	Jordan
	United Arab Republic		Nicaragua	Laos
			Rhodesia	Liberia
			Panama	Malawi
			Senegal	Mali
			Singapore	Mauritania
			Syria	Mauritius
			Tanzania	Niger
			Trinidad and Tobago	Paraguay
			Tunisia	Rwanda
			Uganda	Somalia
			Zambia	Sierra Leone
				Togo
				Upper Volta
				Yemen

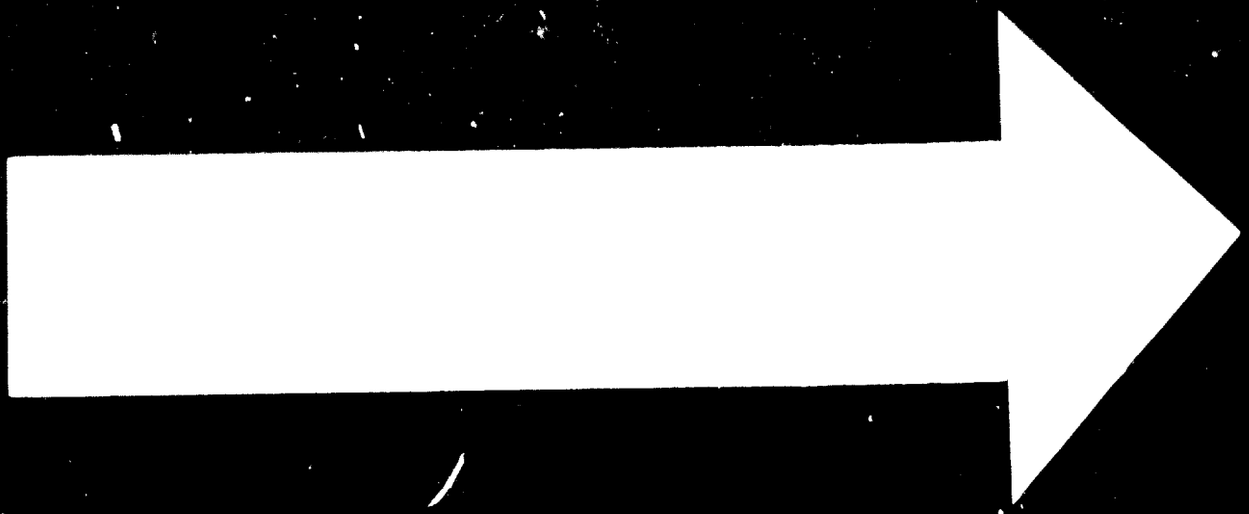
Regional groupings[b]

Andean Group	CACM	CARIFTA
AEU	EACM	UDEAC
ASEAN	UDEAO	
ASPAC		
LAFTA		
PCCM		
RCD		
WAEC		

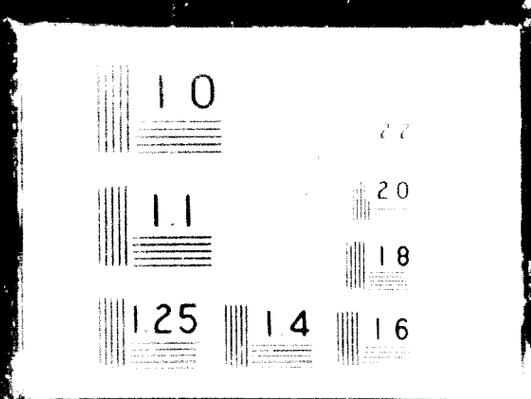
Source: UNIDO, based on United Nations, *Yearbook of National Accounts Statistics* and *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), part two, table 47.

[a] GDP calculated at 1960 dollar at constant factor cost. Countries and regional groupings arranged by alphabetical order within each column.

[b] Andean Group: Bolivia, Chile, Colombia, Ecuador, Peru; AEU: Arab Economic Unity (Iraq, Jordan, Kuwait, Morocco, Syria, United Arab Republic, Yemen); ASEAN: Association of South East Asian Nations (Indonesia, Malaysia, Philippines, Singapore, Thailand); ASPAC: Asian and Pacific Council (Australia, Japan, Republic of Korea, Laos, Malaysia, New Zealand, Philippines, Thailand, Republic of Viet-Nam); CACM: Central American Common Market (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua); CARIFTA: Caribbean Free Trade Association (Antigua, Barbados, Guyana, Jamaica, Trinidad and Tobago); EACM: East African Common Market (Kenya, Tanzania, Uganda); LAFTA: Latin American Free Trade Association (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, Venezuela); PCCM: Permanent Consultative Committee of the Maghreb Countries (Algeria, Libya, Morocco, Tunisia); RCD: Regional Co-operation for Development (Iran, Pakistan, Turkey); UDEAC: Equatorial African Customs Union (Cameroon, Central African Republic, Chad, Congo [Brazzaville], Gabon); UDEAO: West African Customs Union (Dahomey, Ivory Coast, Mali, Mauritania, Niger, Senegal, Upper Volta); WAEC: West African Economic Community (Dahomey, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo, Upper Volta).



17.12.73



enlargement of the market of the developing countries through exports of manufactures to both developed and other developing countries remains difficult owing to trade restrictions as well as production and marketing weakness, regional co-operation offers an attractive opportunity for industrial development.

The conventional approach to industrial regional co-operation among developing countries has centred around the liberalization of trade, following such examples as that of the European Common Market. This was supposed to lead to greater efficiency through the reallocation of trade and increased specialization and competition, as well as to provide a wider market in which economies of scale could be realized.

The experience of developing countries with this approach so far has not been very rewarding. Not only has the trade in manufactures of developing countries been traditionally small, but their pattern of manufacturing production is largely competitive during the initial stages of industrialization. In these circumstances, opportunities for the reallocation of trade and specialization have been rather limited. In addition, under the conditions of scarcity of capital, entrepreneurial talents and managerial skills, as well as of the high risk and uncertainty prevailing in the developing regions, the mere freeing of trade has not led to the realization of potential gains from a large market for industrial goods. Furthermore, co-operation has been hampered by the large degree of external dependence of developing countries *vis-à-vis* industrialized nations, including their participation in various preferential agreements and membership in different monetary zones.

Another important factor which has been partly responsible for the lack of success of the traditional approach to industrial co-operation has been the considerable differences among developing countries of the same region in levels of industrialization and competitive position. These imbalances have led to an excessive concentration of the gains from industrial co-operation in the relatively more developed countries of a region, thereby threatening the very basis of co-operation.

It would appear that, if regional co-operation is to have a greater impact on industrial development, a more active policy of promotion and distribution of industry must be emphasized at the regional level. This policy should encompass not only measures in the field of trade but also the identification, selection and evaluation of projects of regional interest. Also to be stressed is the pooling of regional financial resources, joint efforts to promote foreign investment, the training of labour and managerial personnel as well as the devising of appropriate marketing arrangements to ensure the successful implementation of these projects. Attention should also be paid to opportunities for co-operation in the application of industrial technology. At a broader level, a close co-ordination of industrial programmes and policies should be ensured. Furthermore, as the implementation of regional co-operation at the

micro-level relies, to a large extent, upon decisions of private business firms, an adequate structure of inducements and incentives should be provided in the private sector.

CURRENT INDUSTRIAL CO-OPERATION EFFORTS IN DEVELOPING REGIONS

Action of international institutions

Although the better known schemes of co-operation and integration such as common markets, customs unions and sectoral integrations usually occupy a focal position in any discussion of regional co-operation the extensive activities and catalytic role of international organizations in that field should not be overlooked. These organizations have initiated action to promote and help establish co-operation agreements between developing countries, and have granted technical assistance as well as financial support to various regional projects. Among such organizations are the various members of the United Nations family and especially, among the latter, the regional economic commissions, which have been instrumental in the formation of several regional grouping. On the financial side, IBRD and especially several regional financial institutions such as the Inter-American Development Bank, the Central American Bank for Economic Integration, the Asian Development Bank and the African Development Bank have lent financial and technical support to industrial co-operation projects.

Regional groupings

Africa

The African continent is characterized by a large degree of political and economic fragmentation. Six countries of the region have a population of less than 1 million inhabitants and another twenty countries less than 5 million. As an indication of the total purchasing power of the region, the total GDP of the developing countries in Africa amounted to $ 43.8 billion in 1966.[77] It is obvious that for most of the countries of the area industrialization cannot proceed to any significant extent within the limits of national boundaries.

Besides the small size of national units, the African region is also characterized from the point of view of industrial co-operation by the relatively high concentration of industrial development in a few countries: one or two within each subregion. This situation reflects industrial imbalances within the region rather than a high degree of development

[77] As estimated in ECA, A Survey of Economic Conditions in Africa, 1967 (E/CN.14/409).

and has strong implications for industrial co-operation because of the tendency of the benefits derived from co-operation to be polarized around the more industrialized partners. In addition, industrial co-operation in Africa is influenced by the high concentration of trade among countries which belonged to the same political grouping before independence[78] and the membership of several countries of the region in different monetary zones and preferential systems in regard to developed countries.

In West Africa, several meetings were held in 1967 and 1968 among representatives of fourteen independent countries included in the subregion delineated by ECA, and it was agreed in principle to set up a common market – the West African Economic Community (WAEC).[79] Through the progressive elimination of trade barriers, WAEC would constitute a market for industrial goods representing a population of some 95.5 million with a combined GDP of $ 10.1 billion. Trade of all commodities among member countries amounts to only 2.7 per cent of total trade.[80] In addition, the draft treaty provides for the co-ordinated development of industry.

The West African Customs Union (UDEAO),[81] established in 1959 and comprising seven countries (Dahomey, Ivory Coast, Mali, Mauritania, Niger, Senegal and Upper Volta), was renegotiated in 1966 after initial plans for a completely integrated market area had run into difficulties related to industrial imbalances and customs revenues sharing. The new treaty, which provides, among other things, for a common external tariff, was supplemented by bilateral agreements on the exchange of domestically produced manufactures. UDEAO includes a population of 22.8 million with a combined GDP of $ 3.9 billion. Other regional co-operation attempts in West Africa which relate only indirectly to industry are those represented by the Conseil de l'Entente, created in 1959, grouping Dahomey, Ivory Coast, Niger, Togo and Upper Volta; the joint development agreements between Gambia and Senegal; and the integrated multipurpose development of the Senegal River basin under the Organization of Senegal River States, comprising Guinea, Mali, Mauritania and Senegal.

In the Central African subregion as defined by ECA,[82] a meeting was held in 1967 which endorsed the principle of co-operation, although

[78] African countries belonging to the Commonwealth carry out approximately 80 per cent of their intra-African trade among themselves and similar high ratios obtain for the former French territories.

[79] WAEC includes Dahomey, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo and Upper Volta.

[80] Population, GDP and trade figures refer to the late 1960s. See United Nations, *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), part two, table 47.

[81] *Union douanière des Etats d'Afrique occidentale*.

[82] Includes Burundi, Cameroon, Central African Republic, Chad, Congo (Brazzaville), Democratic Republic of Congo, Gabon and Rwanda.

no practical action has been taken to date to link the Democratic Republic of the Congo, Rwanda and Burundi to the Equatorial African Customs Union (UDEAC),[83] established in 1966 and composed of Cameroon, the Central African Republic, Chad, Congo (Brazzaville) and Gabon. The members of UDEAC currently represent a population of 11.5 million, with a GDP of $ 1.2 billion.[84] Intra-zonal trade, which amounted to close to 6 per cent of all trade in 1966,[85] has a large content of a limited range of simple manufactures. One of the primary objectives of the union is the harmonization of industrial development policies; to that effect, a joint industrialization programme was scheduled to be drawn up in 1968. The UDEAC treaty provides for advance consultation among members on the establishment of regional industries. Co-operation in the regional grouping to which it succeeds — the Equatorial Customs Union,[86] established in 1959 — had suffered from the excessive concentration of industrial activity in one of the member countries, which started off with a strong locational advantage. Another feature of the treaty is the *taxe unique*, which is levied at the factory exit and redistributed according to the share of products consumed by each country.

In the North African subregion,[87] Algeria, Libya, Morocco and Tunisia, with a combined population of 31.2 million and a combined GDP of $ 6.8 billion,[88] created in 1964 a joint co-operation institution: the Permanent Consultative Committee of the Maghreb Countries. Among the institution's objectives is the co-ordination of industrial programmes and policies; it is assisted in that area by a Centre for Industrial Studies.[89] In 1966, the four Maghreb countries agreed to explore jointly with the Sudan and the United Arab Republic the possibility of enlarging the co-operation scheme to include all six countries of the subregion.

In the East African subregion,[90] the Governments of Kenya, Tanzania and Uganda are currently engaged in efforts to rescue and bolster one of the better known examples of industrial co-operation in Africa, the East African Common Market (EACM), which will be examined in more detail in the next section. Successful co-operation within EACM

[83] Union douanière des Etats d'Afrique équatoriale. UDEAC's membership has temporarily varied in recent years.

[84] United Nations, *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), part two, table 47.

[85] *Ibid.*

[86] Included UDEAC's members except for Cameroon.

[87] Defined by ECA to include Algeria, Libya, Morocco, Sudan, Tunisia and the United Arab Republic.

[88] See United Nations, *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), part two, table 47.

[89] The Centre is supported by a UNDP project. UNIDO is the executing and participating agency.

[90] Defined by ECA to include Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Somalia, Tanzania, Uganda and Zambia.

had been jeopardized by discontent brought about by the uneven distribution of industrial gains in favour of one of the member countries. At the subregional level, the nine countries involved, including those of EACM, are considering the formation of a wider East African community that would provide greater industrial development opportunities.

In addition to the groupings mentioned above, there is the Organisation Commune Africaine et Malgache (OCAM),[91] comprising most of the French-speaking African States, which deals partly with matters of economic co-operation. In the field of industry, the OCAM countries have recently agreed to form a common sugar market.

Asia

In West Asia, by virtue of a convention adopted in 1957 and signed in 1963,[92] Iraq, Jordan, Kuwait, Morocco, Syria and Yemen, joined by two countries from outside the subregion, namely, the United Arab Republic and Libya, created the Arab Economic Unity Council (AEUC), which provides for the co-ordination of economic policies and the liberalization of trade. AEUC encompasses a market area of 60.6 million consumers with a combined GDP of $ 9.97 billion.[93] Intra-trade amounts to 10 per cent of all trade on the average, but varies widely from country to country.[94] In 1964, the members of AEUC agreed to form an integrated Arab Common Market to be achieved gradually over a ten-year period. Since then, tariffs have reportedly been reduced by approximately 20 per cent on practically all manufactures, while quantitative restrictions have been abolished on the same percentage of these goods.[95] In addition, following a series of bilateral negotiations, the way has been cleared for the harmonization of industrial plans and policies among most of the member countries. At a meeting in 1967, AEUC decided to lower tariffs on industrial goods by 40 per cent and recommended the implementation of measures to promote the free movement of labour. At the sectoral level, the possibility of joint subregional manufacturing projects, such as steel and paper mills and petrochemical plants, is being considered. Kuwait would assume an active role in the financing of some of these undertakings.

In South and East Asia, very few serious attempts at industrial co-operation had been made before the 1960s. The subregions feature great

[91] Includes Cameroon, Central African Republic, Chad, Congo (Brazzaville), Democratic Republic of Congo, Dahomey, Gabon, Ivory Coast, Madagascar, Niger, Rwanda, Senegal, Togo and Upper Volta.

[92] Ratified by six of the seven signatories in 1963 and 1965.

[93] United Nations, *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), part two, table 17.

[94] UNCTAD, *Trade Expansion and Economic Integration among Developing Countries* (United Nations publication, Sales No.: 67.II.D.20), p. 18.

[95] *Ibid.*

cultural and political diversity as well as a high proportion of large countries. A large number of regional plans, agreements and organizations have emerged in recent years from the increasing efforts of South and East Asian countries towards industrial co-operation and integration.

The most successful example of co-operation for industrial development in the area to date has been the Regional Co-operation for Development (RCD) agreement, entered into by Iran, Pakistan and Turkey in 1963. RCD comprises a regional planning council that reviews development plans and potentialities of the grouping and makes recommendations for joint industrial projects and long-term regional purchase agreements. Notable progress has been made in the field of promotion and joint financing of large-scale industries serving the regional market.[96] The RCD countries make up a market of 158.6 million people, with a total GDP of $ 22.5 billion.[97]

The Association of South Eastern Asian Nations (ASEAN) is a revival of the Association of South East Asia (ASA), initiated in 1961 by Malaysia, the Philippines and Thailand for the purpose, among others, of promoting joint economic and industrial development. ASA remained dormant largely on account of political differences. In addition to the three above-mentioned countries, ASEAN includes Indonesia and Singapore; it has a combined population of 178.9 million, with a GDP of 22.8 billion.[98] The statutes of the organization give emphasis to the formation of a free-trade zone and the implementation of joint projects, especially in the area of infrastructure. However, since the traditional export sectors of the ASEAN economies are largely competitive (tin, rubber, rice and timber), industrial co-operation and joint development of the manufacturing sector seem to offer the most attractive prospects in the long run as a source of regional benefits.

Another co-operation experiment taking shape in South and East Asia and deserving mention is the Asian and Pacific Council (ASPAC), a "mixed" subregional grouping founded in 1966 and associating six developing nations (the Republic of Korea, Laos, Malaysia, Philippines, the Republic of South Viet-Nam and Thailand) with three developed ones (Australia, Japan and New Zealand). Although ASPAC emerged clearly out of political circumstances, its emphasis seems to have been slowly shifting to economic co-operation. It is open to other South East Asian countries and could eventually utilize its large market, abundant natural resources, capital and skills for joint industrial development. Given the imbalances prevailing in the grouping, however, the prospects

[96] Joint industrial projects approved for implementation include aluminium, carbon black and bank-note paper manufacturing. Under consideration are iron and steel, machine-tools and electronics.

[97] United Nations, *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), part two, table 47.

[98] *Ibid.*

for successful industrial co-operation will be uncertain unless active policies are adopted to ensure an equitable distribution of industrial benefits.[99]

Latin America

In the Latin American region, efforts towards industrial co-operation and integration continued to be made in both the Central American Common Market (CACM) and the Latin American Free Trade Association (LAFTA), to which most of the countries of the region belong. Recent developments in both groupings will be reviewed in the next section.

To achieve closer co-operation between CACM and LAFTA, a co-ordinating committee set up by members of both organizations met in 1968 to examine and promote the convergence of their integration objectives and activities. Possible subregional agreements between CACM and LAFTA, the opening of industrial complementary agreements to all Latin American countries, the establishment of a common preferential tariff and the freezing of the *status quo* with respect to import restrictions were among the items discussed of relevance to industrial co-operation.[100]

A sub-grouping of LAFTA — the Andean Group — was created in 1966 by Bolivia, Chile, Colombia, Ecuador and Peru. The subregion has a population of 57.4 million and a combined GDP of $ 22.2 billion.[101] Its intra-trade has been increasing several times faster than that of LAFTA as a whole. The Andean Group aims at fostering its industrialization through closer integration and industrial complementarity agreements. Such agreements were concluded in 1967 and 1968 by various member countries covering the petrochemical, metal, mechanical and automotive sectors. In addition, the group has established a joint development corporation and taken steps to co-ordinate industrial programmes and policies.[102] The Andean scheme represents an interesting attempt to forestall the excessive polarization of the gains from industrial co-operation in LAFTA around the two largest and more industrialized member countries.

In the Caribbean subregion, an agreement was signed in 1968 by Antigua, Barbados, Guyana, Jamaica and Trinidad and Tobago creating the Caribbean Free Trade Area (CARIFTA), designed to lead eventually to complete economic integration. A Caribbean Development Bank has also been established to finance and promote joint projects.

[99] Most of the intra-trade of the grouping, which is relatively high, is accounted for by Japanese imports of raw materials and exports of manufactures.

[100] For further details, see Banco de Mexico, *Comercio Exterior*, vol. 14, No. 10, October 1968.

[101] United Nations, *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), part two, table 47.

[102] For further details, see Banco de Mexico, *Comercio Exterior*, vol. 14, No. 10, October 1968.

Previous attempts at co-operation in the area have been unsuccessful. Even CARIFTA groups only five small nations with a total population of about 4 million and a combined GDP of $ 2 billion,[103] and none of the larger countries of the area is a participant. Industrial co-operation is, however, essential to the subregion since it is composed of heavily populated small islands with narrow markets and resource bases.

A REVIEW OF THREE CURRENT INTEGRATION SCHEMES

The East African Common Market

The East African Common Market (EACM) has been in operation since 1967, when Kenya, Tanganyika[104] and Uganda were organized into a single customs area. At the time of independence, in the early 1960s, the three countries enjoyed complete freedom of capital and labour movements, internal free trade, a unified external tariff, a single currency and a vast regional infrastructure, as well as a variety of common administrative services. EACM currently has a population of 29.3 million accounting for a GDP of $ 2.1 billion. *Per capita* income is under $ 100, but has increased noticeably in the 1960s, as can be seen from table 47.

From the point of view of industrialization, three salient facts have characterized the performance of EACM in recent years: a substantial growth of manufacturing output accompanied by a rapid expansion of intra-trade in manufactures; the absence of significant structural changes; and the aggravation of industrial imbalances among the three member countries.

Growth

Table 47 indicates that from 1960 to 1966 manufacturing output grew at average annual rates of 6 per cent in Kenya, 7.5 per cent in Uganda and 11.9 per cent in Tanzania, that is, almost twice the rates of increase of GDP in Kenya and Uganda and three times those in Tanzania. Production stagnated in Kenya and Uganda from 1960 to 1962 and advanced rapidly afterwards, while progressing more evenly in Tanzania throughout the period.[105]

These changes in manufacturing output were closely associated with movements in investment and trade. Table 47 shows that, from 1960 to 1966, the share of gross investment in GDP declined from 18 to

[103] United Nations, *Yearbook of National Accounts Statistics, 1967* (United Nations publication, Sales No.: E.69.XVII.6) and *Statistical Yearbook, 1967* (United Nations publication, Sales No.: E./F.68.XVII.1).

[104] Zanzibar merged with Tanganyika in 1964 to form the United Republic of Tanzania.

[105] See Z. Dobrska-Woydt, Curren Pattern of Investment in Manufacturing in East Africa, 1968 (consultant paper prepared for UNIDO).

TABLE 47. GROWTH AND STRUCTURAL CHANGE IN THE EAST AFRICAN COMMON MARKET, 1960–1966

	Per capita value[a]				*Average annual percentage growth rate*[b] *of*		*Percentage share of*			
	National income		*Net value of manufacturing output*		*GDP*	*Manufacturing output*	*Manufacturing in GDP*		*Gross domestic capital formation in GDP*[d]	
	1960	*1966*	*1960*	*1966*	*1960–1966*		*1960*	*1966*	*1960*	*1966*
Kenya	83	96	9	12	3.9	6.7	10	11	18	13
Tanzania[e]	49	68	2	4	3.9	11.9	3	5	12	14
Uganda	62	82	5	7	4.1	7.5	7	8	12	14
EACM[f]	64	81	5	8	3.9	7.8	7	8	14	14

Source: UNIDO, based on United Nations, *Yearbook of National Accounts Statistics* and *Statistical Yearbooks*.

[a] In current dollars.
[b] Computed at constant factor cost.
[c] Computed at current factor cost.
[d] Computed at current market prices.
[e] Former Tanganyika only.
[f] Weighted average.

13 per cent in Kenya. An examination of a longer time span, however, would reveal a sharp recession in the EACM of gross domestic capital formation in the early 1960s from its mid-1950s high level, which was regained only in 1967.[106] With respect to investment in manufacturing, all three countries achieved some progress in the 1960s. It is estimated that the share of manufacturing investment in total fixed capital formation rose to approximately 16 per cent in Kenya and 20 per cent in Tanzania over the period 1964—1967, with the performance of Uganda, on the basis of fragmentary evidence, being close to that of Kenya.[107]

Total intra-area trade increased from $ 40 million in 1954 to $ 126 million in 1965, while intra-trade in manufactures rose from some $ 5 million to $ 62 million.[108] In 1966, however, this remarkable expansion ground to a halt as total intra-area trade declined and the advance in intra-area trade in manufacturing slowed down (see table 48). More than one-half of total intra-EACM trade in the mid-1960s was accounted for by manufactures, especially light consumer goods, of which Kenya produced and exported a large share (see table 48 and footnote 105).

The recent trends in manufacturing production, investment and trade outlined above appear to be linked to two underlying factors. The situation of uncertainty prevailing in the wake of independence brought about the 1960—1963 recession, characterized by a sharp decline in manufacturing production and investment. Return to normality entailed a recovery in industrial activity further enhanced by the implementation of a few big projects.[109] In addition, manufacturing output increased rapidly in Tanzania and Uganda, as they established or expanded market-oriented industries competing with imports from Kenya. These efforts to reduce industrial imbalances, often implemented through trade restrictions, were largely responsible for the reversal of the trend in intra-EACM trade.

Changes in structure

The progress accomplished by the EACM countries in manufacturing production, investment and intra-trade does not appear to have entailed any significant structural changes in their economies. Table 47 shows that, over the 1960—1966 period, the share of manufacturing in GDP rose moderately in Kenya and Uganda and slightly more in

[106] *Ibid.*

[107] *Ibid.*

[108] Trade in manufactures refers to SITC 5—8. Had the manufacturing content of SITC 0—1 (food, beverages and tobacco) been included, manufacturing trade would have shown substantially higher figures. The data for 1954 are taken from UNCTAD, *Trade Expansion and Economic Integration among Developing Countries* (United Nations Publication, Sales No.: 67.II.D.20).

[109] Oil refinery, sugar factory and textile mills in Kenya; steel and textile mills in Uganda; textile mills and, more recently, oil refinery and cement plant in Tanzania (see Z. Dobrska-Woydt, *op. cit.*).

TABLE 48. INTRA-AREA TRADE OF THE EAST AFRICAN COMMON MARKET BY COMMODITY GROUPS, 1964—1966[a]

SITC	Commodity group	Intra-area imports					
		Value (millions of dollars)[b]			Percentage composition		
		1964	1965	1966	1964	1965	1966
5 – 8	*Mainly manufactures*	55.8	62.6	69.5	49.0	49.6	56.4
5	Chemical products	10.2	11.7	13.3	9.0	9.3	10.8
6	Manufactured goods	30.8	34.2	40.6	27.1	27.1	33.0
7	Machinery and equipment	0.6	0.9	1.5	0.5	0.7	1.2
8	Miscellaneous manufactures	14.2	15.8	14.1	12.5	12.5	11.4
0 – 4	*Mainly primary products*	57.6	63.1	53.3	50.6	50.0	43.2
0	Food products	29.1	28.2	24.9	25.6	22.3	20.2
1	Beverages and tobacco	17.3	10.9	7.3	12.0	8.6	5.9
2	Non-edible raw materials	2.0	2.8	3.2	1.8	2.2	2.6
3	Fuel and lubricants	8.4	15.5	14.2	7.4	12.3	11.5
4	Oil and fats	4.4	5.7	3.7	3.9	4.5	3.0
0 – 9	*All commodities, total*[c]	113.8	126.2	123.2	100.0	100.0	100.0

Source: UNIDO, based upon United Nations, *Yearbook of International Trade Statistics, 1966* (United Nations publication, Sales No.: 68.XVII.2).

[a] All figures are rounded.

[b] Conversion factor £1 = $2.80.

[c] Includes SITC 9 – miscellaneous transactions.

Tanzania. Only in the latter year, however, did it reach 11 per cent in Kenya and one-half that amount in Tanzania. Similarly, the share of manufacturing investment in gross domestic capital formation remains low although, as mentioned earlier, advances in that field have been substantial. Industrialization in EACM also appears to have had only a negligible effect on the volume and structure of employment.[110]

With respect to the internal composition of the manufacturing sector, comparisons of data available for Kenya for 1957 and 1965 (see table 49) reveal a certain stability, except for the relative decline of certain early industries associated with construction activities (wood products and non-metallic minerals) and a rise in basic metals and metal products,

TABLE 49. STRUCTURE OF THE MANUFACTURING SECTOR IN THE EACM COUNTRIES
(Percentage distribution of value added)

ISIC	*Industry*	*Kenya*		*Tanzania*	*Uganda*
		1957	*1965*	*1965*	*1964*
20–22	Food, beverages and tobacco	37.8	36.6	41.4	32.9
23–24	Textiles and wearing apparel	4.4	6.6	22.3	37.0
25–28	Wood, furniture, paper and publishing . .	17.4	10.0	5.8	8.9
31–32	Chemicals and petroleum products . . .	9.8	14.7	2.7	5.4
33	Non-metallic minerals . . .	10.0	6.5	5.1	1.1
34–38	Basic metals and metal products	18.3	24.1	22.1	11.9
30–39	Others	2.3	1.5	0.6	2.8
2–3	Total manufacturing	100.0	100.0	100.0	100.0

Source: UNIDO, based on United Nations, *The Growth of World Industry, 1953–1965, National Tables* (United Nations publication, Sales No.: 67.XVII.10), and national statistics.

categories which include a high proportion of repair activities. For EACM as a whole, an intercountry comparison of the structure of manufacturing in 1965 for Kenya and Tanzania and 1964 for Uganda shows broad similarities, as is evidenced by table 49. In all three countries the prominent role is played by the food, beverages and tobacco industry, reflecting export crop processing in Tanzania and Uganda and the development of the grain milling, dairy and cattle industry in Kenya. Next in order of importance come the basic metal and metal products industries, whose significance for development and structural change are deceptive because of the importance of repair activities (especially in Kenya) and ore processing (copper smelting in Uganda). Chemicals are relatively strong in Kenya (oil refinery and soda ash). The slow share of non-metallic minerals industries in Tanzania and Uganda, and of

[110] See Z. Dobrska-Woydt, *op. cit.*

textiles in Kenya was due to the absence until recently of cement and textile industries in those two countries. Although there is evidence of industrial diversification in EACM, its extent has been rather limited.

Industrial imbalances

Due to locational advantages, Kenya enjoyed an early start over its neighbours in industrialization. Because of polarization effects and external economies, it attracted most of the industries serving the EACM market, even light market-oriented manufactures. It has been estimated, for example, that in the early 1960s, Tanzania and Uganda accounted for some 29 per cent of the over-all sales of Kenya's manufactures, this

TABLE 50. EAST AFRICAN COMMON MARKET: AVERAGE ANNUAL RECIPROCAL TRADE BALANCES BY COMMODITY GROUPS, 1964–1966[a]

(Millions of dollars)[b]

	Commodity group and SITC code		
	Mainly manufactures (5–8)	*Mainly primary products (0–4)*	*Total trade[c] (0–9)*
Kenya	29.5	16.9	46.7
Tanzania[d]	19.0	11.7	30.9
Uganda	10.5	5.2	15.8

Source: UNIDO, based upon United Nations, *Yearbook of International Trade Statistics, 1966* (United Nations publication, Sales No.: 68.XVII.2).

[a] Both imports and exports are c.i.f. figures.

[b] Conversion factor: £1 = $2.80.

[c] Includes SITC 9 "Miscellaneous transactions".

[d] Former Tanganyika only.

dependence being much higher for individual industries.[11] One of the corollaries of this high territorial concentration of production was a strong disequilibrium in intra-zonal trade. In the period 1964–1966, total industrial exports (SITC 5–8) from Kenya to Tanzania and Uganda were respectively two and three times greater than corresponding imports from those countries. The same phenomenon is portrayed by table 50, which indicates a sizeable surplus on account of both total and manufacturing intra-trade in favour of Kenya.

Whether or not these inequalities were exclusively the result of tariff preferences enjoyed by Kenya within EACM, the loss of opportunities to establish viable local industries and to import cheaper extra-EACM manufactures are relevant considerations for Tanzania and Uganda with respect to the distribution of gains from integration. Awareness of this problem led the Raisman Commission in 1961 to recommend a

[11] 20 to 40 per cent for textiles, clothing, cement, paper and metal products; over 40 per cent for tobacco, footwear and soap (see Z. Dobrska-Woydt, *op. cit.*).

redistribution of revenue through a common fiscal pool.[112] In 1964, the Kampala Agreement provided various compensatory industrial distribution policies. Failure to implement them brought about a self-sufficiency drive by the EACM countries accompanied by the raising of quotas on intra-trade and the termination of the common currency agreements.[113]

The Treaty for East African Co-operation, which came into effect in 1967, constitutes an attempt to preserve a measure of industrial co-operation in EACM. The treaty prohibits quotas on intra-zonal trade but allows a deficit country to impose a "transfer tax" not exceeding 50 per cent of the common external tariff on specific imports from a partner country, provided that it intends to establish such an import-replacing industry within a short period of time. Fiscal redistribution is due to be phased out and no provision made for the allocation of new industries, but an East African Development Bank has been created with the purpose of promoting and influencing the location of large-scale industries. In addition, a common EACM secretariat has been set up in Arusha, while the headquarters of various common services are dispersed among member countries.

Thus it would appear that close industrial integration in EACM has been reduced to preferential trading arrangements. That the existing industrial imbalances called for certain adjustments is evident, especially in the area of light market-oriented manufactures. The absence of provisions and institutional machinery for the joint promotion and distribution of new industries is, however, regrettable.[114] It could well entail the loss of some of the major potential benefits of integration.

The Central American Common Market

The Central American Common Market (CACM) groups five nations (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua), with a total population of 13.6 million and a combined GDP of $ 3.6 billion.[115] It is often cited as one of the most successful examples of economic co-operation among developing countries. Since its establishment in 1960,[116] trade among member countries has been freed in 91 per cent of the items of the standard customs classification (NAUCA) and a common external tariff applies to 98 per cent of the NAUCA items. In

[112] See Peter Robson, "The African Experience of Common Market", *Inter-Economics*, No. 4, Hamburg, April 1968.

[113] *Ibid.*

[114] Several large-scale industries such as steel mills, fertilizer plants, oil refineries and various assembly plants are already being established in triplicate within EACM (see Z. Dobrska-Woydt, *op. cit.*).

[115] United Nations, *World Economic Survey, 1967* (United Nations publication, Sales No.: E.68.II.C.1), part two, table 47.

[116] Costa Rica acceded in 1962.

addition, a number of common institutions support CACM co-operation from the point of view of development finance, industrial studies and research and monetary matters.

Performance

From its inception to the present, CACM has experienced appreciable growth in manufacturing production as well as a remarkable increase in intra-area trade. As may be observed from table 51, manufacturing output advanced at average rates approaching 10 per cent in Nicaragua and exceeding 7 per cent in the four other countries, while GDP grew at slower rates in all cases. Net value of manufacturing *per capita* in 1966 attained levels ranging from $ 30 in Honduras and $ 40 – $ 44 in Guatemala and Nicaragua to $ 59 in Costa Rica. This represented increases of 20 to 30 per cent over the 1960 level.

With respect to trade, as indicated by table 52, intra-area trade of all commodities soared from $ 32.7 million in 1960 to $ 156 million in 1966, representing an average annual rate of growth of approximately 31 per cent and more than 20 per cent of the combined value of CACM exports in 1966. To appraise this performance, it should be recalled that, around 1950, the value of intra-trade was some $ 8 million annually, that is, roughly 4 per cent of total CACM exports.[117] Within CACM intra-trade, manufacturing goods (SITC 5 – 8) were fastest-growing group of commodities. From 1960 to 1966, they increased at an average rate exceeding 40 per cent *per annum*, to constitute some 64 per cent of intra-area trade of all commodities in the latter year.

A large proportion of the items included under SITC 6 (manufactured goods classified mainly by material) and SITC 8 (miscellaneous manufactures), which are the two largest categories of intra-area trade, are produced and exported by El Salvador and Guatemala. However, many light manufactures produced by the other countries compete on the regional market. This is especially true of the products of the well-established food-processing industry.[118] The fast growth of chemicals is accounted for mainly by the expanding fertilizer industries of Costa Rica and El Salvador. It is interesting to note that intra-trade in machinery and equipment is of negligible value. Future growth in intra-trade will probably rely more on heavier manufacturing goods as their production is undertaken on a regional basis[119].

In spite of this rapid progress of production and trade, only very moderate structural changes took place in the economies of individual CACM countries. From 1960 to 1966 (see table 51), the share of manufac-

[117] ECLA, *Economic Survey of Latin America, 1965* (United Nations publication, Sales No.: 67.II.G.1).

[118] Included in SITC 0.

[119] ECLA, *Economic Survey of Latin America, 1965* (United Nations publication, Sales No.: 67.II.G.1).

TABLE 51. GROWTH AND STRUCTURAL CHANGE IN THE CENTRAL AMERICAN COMMON MARKET, 1960–1966

Country	Per capita (dollars)[a]				Average annual percentage growth rate[b] of:		Percentage share of:			
	National income		Net value of manufacturing		GDP	Manufacturing	Manufacturing in GDP[c]		Gross domestic capital formation in GDP[d]	
	1960	1966	1960	1966	1960–1966		1960	1966	1960	1966
Costa Rica[e]	350	362	48	59	5.3	8.7	13	15	18	23
El Salvador	210	240	27	41	6.7	8.2	12	16	14	17
Guatemala	246	265	33	40	5.2	7.2	13	14	11	12
Honduras	174	199	22	32	4.6	7.7	12	15	13	17
Nicaragua	248	311	34	44	8.5	9.8	12	13	13	22
CACM[f]	237	264	31	41	5.9	8.1	13	15	13	17

Source: UNIDO, based on United Nations, *Yearbook of National Accounts Statistics* and *Statistical Yearbook*.

[a] In current dollars.

[b] Constant market prices for Guatemala and Nicaragua; others at constant factor cost.

[c] Constant market prices for Guatemala and Nicaragua; others at current factor cost.

[d] Constant market prices for Nicaragua; others current market prices.

[e] Manufacturing includes mining and quarrying.

[f] Weighted average.

TABLE 52. INTRA-AREA IMPORTS OF THE CENTRAL AMERICAN COMMON MARKET BY COMMODITY GROUPS, 1960 – 1966[a]

SITC code	Commodity group	Intra-area imports: Value (millions of dollars)			Intra-area imports: Percentage composition			Average annual percentage growth rate
		1960	1963	1966	1960	1963	1966	1960 – 1966
5 – 8	*Mainly manufactures*	13.1	34.6	101.0	40.0	52.3	64.7	41.7
5	Chemical products	2.4	7.8	22.5	7.3	11.8	14.4	43.7
6	Manufactured goods	6.2	16.3	42.0	19.0	24.6	26.9	37.3
7	Machinery and equipment	1.5	1.6	6.5	4.6	2.4	4.2	37.7
8	Miscellaneous manufactures	3.0	8.9	30.0	9.2	13.4	19.2	48.4
0 – 4	*Mainly primary products*	19.3	31.3	54.5	59.0	47.3	34.9	19.2
0	Food products	14.9	21.6	40.0	45.6	32.6	25.6	19.0
1	Beverages and tobacco	1.1	1.1	2.2	3.4	1.7	1.4	14.5
2	Non-edible raw materials	1.6	3.3	5.3	4.9	5.0	3.4	20.6
3	Fuel and lubricants	0.1	3.7	4.0	0.3	5.6	2.6	26.5
4	Oil and fats	1.6	1.6	3.0	4.9	2.4	1.9	12.9
0 – 9	*All commodities, total*[b]	32.7	66.2	156.0	100.0	100.0	100.0	31.0

Source: UNIDO, based upon ECLA, *Economic Survey of Latin America, 1966*. United Nations publication, Sales No.: 68.II.G.1.

[a] All figures are rounded.

[b] Includes SITC 9 (miscellaneous transactions).

turing in GDP increased slightly in all five countries, although remaining generally low (under 16 per cent). The situation is brighter with respect to investment efforts. The share of capital formation in GDP increased substantially in four of the five CACM countries over the above-mentioned period and some evidence indicates that manufacturing investment followed the same trend. As to the structure of the manufacturing sector, it can be inferred from trade patterns that it has remained largely unchanged, resting largely upon light manufactures, some consumer durables and construction materials.

In assessing the performance of CACM, it should be mentioned that, until 1965, industrial co-operation had taken place under propitious external conditions, namely, favourable world market prices for traditional exports and a high level of foreign capital inflow.[120] In 1966, these conditions were reversed and most of the CACM countries adopted restrictive trade and monetary measures on a temporary basis to cope with balance of payments difficulties. Preliminary estimates for 1967 appear to show, however, a continuing expansion of intra-trade to approximately $ 210 million.[121]

Industrial co-operation instruments

From the point of view of manufacturing trade, the Managua Treaty provided for the automatic liberalization of all trade, leaving it to individual producers to request and justify temporary restrictions for purposes of adjustment to the regional market. Under this approach, made possible by the low initial level of industrialization of the Central American states, most of the NAUCA items had been placed under free trade by 1966. Exceptions in the manufacturing category include petroleum products and some products of state monopolies. Similarly, a common external tariff encompasses all but 2 per cent of the NAUCA items. These goods, which include petroleum products, transport equipment and electrical appliances, account for 20 per cent of CACM imports. They are scheduled to be brought within the common tariff wall by 1970, following an agreement on the integrated regional development of the assembly industries and harmonization of excise taxes.[122]

In the institutional field, the Central American Bank for Economic Integration (CABEI), also created in 1960, makes available financial resources for financial projects. By 1967, CABEI had loaned close to $ 110 million, approximately 40 per cent of which went to industrial

[120] From 1960 to 1967, CACM is estimated to have received some $ 200 million in private foreign investment (see Miguel Wionczeck, "The Central American Common Market", *Inter-Economics*, No. 8, Hamburg, August 1968.

[121] Newsletter of the Permanent Secretariat of CACM, quoted in *Comercio Exterior*, Mexico, September 1968.

[122] ECLA, *Economic Survey of Latin America, 1966* (United Nations publication, Sales No.: 68.II.G.1).

projects.[123] Also in the realm of investments, an agreement provides for the harmonization of fiscal incentives. Another common institution, the Central American Institute for Industrial and Technological Studies (ICAITI) promotes industrial co-operation through the identification and evaluation of industrial projects of regional interest. In addition, the Secretariat for Economic Integration (SIECA) co-ordinates the development policies of the member countries of the Central American Common Market.

The most interesting CACM instrument of industrial co-operation, however, was the Regime for Central American Integration of Industries,[124] under which a temporary regional monopoly was to be granted to industries requiring access to the whole regional market to operate efficiently. Additional encouragements were to be provided through external protection, fiscal incentives and preference in regard to government procurement. The essential objectives of the Regime were to attract new industries which otherwise might not have been established, to avoid wastage of scarce capital, managerial and technical skills and to allow for a policy of industrial location.

Before 1965, surprisingly enough, no new industries had been attracted by the Regime in spite of a long list of candidates. Two are presently in existence in Honduras and Nicaragua, and a few regional industries have been established outside it. Failure is ascribed to various causes, among which the demand for external assistance through CABEI of industries applying to the Regime, the risk of uneconomic location due to political considerations, the business regulation provisions of the Regime, its cumbersome procedure and the small size of CACM as well as unrestricted intra-trade which made such a device superfluous. Nevertheless, the basic assumptions of the Regime concerning economies of scale and duplication remain relevant. In 1966, a special system for the promotion of productive activity was established providing above-common-tariff protection for certain regional industries.

Industrial imbalances

Although CACM has not faced severe industrial imbalance strains as has the East African Common Market, industrial activity has tended to concentrate around certain countries. It may be observed from table 51, for example, that Honduras, the least industrialized CACM country, experienced the lowest growth rate of manufacturing and GDP in the period 1960–1965. This is corroborated by its increasingly deficitary intra-area trade balance in 1965 and 1966.[125]

[123] Alberto Calvo, "Financial Aspects of Latin American Integration", *Bank of London and South America Review*, vol. 2, No. 18, London, June 1968.

[124] For further details, see Miguel Wionczek, *op. cit.*

[125] The largest deficitary position, however, is found in Nicaragua. See ECLA, *Economic Survey of Latin America, 1966* (United Nations publication, Sales No. 68.II.G.1).

These difficulties had been anticipated at the outset. The ill-fated Regime for Central American Integration of Industries featured an explicit industrial distribution policy. In addition, CABEI was to assist in compensating the less developed countries by devoting a larger share of its resources to their infrastructure and industrial sectors. In effect, by 1967, approximately 50 per cent of the bank's resources had been allocated to Honduras and Nicaragua.[126]

Additional measures were adopted in 1967. In the interest of balanced CACM development, Honduras was allowed the privilege of granting special fiscal incentives to attract more industries, and the Central American Institute for Industrial and Technological Studies (ICAITI) was called upon to identify and evaluate regional industries for location in that country.[127]

Both the prospects and the challenge facing CACM are great. The ultimate goal is the rapid and harmonious development of the region through an integrated common market. At the stage reached by the CACM countries, this will require increasing attention to an equitable sharing of the benefits from co-operation and structural changes in the economies of the member countries.

The Latin American Free Trade Association

The Latin American Free Trade Association (LAFTA) was established in 1960 by Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru and Uruguay. Bolivia and Venezuela joined in 1966. Including the two latter countries, LAFTA embraces a vast market of 212 million people with a combined GDP of $ 79.6 billion.[128] The objectives of LAFTA are the progressive multilateral freeing of trade and sectoral co-operation among member countries in order to promote industrial development.

Performance

From 1960 to 1966, both GDP and manufacturing output increased at approximately the same rates (5 and 5.7 per cent respectively) in the LAFTA group as a whole (see table 53). There were, however, considerable differences in performance among individual countries, the highest rates of growth of both GDP and manufacturing being recorded for Chile, Mexico and Peru. Net value of manufacturing *per capita* in LAFTA increased from $ 76 to $ 105, indicating a relatively high level of industrialization compared with other developing subregions. As to the two countries which joined LAFTA in 1966, Venezuela evidenced a

[126] Alberto Calvo, *op. cit.*

[127] ECLA, *Economic Survey of Latin America, 1966* (United Nations publication, Sales No.: 68.II.G.1).

[128] United Nations, *World Economic Survey, 1967*, part II, table 47.

TABLE 53. GROWTH AND STRUCTURAL CHANGE IN THE LATIN AMERICAN FREE TRADE ASSOCIATION, 1960–1966[a]

	Per capita (current dollars)[b]		*Average annual percentage growth rate in real terms*[c] *of:*		*Percentage share of:*			
	National income	*Net value of manufacturing*	*GDP*	*Manufacturing*	*Manufacturing in GDP*[d]		*Gross domestic capital formation in GDP*[e]	
	1966	*1960*	*1966*	*1960–1966*		*1960*	*1966*	*1960*	*1966*
Argentina	705	169	252	2.8	4.2	32	33	23	18
Brazil[f]	252	61	66	4.3	5.1	23	24	17	13
Chile	474	89	136	6.4	6.7	25	25	21	21
Colombia	285	40	61	4.4	5.6	17	19	16	13
Ecuador	188	28	35	4.3	5.5	16	17	15	16
Mexico[g]	446	85	140	6.0	7.9	26	29	17	16
Paraguay	189	26	32	4.0	4.3	17	15	22	20
Peru[h]	212	34	49	7.2	9.3	17	20	18	12
Uruguay[h,i]	535	98	129	0.2	0.9	21	22	11	18
LAFTA[j]	358	76	105	5.0	5.7	25	27	18	15
Bolivia[g]	154	16	24	5.0	5.3	15	16	15	16
Venezuela[k]	744	84	119	4.5	7.2	11	13	18	20

Source: UNIDO, based on United Nations, *Yearbook of National Accounts Statistics* and *Statistical Yearbook*.

[a] Comparability of data shown for individual countries is strictly limited due to differences in the coverage of national series and problems of conversion of national currencies into United States dollars. Data for Bolivia and Venezuela, which joined LAFTA in 1966, are shown separately.

[b] *Per capita* income estimates are not shown for 1960 due to lack of conversion factors comparable to those used for 1966.

[c] Computed at constant factor cost for Argentina, Colombia, Ecuador, Uruguay and Venezuela, and at constant market prices for Brazil, Mexico and Paraguay. Net domestic product at constant factor cost for Chile and GDP at constant market prices for Peru and Bolivia. Growth rates for Colombia and Mexico refer to the period 1960–1965.

[d] Computed as indicated in footnote [c] for Brazil, Chile, Colombia, Mexico, Paraguay and Peru. Others at current factor cost.

[e] Computed at current market prices for all countries. Capital formation for Brazil and Mexico refers to gross fixed capital formation, for others gross domestic capital formation. Coverage of series varies, however, with respect to stocks. For definition of series, see source.

[f] Manufacturing includes mining, public utilities and construction.

[g] Manufacturing includes petroleum extraction.

[h] For Peru and Uruguay, data shown under 1966 refer to 1964.

[i] Manufacturing includes mining and quarrying.

[j] Weighted average.

[k] Manufacturing excludes petroleum refining.

growth of manufacturing output over the period 1960–1966 well over the average for LAFTA, while the performance of Bolivia was close to the average.

With respect to trade, intra-LAFTA imports increased at an average rate of close to 17 per cent *per annum* (see table 54), from 1961 to 1966. In recent years there has been a tendency for intra-area trade to slow down. In 1966, intra-trade growth was very slight as compared with previous years. In 1967, the absolute value of intra-trade declined by a small amount. The share of intra-LAFTA trade in total external trade increased from 7 per cent in 1961 to 11 per cent in 1966.[129] Intra-trade, as indicated by table 54, is largely concentrated in three countries: Argentina, Brazil and Chile. During the 1960s, however, Colombia, Peru and especially Mexico have substantially increased their share in intra-zonal trade. Trade between LAFTA countries is characterized by the low participation of manufacturing goods (approximately 35 per cent), and especially capital goods. The latter manufactures represented only 1 per cent of total intra-trade over the period 1963–1966.

In spite of the progress of individual countries, the LAFTA subregion on the average did not show any significant structural changes in the 1960s. In addition to the composition of intra-trade mentioned above, it can be observed from table 53 that there was little change in the relative importance of the manufacturing sector and of investment efforts in the LAFTA economies during that period.

Progress of industrial co-operation

The LAFTA charter provides for two major types of industrial co-operation instruments: trade liberalization and sectoral integration through complementarity agreements among two or more member States. Trade liberalization is carried out through annual negotiations of tariff concessions from national lists and the gradual freeing of existing intra-trade by periodic negotiations from a common list.[130]

Negotiations from the common list have proved difficult, since, owing to the structure of intra-trade, there is little room to manoeuvre. In negotiations held in 1967, LAFTA representatives failed to agree on the second instalment of the common list items to be traded throughout the area by 1973. As to national list negotiations,[131] they started off impressively as concessions were granted by LAFTA countries on some 7,000 products in 1961 and 1962. The number of products negotiated declined considerably in the next three years. In 1966, 508 concessions

[129] Alberto Calvo, *op. cit.*

[130] Results of negotiations from the national list are subject to various escape clauses, including temporary withdrawal, while results of negotiations from the common list (every three years) are irrevocable.

[131] For details on national list concessions, see ECLA, *Economic Survey of Latin America, 1966* (United Nations publication, Sales No.: 68.II.G.1), tables 35 and 36.

TABLE 54. INTRA-AREA TRADE OF THE LATIN AMERICAN FREE TRADE ASSOCIATION, 1961–1967

	[illegible]	[illegible]	[illegible]	Percentage composition			Average annual [illegible] rate
	1961	[illegible]	[illegible]	1961	[illegible]	[illegible]	[illegible]
Argentina	126.0	226.7	212.0	35.0	28.9	27.8	12.46
Brazil	45.2	167.0	171.6	12.6	21.3	22.5	29.87
Chile	94.5	140.9	143.1	26.2	18.0	18.7	8.32
Colombia	10.2	56.0	31.9	2.9	7.2	4.2	40.57
Ecuador	4.1	8.3	12.5	1.1	1.1	1.6	15.15
Mexico	4.1	33.7	38.2	1.1	4.3	5.0	52.40
Paraguay	9.8	14.3	16.5	2.7	1.8	2.2	7.85
Peru	31.8	91.5	93.4	8.8	11.7	12.2	23.53
Uruguay	34.5	45.0	44.1	9.6	5.7	5.8	5.46
LAFTA, total	360.2	783.4	763.3	100.0	100.0	100.0	16.81

Source: UNIDO, based on ECLA, *Economic Survey of Latin America, 1966*, and LAFTA, *Monthly Abstract*.

[a] c.i.f.

were granted, 468 of which referred to manufactured goods. As in previous years, most of the concessions came from Argentina, Brazil and Mexico; the implication would be that the participation of the other LAFTA countries in trade liberalization was rather low.

Complementarity agreements, corresponding to the requirement for planned regional allocation of resources in certain sectors, hold great promise. In effect, there are a number of large-scale industries which cannot operate efficiently within the national markets of the LAFTA countries. However, prior to 1967 only four such arrangements,[132] of relatively minor significance, had been concluded among LAFTA countries. They involved: punch cards and calculators (Argentina, Brazil, Chile and Uruguay); electronic valves (Argentina, Brazil, Chile, Mexico and Uruguay); electrical appliances (Brazil and Uruguay); electronic and electrical communication products (Brazil and Uruguay). In 1967, negotiations were completed on a complementarity agreement for the chemical industry; it was the first important achievement of LAFTA in the use of this co-operation instrument. The chemical industry is a fast-growing highly capital-intensive sector requiring large-scale operations. The agreement was signed by eight LAFTA members and applies automatically to the three others by virtue of their position as countries of relatively lower economic development.

Mention should also be made, in connexion with industrial co-operation, of the action of various associations of industrialists and entrepreneurs. They have initiated sectoral meetings and studies and also influence co-operation by bringing their influence to bear on member Governments and advising the LAFTA secretariat. At the fifth conference of LAFTA in 1965, for example, the industrialists promoted negotiations on the machine-tool sector.[133]

One of the obstacles to the continued progress of integration in LAFTA is the dissatisfaction of the less-developed countries with the distribution of benefits from industrial co-operation. To deal with this problem, special advantages are granted to them, such as the additional tariff concessions granted to Ecuador and Paraguay in 1966[134] and provisions for their automatic participation in complementarity agreements, as in the chemical industry case. The LAFTA secretariat has recommended additional measures such as the joint establishment and financing of multinational industries, exclusive allocation of plants under complementarity agreements, the creation of a regional development fund and easier deadlines for integration commitments.[135]

[132] Alberto Calvo, *op. cit.*

[133] ECLA, *Economic Survey of Latin America, 1966* (United Nations publication, Sales No.: 68.II.G.1), pp. 59 and 60.

[134] *Ibid.*

[135] See *Business Latin-America*. New York, Business International Corporation, 1 May 1969.

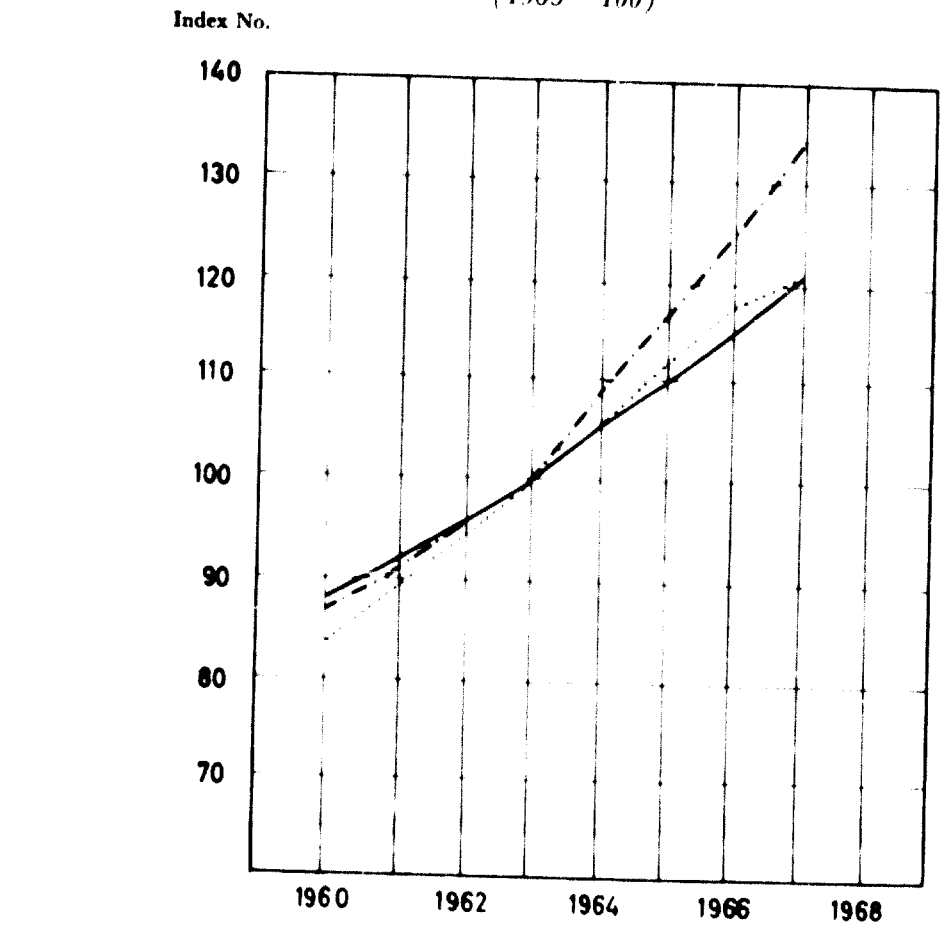
In addition, there has been a trend towards the formation of sub-groupings within LAFTA among member countries having relatively more homogeneous geographical and economic characteristics. The Andean integration scheme, encompassing Bolivia, Chile, Colombia, Ecuador and Peru, to which reference was made earlier, exemplifies that tendency.

The performance of LAFTA in the field of industrial co-operation would appear to have been poorer than that of CACM. The difficulty with LAFTA stems in part from the fact that the member countries started with an industrial structure of some importance developed under strong protection, which they are unwilling to expose to competition. They are also reluctant to give up the right to establish certain industries which they do not at present possess. Future progress of industrial co-operation within LAFTA will hinge heavily upon the modification of these attitudes.

Annex

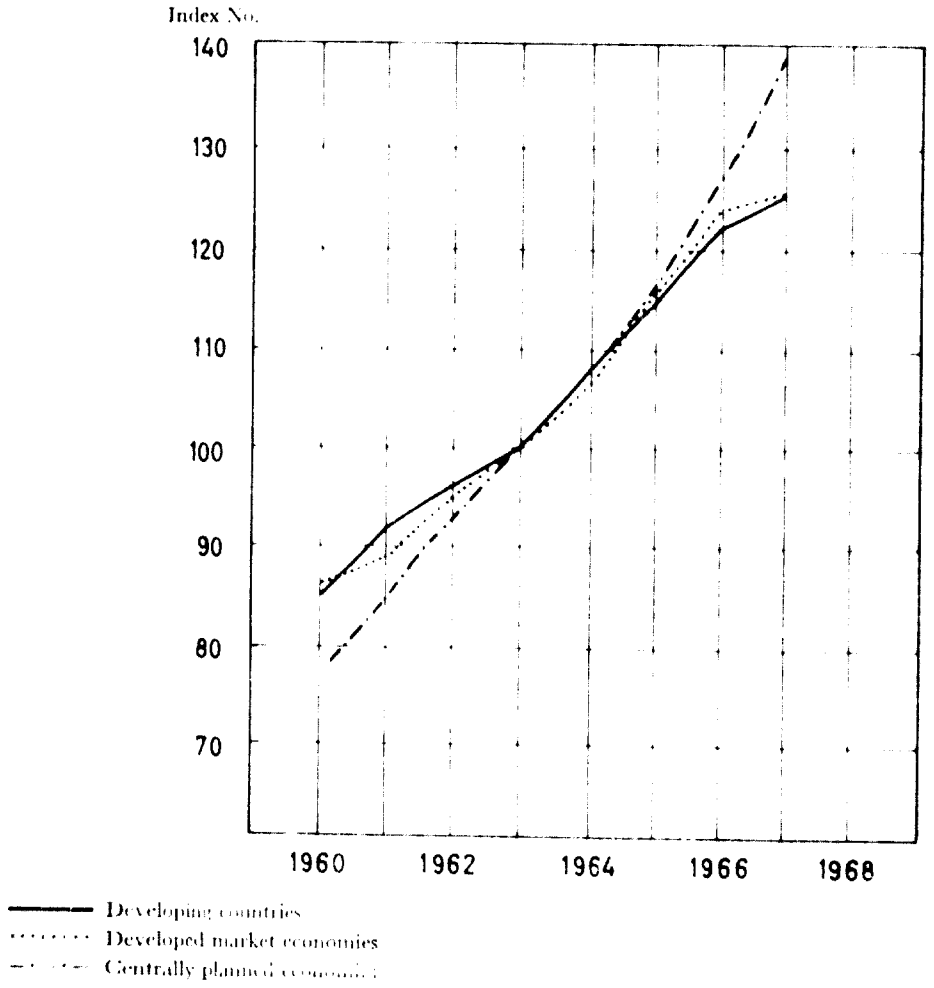
ECONOMIC INDICATORS

1. Growth of gross domestic product by economic groupings, 1960–1967
(1963 = 100)



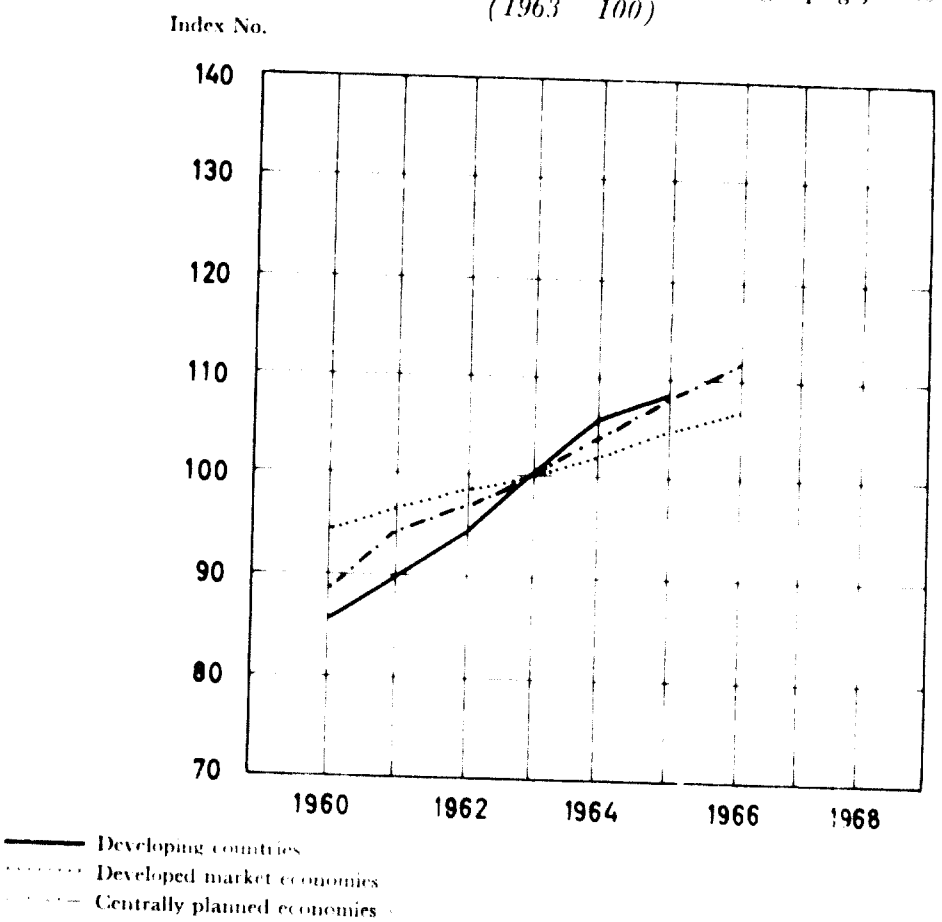
Source: United Nations, *Yearbook of National Accounts Statistics.*

2. Manufacturing output (ISIC 2–3) by economic groupings, 1960–1967 (1963 = 100)



Source: United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics.*

3. Manufacturing employment (ISIC 2 3) by economic groupings, 1960 1966 (1963 100)

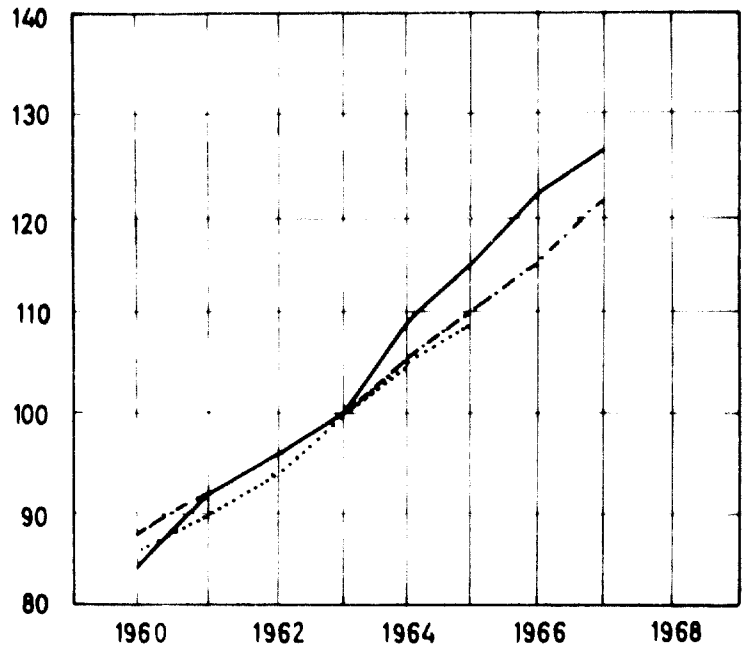


Source: United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics.*

4. Manufacturing output, employment and GDP, 1960–1967 (1963 = 100)

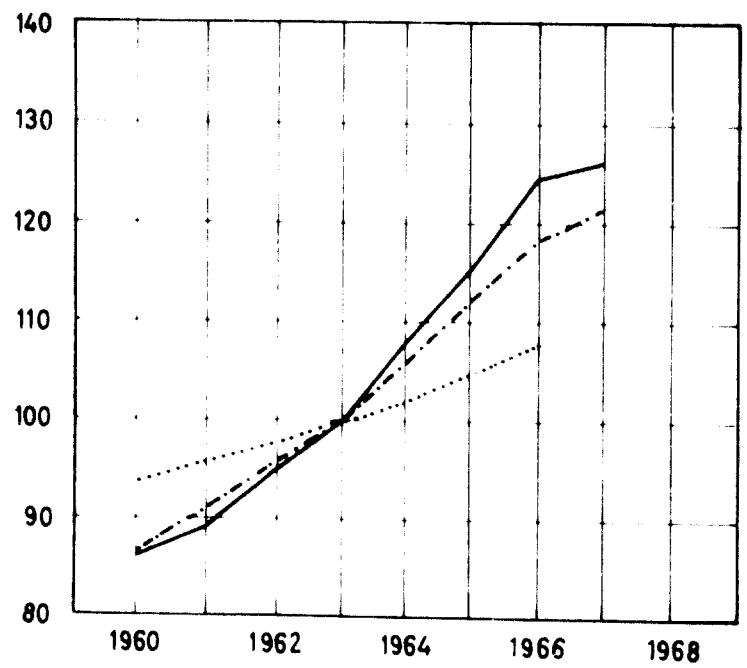
Index No.

(a) Developing countries

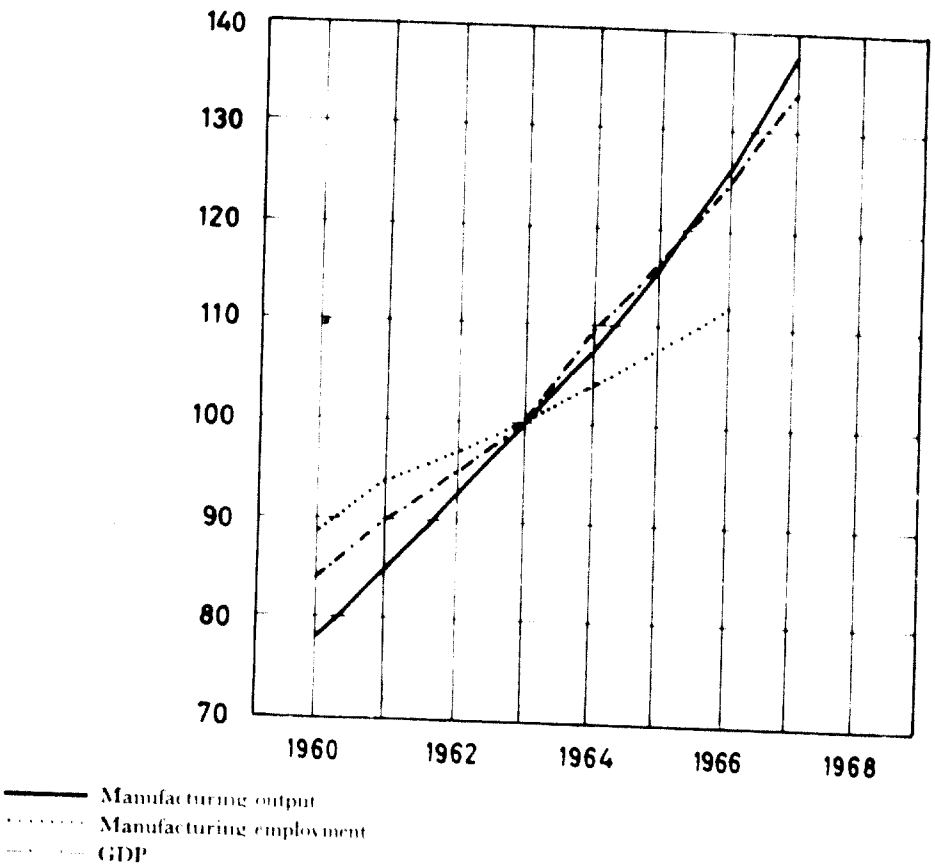


Index No.

(b) Developed market economies

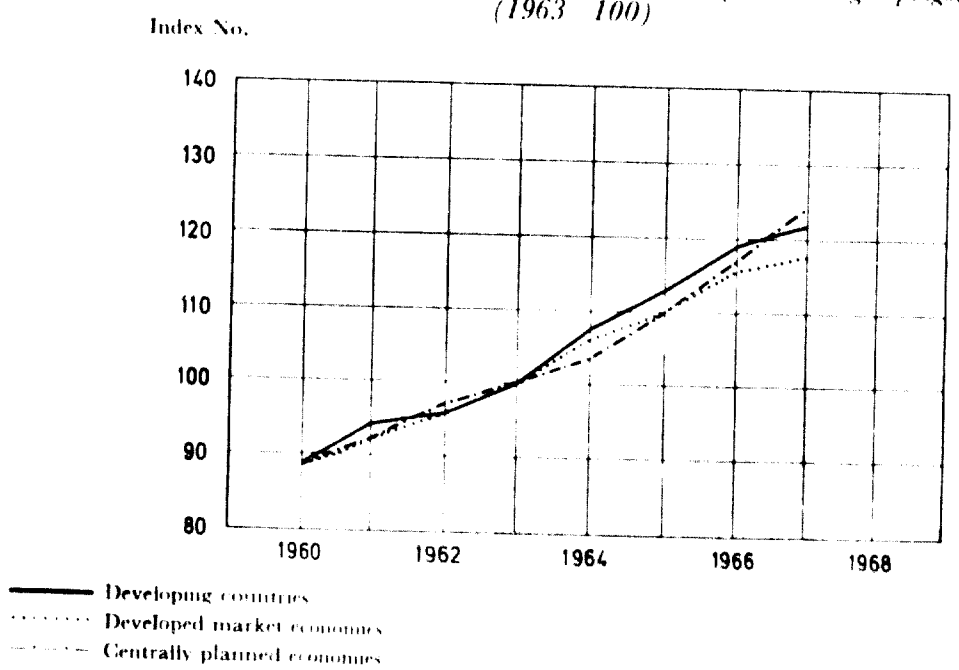


(c) Centrally planned economies



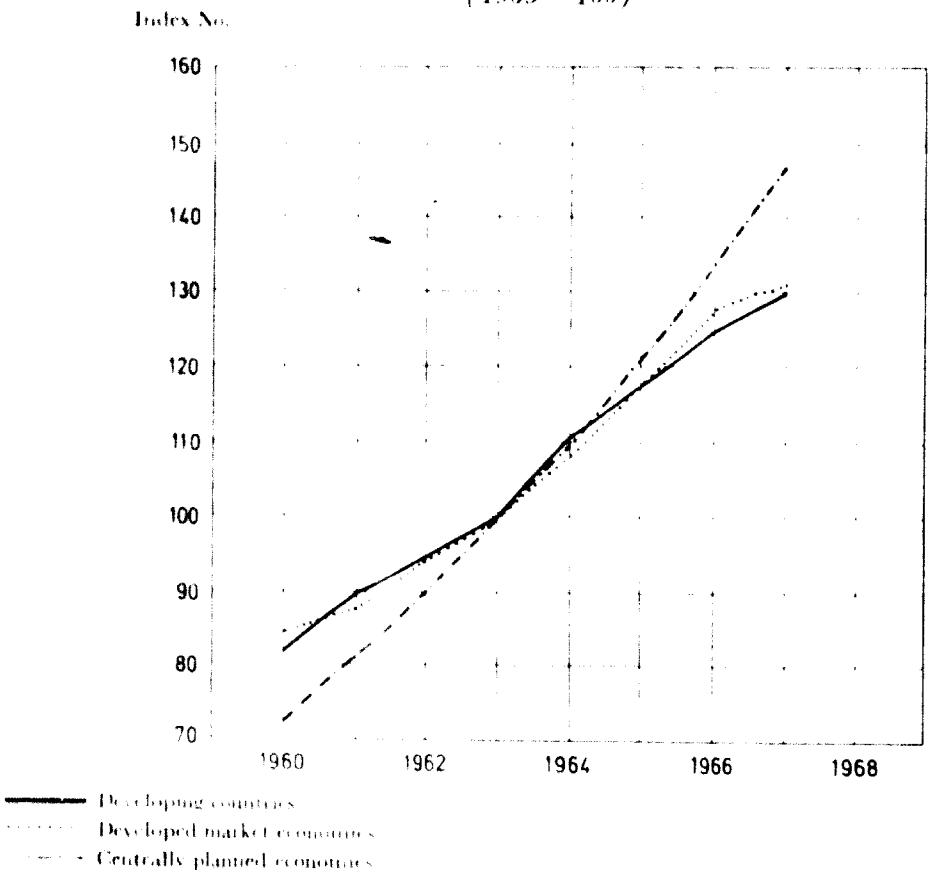
Source: United Nations, *Yearbook of National Accounts Statistics*, *Statistical Yearbook* and *Monthly Bulletin of Statistics*.

5. Light manufacturing output (ISIC 20–26, 28–30, 39) by economic groupings, 1960–1967 (1963–100)



Source: United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics*.

6. Heavy manufacturing output (ISIC 27, 31–38) by economic groupings, 1960–1967 (1963 = 100)

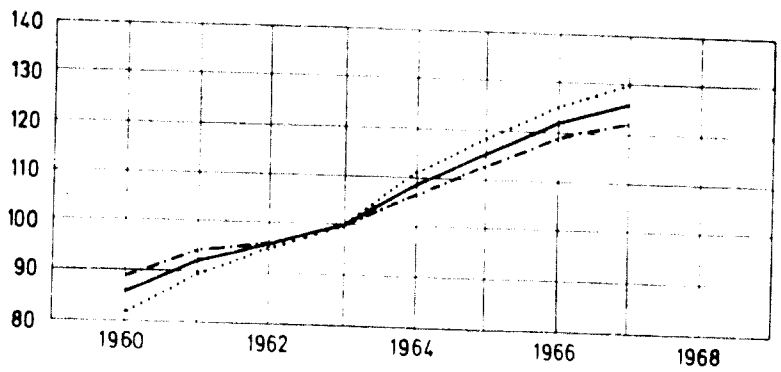


Source: United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics.*

7. Manufacturing output, 1960 - 1967
(1963 = 100)

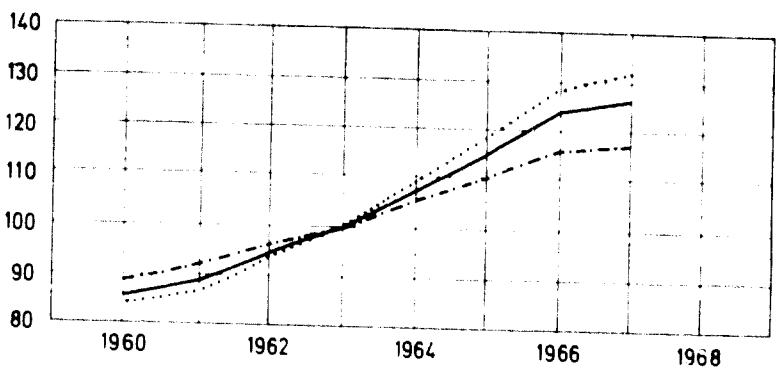
Index No.

(a) Developing countries



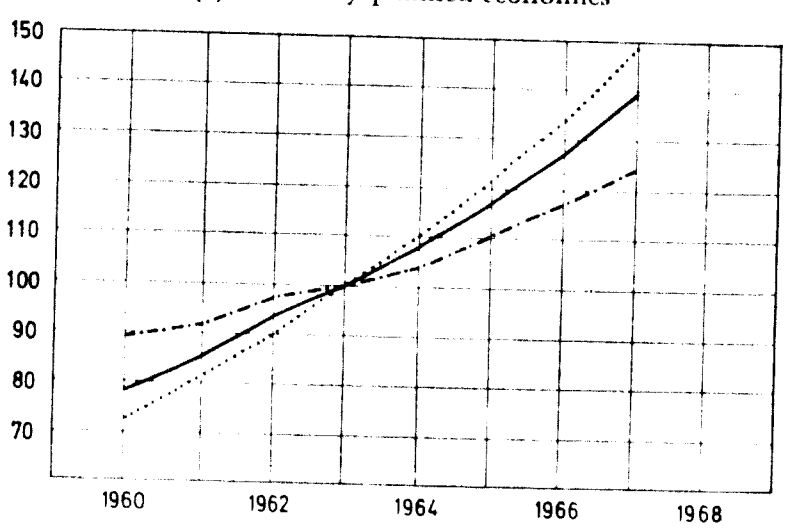
Index No.

(b) Developed market economies



Index No.

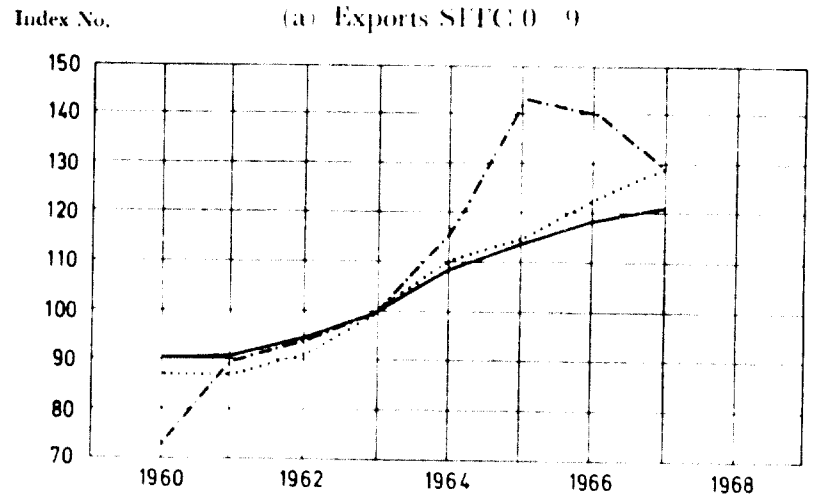
(c) Centrally planned economies



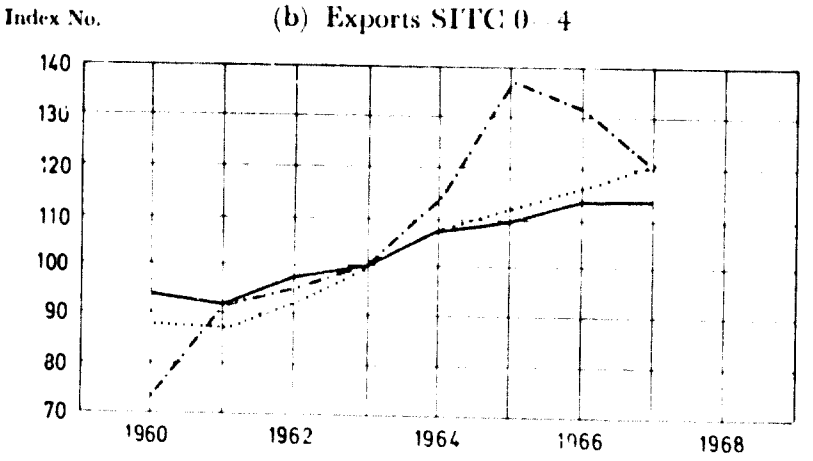
——— **Total** manufacturing output
····· **Heavy** manufacturing output
– – – **Light** manufacturing output

Source: United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics.*

8. Destination of exports from developing countries, 1960–1967 (1963–100[a])

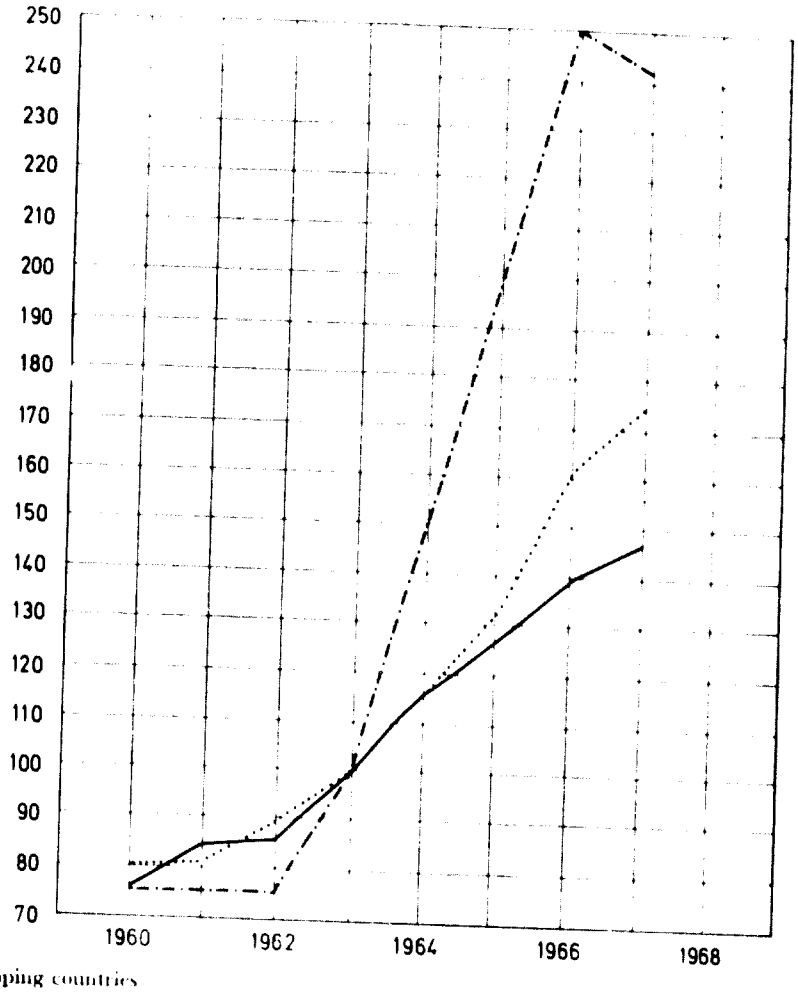


[a] Value (f.o.b.) in 1963: $ 6.7 billion to developing countries;
$ 22.8 billion to developed market economies;
$ 1.7 billion to centrally planned economies.



[a] Value (f.o.b.) in 1963: $ 5.1 billion to developing countries;
$ 19.5 billion to developed market economies;
$ 1.5 billion to centrally planned economies.

(c) Exports SITC 5–8

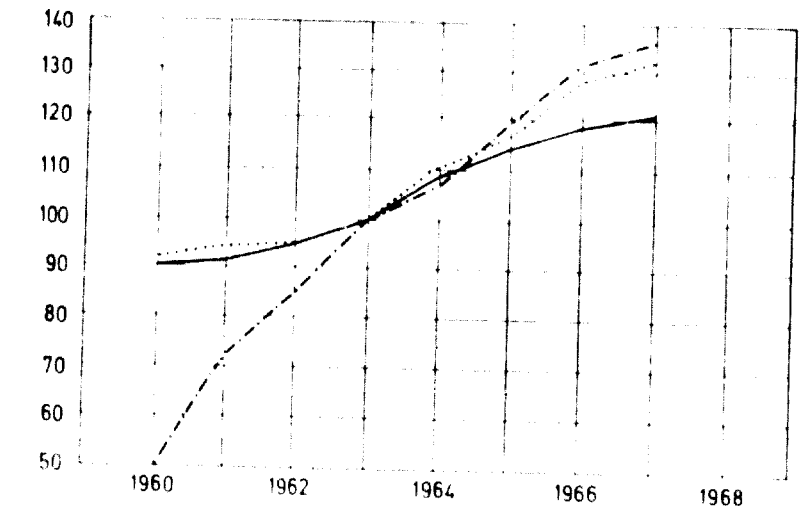


[a] Value (f.o.b.) in 1963: $ 1.5 billion to developing countries;
$ 3.2 billion to developed market economies;
$ 0.1 billion to centrally planned economies.

Source: United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics*.

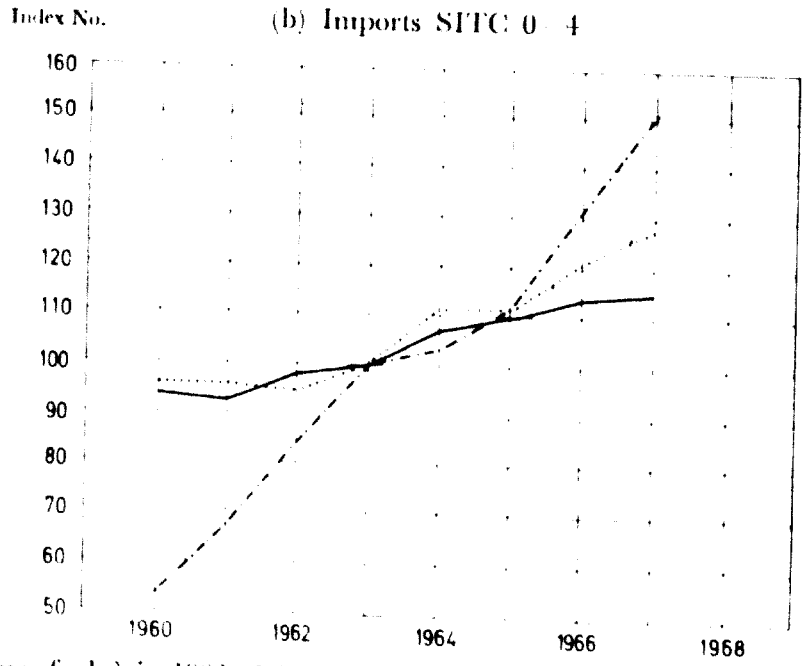
9. Source of imports to developing countries, 1960–1967
(1963 = 100)

(a) Imports SITC 0–9



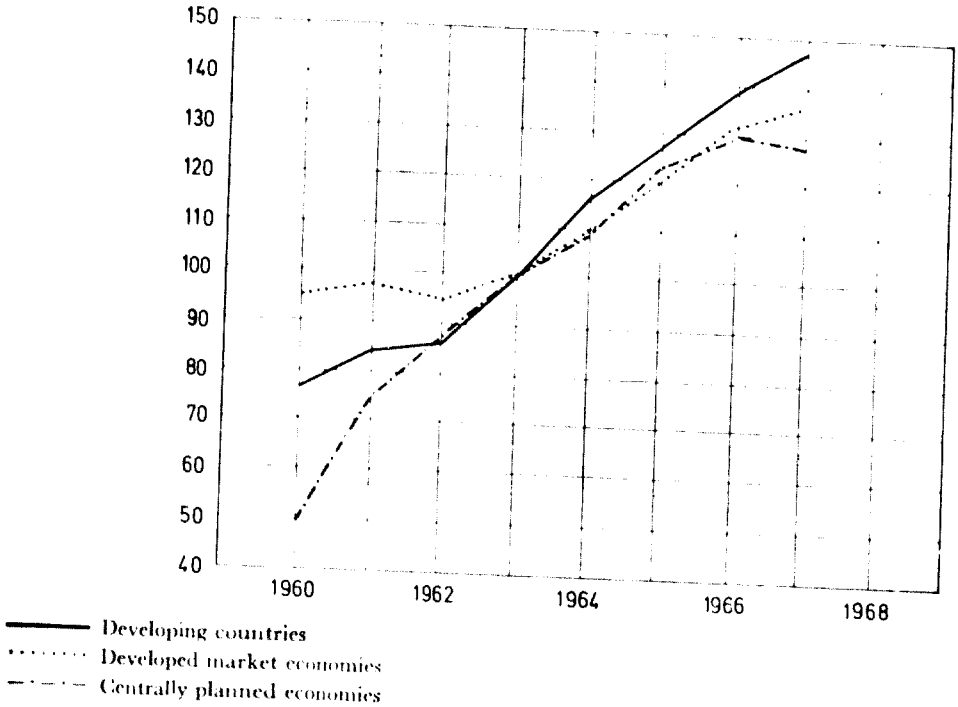
[a] Value (f.o.b.) in 1963: $ 6.7 billion from developing countries;
$ 23.0 billion from developed market economies;
$ 2.5 billion from centrally planned economies.

(b) Imports SITC 0–4



[a] Value (f.o.b.) in 1963: $ 5.1 billion from developing countries;
$ 4.7 billion from developed market economies;
$ 0.8 billion from centrally planned economies.

(c) Imports SITC 5–8

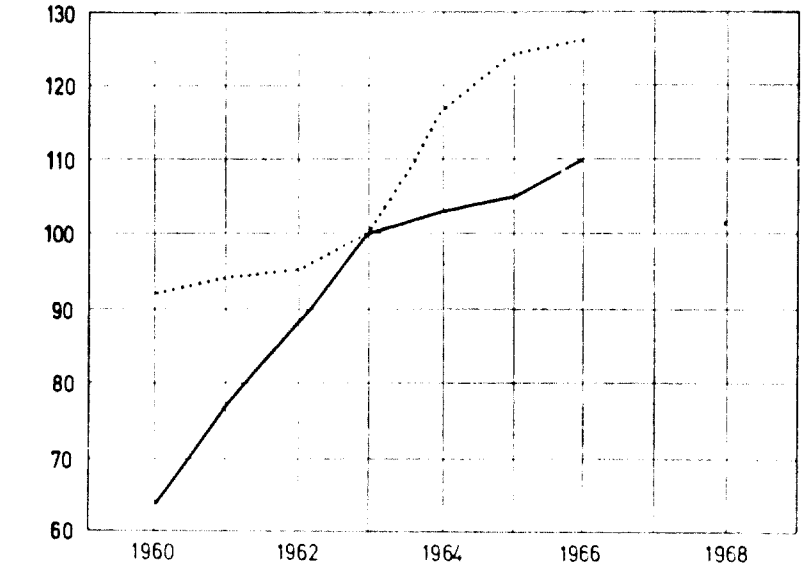


[a] Value (f.o.b.) in 1963: $ 1.5 billion from developing countries;
$ 17.3 billion from developed market economies;
$ 1.7 billion from centrally planned economies.

Source: United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics*.

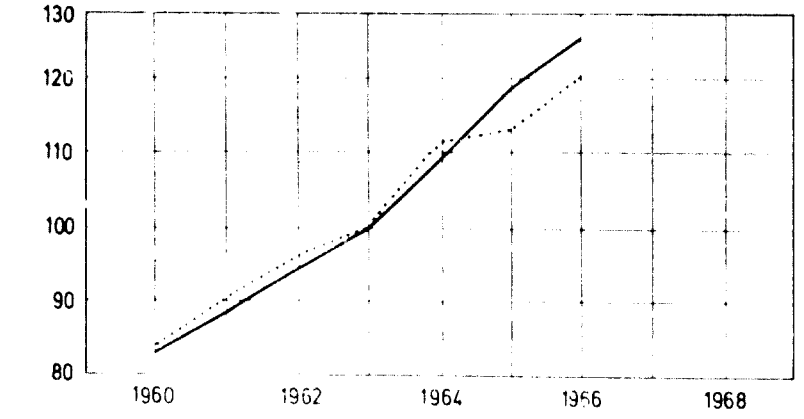
10. Production of selected industrial products, 1960–1967
(1963 = 100[a])

(a) Pig-iron and ferro-alloys



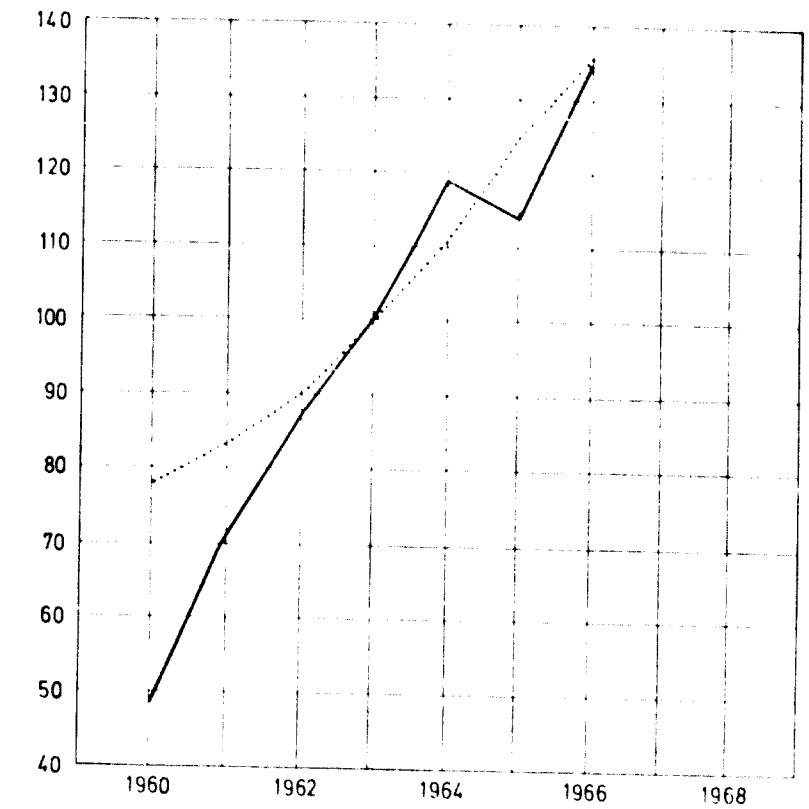
[a] 1963 production: 12 million tons in developing countries;
175 million tons in developed market economies.

(b) Cement



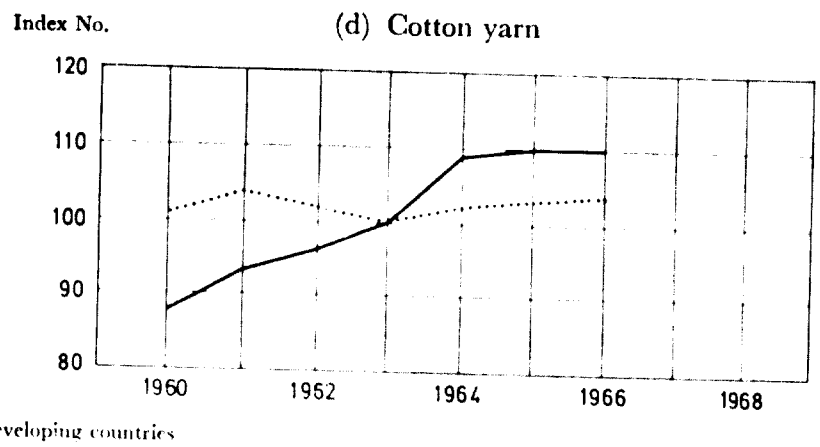
[a] 1963 production: 49 million tons in developing countries;
224 million tons in developed market economies.

(c) Nitrogenous fertilizers



[a] 1963 production: 1.1 million tons in developing countries;
10.9 million tons in developed market economies.

(d) Cotton yarn



[a] 1963 production: 1.6 million tons in developing countries;
4.0 million tons in developed market economies.

Source: United Nations, *Statistical Yearbook* and *Monthly Bulletin of Statistics*.

Printed in Austria

69-1151 April 1970 1,100

Price: $U.S. 1.50
(or equivalent in other currencies)

United Nations publication

Sales No.: E.70.II.B.5

ID/41


22.3.74