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Survey of Industrial Development in Developing Asia and the Pacific: Achievements and Prospects */

Prepared by the UNIDO Secretariat

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I. Introduction

1.1 The Ministers of Industry of the developing countries of Asia and the Pacific, meeting in Bangkok in 1974, specified a target share of 10 per cent of world manufacturing value added by the year 2000 for the developing Asian and Pacific region. This regional target became part of the overall target for developing countries of at least 25[1/] per cent share of world manufacturing value added by the year 2000, a target which was a predominant feature of the Lima Declaration. The call for a more equitable share of world industrial production was inspired by the new international economic order and originated from the present imbalance in the distribution of industrial production between the developing and the developed countries.

1.2 The purpose of this paper is to provide insight into the past pattern of industrial development in developing Asia and the Pacific and to draw up a broad picture for the future with a view to serving as a background analysis for the Ad Hoc Group of Ministers of Industry in defining new approaches to the future path and orientation of industrialization in the developing countries of Asia and the Pacific. The paper is primarily based upon selected findings of the UNIDO Industrial Development Survey[2/] presently under preparation for the Third General Conference of UNIDO.

1.3 The paper is divided into seven chapters including the introductory chapter. Chapter II examines trends in the pattern and distribution of industrial growth of the developing Asian and Pacific region and the share of this region in world manufacturing value added. Chapter III analyses trends in structural changes of the manufacturing sector in particular in regard to the composition of industrial output in terms of heavy versus light industry, consumer, intermediate and capital goods, basic goods, etc. Chapter IV examines the important contribution of trade to industrialization in Asia and the Pacific and in Chapter V a brief review is given on industrialization in three selected countries: India, the Republic of Korea and the Philippines. The industrial growth prospects for the developing Asian and the Pacific region are elaborated

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1/ At the regional meetings prior to the Second General Conference, the ECLA countries specified a target of 13.5 per cent (see ID/CONF.3/CRP.1/Add.1); the ECA countries set a target of 2 per cent (see recommendation c (iii) of Industrialization in Africa, Principles and Guidelines for Co-operation and Development, Cairo, 18-23 December 1978); and the ESCAP countries fixed a target of 10 per cent (see E.CN.11/1181). The total obviously exceeds 25 per cent. Moreover, the ESCAP target does not include West Asia. For these reasons a target for all developing countries, which exceeds 25 per cent, would probably be more compatible with the intentions of the Lima Declaration.

2/ The UNIDO Industrial Development Survey is scheduled to be released in the course of 1979.

in Chapter VI which contains an outlook for the possible share of the region in world manufacturing value added in the year 2000, under three different scenarios assumptions. Finally a summary of the implications for industrial policies and strategies is made in Chapter VII.

II. Growth and Distribution of Manufacturing Value Added

2.1 The long-term trend in the distribution of world manufacturing production shows a decline in the share of developed market economies, a significant shift in favour of centrally-planned economies and a positive, though still modest, shift in favour of developing countries. The decline in the share of developed market economies in world industrial production was quite significant from 73.9 per cent in 1960 to 62.4 per cent in 1976. During the same period the centrally planned economies increased their share from 19.2 per cent to 29.0 per cent [Table 2.1].

2.2 The participation of developing countries in world industrial production has been modest and their share has increased only marginally. In fact, it is only since 1969 that the developing countries show any evidence of sustained growth. Their share remained stagnant at around 6.9 per cent during the 1960's but from 1969 onwards annual gains were observed and in 1976, their share reached 8.7 per cent.

2.3 The share of developing countries of Asia and Pacific[1/] in world industrial production followed similar trends as those observed for the developing countries in general. The share remained fairly stagnant at 1.8-2.0 per cent from 1960-1968 whereafter it increased modestly, to 2.1 per cent in 1973, and reached 2.5 per cent in 1976 (Table 2.2). Thus less than one-third of the manufacturing value added in developing countries originates in developing Asia and the Pacific.

2.4 An examination of manufacturing production by the four developing regions shows that the Asian and Pacific region as a whole achieved a slightly higher rate of growth than both Africa and Latin America, and contrary to these two regions were relatively unaffected by the recession in 1975. West Asia, however, achieved the highest long-term rate of industrial growth of all developing regions.

1/ Unless otherwise indicated, the following developing countries for which data were available are included under Asia and the Pacific in this paper: Afghanistan, Burma, Sri Lanka, Fiji, Hong Kong, India, Indonesia, Iran, the Republic of Korea, Malaysia, Pakistan, the Philippines, Singapore and Thailand. These countries account for around 80 per cent of the population in developing Asia and Pacific.

Table 2.1 Growth and distribution of industrial production by economic grouping and by four developing regions, 1960-76

	Average annual growth					Relative share of world manufacturing production			
	1960-1975	1966-1975	1974	1975	1976	1960	1970	1975	1976
Developing Market Economies	4.4	3.0	-2.0	-6.4	9.2	73.9	68.6	61.8	62.4
Centrally Planned Economies	8.8	8.7	9.1	8.0	6.1	19.2	24.0	29.5	29.0
Developing Countries	7.3	7.7	6.1	3.5	7.8	6.9	7.3	8.7	8.7
Asia and Pacific	7.7	8.1	6.1	6.6	12.3	1.9	2.0	2.4	2.5
Latin America	7.1	7.5	6.3	2.0	5.8	4.1	4.2	5.0	4.9
Africa	6.6	6.3	3.2	0.3	4.2	0.7	0.7	0.7	0.7
West Asia	9.1	9.2	8.3	8.3	10.8	0.3	0.4	0.5	0.5
World	5.7	4.8	1.4	-1.7	8.1	100.0	100.0	100.0	100.0

Source: UNIDO, based on data supplied by UNSO.

Table 2.2 Annual increase in manufacturing value added and share in world manufacturing value added, 1960-76, developing countries and developing Asia and Pacific

	Developing Countries		Developing Asia and Pacific	
	Annual rate of increase	% shares to world	Annual rate of increase	% shares to world
1960	...	6.9	...	1.8
1961	8.6	7.2	8.6	1.9
1962	6.2	7.1	9.4	1.9
1963	5.0	6.9	8.8	2.0
1964	9.0	7.0	6.8	2.0
1965	5.7	6.9	5.2	1.9
1966	6.4	6.8	3.7	1.8
1967	4.6	6.8	6.2	1.9
1968	9.3	6.9	8.6	1.9
1969	9.7	7.0	11.2	1.9
1970	7.9	7.3	7.0	2.0
1971	8.6	7.7	6.9	2.1
1972	9.1	7.8	8.8	2.1
1973	10.5	7.9	11.5	2.1
1974	6.1	8.3	6.1	2.2
1975	3.5	8.7	6.6	2.4
1976	7.8	8.7	12.3	2.5

Source: UNIDO, based on data supplied by UNSO.

Thus, while each developing region succeeded in increasing their share of world industrial production, Asia and Pacific improved their share slightly more favourably than other developing regions except West Asia (Table 2.1).

2.5 Fluctuations occurred in the rate of growth of industrial production in developing Asia and the Pacific. With small variations these fluctuations followed similar trends as those observed for all developing countries. These fluctuations were of a smaller magnitude than those observed in the developed market economies where the level of industrial production exhibits greater sensitivity to cyclical fluctuations within the overall economy. The greater stability in the developing countries' industrial production may be explained by the fact that they are still less dependent upon derived demand for domestic capital goods; moreover, they have succeeded in maintaining a consistent export performance, aided by inflation in the developed market economies. The impact of the depression in the developed market economies in 1974 and 1975, however, did not fail to leave its mark upon developing Asia and the Pacific although unlike the developed market economies they did not experience a contraction in the level of industrial production. Data for 1976 show impressive signs of recovery for Asia and Pacific, which almost doubled its rates of growth to 12.3 per cent, higher than any other developing region.

2.6 Further insight into the industrial growth process in developing Asia and the Pacific may be gained by examining the distribution of manufacturing production among individual developing countries. The dominance of a few large countries in the regional industrial structure can be visualized in Table 2.3 which shows that two countries account for around half of regional manufacturing production, namely India, 33.9 per cent, and the Republic of Korea, 16.3 per cent, while eight countries, namely India, the Republic of Korea, the Philippines, Pakistan, Iran, Indonesia, Thailand and Hong Kong, account for around 90 per cent of regional production. The industrial growth process seems to be spearheaded by a few rapidly growth economies pursuing outward looking policies with successful export performance such as the Republic of Korea, Singapore, Iran, Hong Kong, Thailand and Sri Lanka, which all achieved impressive growth of manufacturing production in excess of 10 per cent annually from 1960-1975. Concomitantly, significant changes have occurred in the overall economic structure of the countries of the region, where the share of manufacturing value added in GDP increased from 12.3 per cent in 1960 to 16.9 per cent in 1975. In a few countries the industrial sector has gained a predominant position within the overall economy, for instance in Hong Kong the share of

Table 2.3 Growth and Distribution of Manufacturing Production by Country

	Share of aggregate Manufacturing Value added (percentage)		Share of Manufacturing Value added in GDP (percentage)		Average Annual Growth of Manufacturing Value added (percentage)					Growth of Manufacturing Value added per capita	
					1960-	1966-					
	1960	1975	1960	1975	1975	1975	1974	1975	1976	1960/75	1966/75
India	51.4	33.9	12.7	14.7	4.7	4.0	1.1	3.0	8.4	2.4	1.8
Korea Rep. of	4.5	16.3	11.1	32.3	17.2	20.4	17.4	13.0	26.1	14.5	17.8
Philippines	10.3	8.3	21.4	23.5	6.1	7.0	4.8	3.5	5.8	3.0	3.9
Pakistan	8.5	7.2	13.0	15.0	6.5	4.2	- 0.6	0.3	- 0.8	3.6	1.3
Iran	2.9	6.5	5.8	9.2	13.6	15.3	18.3	16.4	14.8	10.4	12.1
Indonesia	6.2	6.3	8.5	12.6	7.7	11.9	16.2	12.3	9.7	5.0	9.1
Thailand	4.3	6.1	12.4	18.3	10.2	9.5	6.5	7.7	14.1	6.9	6.3
Hong Kong	4.1	6.0	30.6	39.1	10.4	12.6	-3.0	18.7	19.8	7.7	10.5
Malaysia (Total)	3.0	4.1	11.5	19.0	9.9	9.2	14.4	0.0	19.3	6.9	6.4
Singapore	1.2	2.5	13.1	22.0	13.2	15.1	3.8	- 1.6	9.5	10.8	13.2
Sri Lanka	0.8	1.2	5.3	12.2	10.7	8.6	21.1	2.6	1.3	8.4	6.6
Burma	1.6	0.9	8.9	9.6	3.3	1.8	-2.5	4.2	8.3	1.3	-0.4
Afghanistan	0.9	0.7	6.7	10.5	5.7	4.0	-6.4	5.2	2.4	3.3	1.6
Fiji	0.3	0.1	19.0	12.5	3.3	4.7	3.7	0.3	8.8	0.8	2.6
Total	100.0	100.0	12.3	16.9	7.7	8.1	6.1	6.6	12.3	5.2	5.6

Source: Based upon data supplied by United Nations Statistical Office
Countries arranged according to manufacturing value added in 1975

manufacturing value added in GDP is close to 40 per cent; in the Republic of Korea 35 per cent while in the Philippines, Singapore and Malaysia the share lies between 20 and 25 per cent.

2.7 A review of the pattern of industrial growth reveals that a very large proportion of the total increase in the developing countries' industrial production was contributed by a very small number of countries. In fact, India and the Republic of Korea contributed around half of the total increase in manufacturing value added in Asia and Pacific for 1960-1975, while five further countries including Iran, Hong Kong, Thailand, the Philippines and Indonesia, contributed around 35.4 per cent of the total increase in industrial production of the region. Thus, seven countries contributed to 84.4 per cent of the total increase in manufacturing value added of the region which corresponds to around one-fourth of the total increase for developing countries (Table 2.4).

2.8 An examination of the distribution of industrial growth according to the level of development is made in Table 2.5 which shows that the low income countries (per capita income less than $265) failed to match the progress achieved in other developing countries. In this group of countries, which includes Afghanistan, Burma, Sri Lanka, India, Indonesia and Pakistan, more than two-thirds of the population of Asia and Pacific and around one-third of the population in developing countries is to be found. For the large majority of the population in Asia and Pacific, recent industrial progress has thus been slow or marginal. In fact, in a majority of these countries such as India, Pakistan, Burma and Afghanistan, recent industrial progress has largely been absorbed by population growth. In these countries growth of manufacturing value added per capita was less than 2 per cent annually (Table 2.3). In contrast, rapid industrial growth has primarily been confined to a few developing countries at the high income, intermediate and upper middle income levels, which however only account for a small proportion of the regional population, more specifically 6.6 per cent.

2.9 The analysis of industrial growth according to the level of development is elaborated further in Figure I which shows that three countries in the low income group (per capita income less than $265) failed to surpass the average rate of growth of world manufacturing production for 1960-1976 (Afghanistan, Burma, India) while four countries in the low income group failed to surpass the rate of growth of developing countries during the same period (Afghanistan,

Table 2.4 Percentage contribution of selected countries to the increase in manufacturing value added of developing Asia and Pacific and of developing countries, 1960-76

Country	Contribution to increase of developing Asia and Pacific	Contribution to increase of developing countries
	Percentage	
India	24.9	7.6
Korea Rep. of	24.0	7.3
Iran	8.2	2.5
Hong Kong	7.3	2.2
Thailand	7.0	2.1
Philippines	6.8	2.1
Indonesia	6.1	1.9
Total	84.4	25.6

Source: UNIDO based on data supplied by UNSO

Table 2.5 Rate of Growth of Manufacturing Value Added according to Level of Development 1960-75

Income Group of countries	GNP per capita 1975 US$ a/	Growth Rate of Manufacturing Production 1960-75 (percentage)	Share of population in all Developing Countries 1975 (percentage)	Share of population in Asia and Pacific in 1975 (percentage)	Number of Asian and Pacific countries	Countries
Low income	less than 265 $	5.4	31.2	67.7	6	Afghanistan, Burma, Sri Lanka, India, Indonesia, Pakistan
Lower middle income	265 - 520 $	7.5	3.1	6.6	2	Philippines, Thailand
Intermediate Income	521 - 1075 $	15.1	1.6	3.5	2	Korea Rep. of, Malaysia
Upper middle income	1076 - 2000 $	11.7	1.3	2.9	3	Fiji, Hong Kong, Iran
High income	more than 2000 $	13.2	0.1	0.2	1	Singapore
		7.7	37.3	80.9	14	

Source: UNIDO based upon data supplied by United Nations Statistical Office

a/ where GNP was not available GDP per capita was used to classify countries

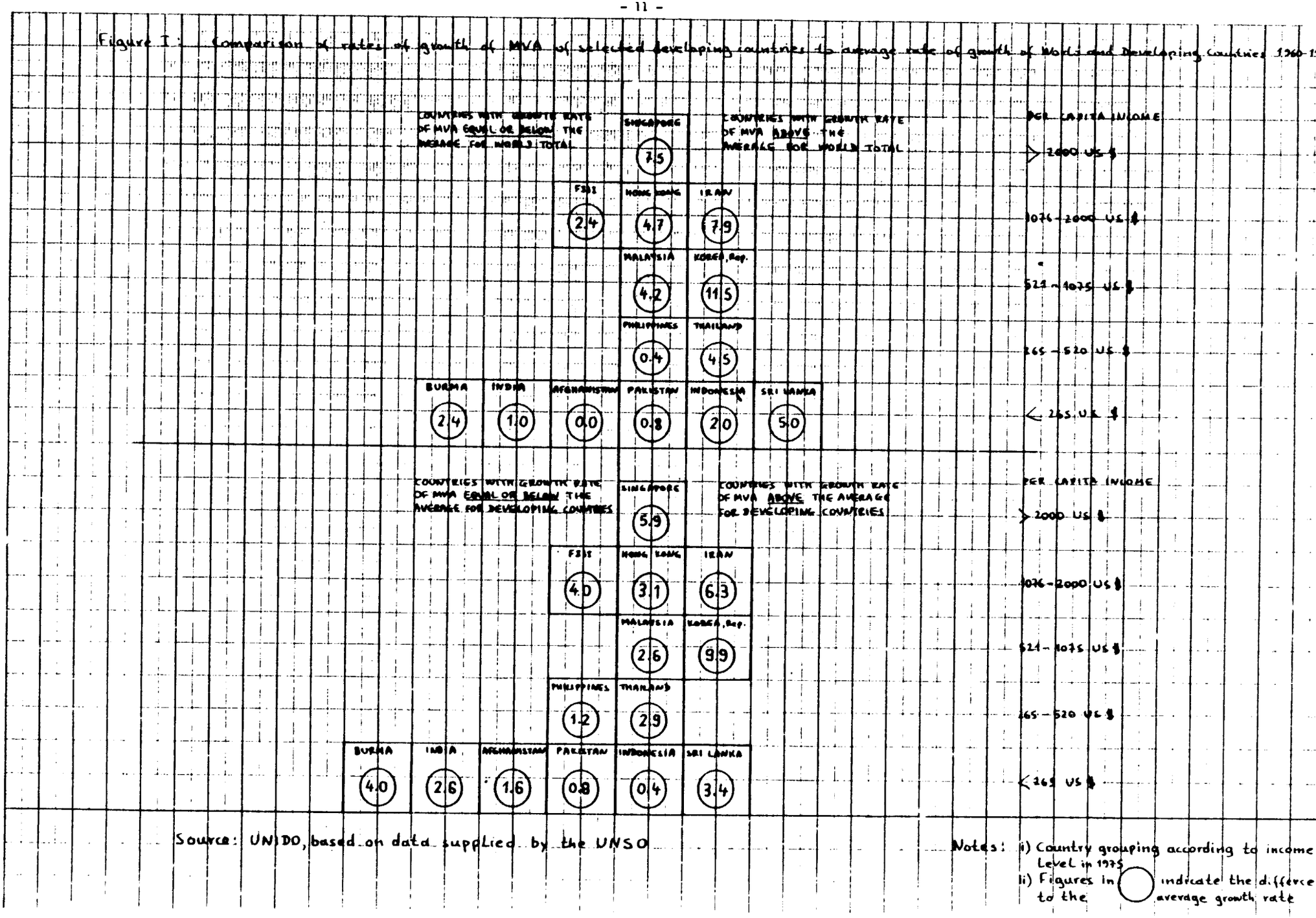
Burma, India, Pakistan). As a result, the share of the low income countries in aggregate manufacturing value added in Asia and Pacific has declined significantly from 69.4 per cent in 1960 to 47.8 per cent in 1976 while concomitantly the share of intermediate income countries (Republic of Korea and Malaysia) has almost tripled to 22.6 per cent in 1976. Further, the share of upper middle income countries (Iran, Hong Kong, Fiji) almost doubled to 13.2 per cent in 1976 (Figure II).

2.10 In terms of regional grouping all ASEAN countries achieved a growth rate above the world average for the 1960-1975 period. However, while Thailand, Singapore, Malaysia and Indonesia exceeded or equalled the average growth of developing countries, only the Philippines failed to match these achievements.

2.11 The overriding impression gained from the preceding analysis is that dynamic industrial growth has indeed been impressive in a small number of developing countries, in particular at the intermediate and advanced levels of development. A more disappointing picture is characterizing the low income developing countries which have lagged behind and where the larger majority of the population in Asia and Pacific has been relatively unaffected by recent efforts towards industrialization. In many of these countries and for a majority of the population in Asia and the Pacific, recent industrial progress has been marginal or non-existent.

2.12 Finally, mention should be made that in comparison with other economic sectors, the manufacturing sector achieved the highest growth in developing Asia and the Pacific, except in the low and middle income countries where the performance of the construction sector was equal with, or slightly higher than, the manufacturing sector. There is some indication that, in general, the elements of dynamic growth which occurred in the manufacturing sector were also reflected in a broadly based growth pattern applying to construction, transport, trade and other sectors, which all achieved annual rates of growth in excess of 6 per cent. However, the elements of dynamic growth observed in the manufacturing sector did not apply to the agricultural sector which lagged behind especially in the low income countries where growth was limited to 2.4 per cent annually, hardly keeping pace with population growth. For the region as a whole, the agricultural sector grew at an annual rate of 2.8 per cent for 1960-75.

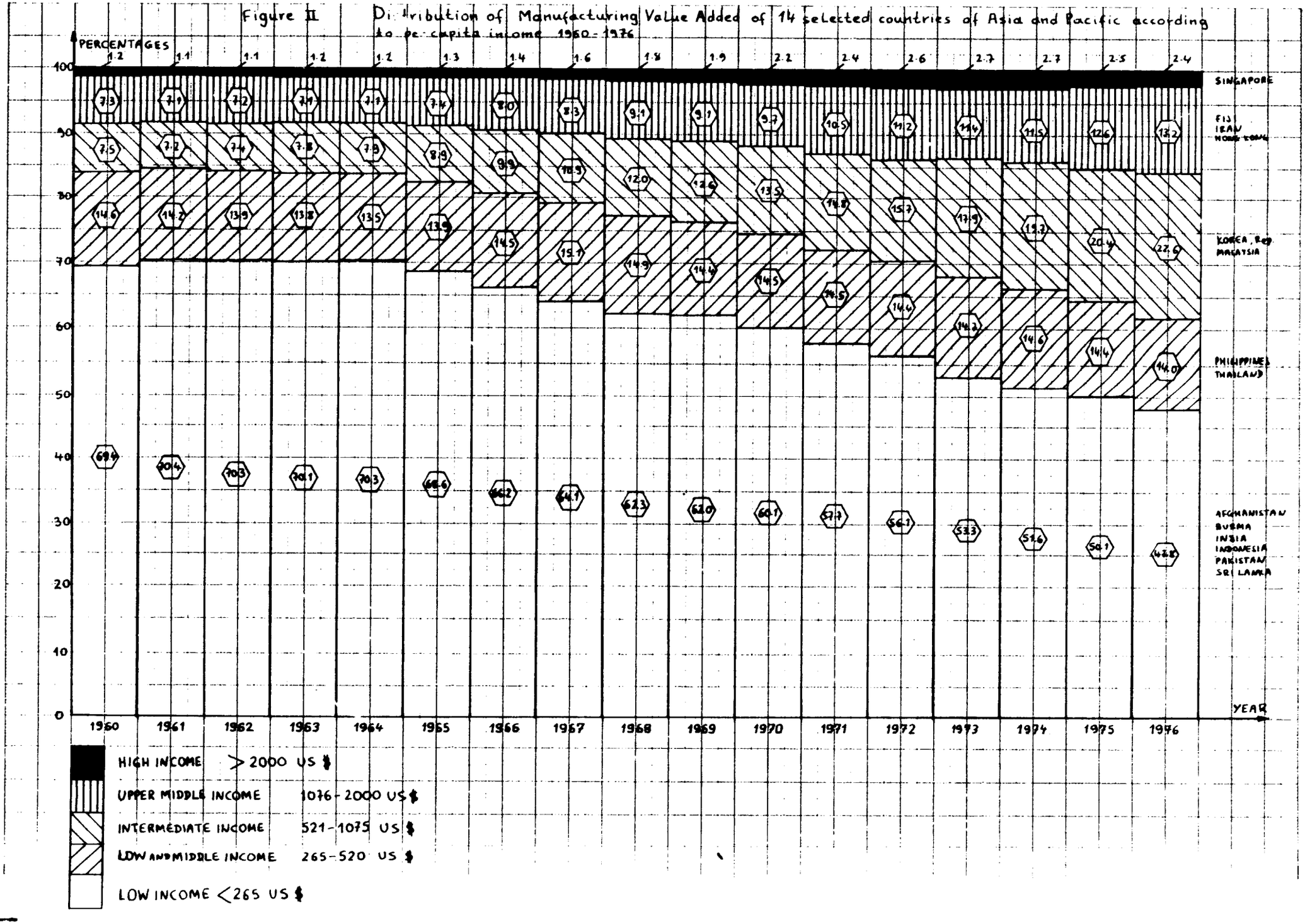
Figure I: Comparison of rates of growth of MVA of selected developing countries to average rate of growth of World and Developing Countries 1960-19



Source: UNIDO, based on data supplied by the UNSO

Notes: i) Country grouping according to income Level in 1975
ii) Figures in ◯ indicate the difference to the average growth rate

Figure II Distribution of Manufacturing Value Added of 14 selected countries of Asia and Pacific according to per capita income 1950-1976



III. Structural Change of the Manufacturing Sector

3.1 The composition of industrial output is a critical determinant of the growth potential of the manufacturing sector which has significant implications for the use of production factors and thus a country's ability to provide employment and to make use of its material, financial and other resources. Structural changes in the composition of manufacturing production are thus essential for growth and, in principle, compatible with the spirit of the new international economic order.

3.2 The structure of industrial production and the pattern of industrial growth has primarily been influenced by the market size, natural resource endowments, policy orientation and per capita income. In view of the complexity and diversity of individual countries of the region there is a wide degree of heterogenity in the structure of the manufacturing sector among Asian developing countries. On the one hand, there are developing countries like the Republic of Korea and India, whose industrial structure exhibit a relatively high degree of similarity with the industrial structure of the developed market economies, while on the other hand, there are developing countries like Iran, whose industrial structure i.a. due to different resource endowments, exhibit a relatively low similarity with the industrial structure prevailing in the developed market economies. Certain common characteristics, however, can be identified for a majority of developing countries in the regions.

3.3 A broadening of the industrial base is closely associated with a growing share of heavy industry which appears to be the predominant growth sector. Traditionally the growth of heavy manufacturing, which largely consists of industrial supplies, producer goods and relatively sophisticated consumer goods, has been closely associated with the expansion of domestic demand which has been a major factor in explaining its dominant role in the past. Only in a few countries has the growth of heavy manufacturing been significantly stimulated by export demand. Table 3.1 shows that the share of heavy industry has increased at the expense of light industry. In 1960 the share of heavy industry accounted for 31 per cent of total manufacturing in developing Asia and Pacific; in 1976, this share had increased to 45 per cent while that of light manufacturing had declined from 69 per cent to 55 per cent during the same period. The restructuring of industry in developing Asia and Pacific has thus been quite impressive over a relatively short period of time, in particular from 1960-1965 while from 1965-1976 the pace of structural change was more moderate. Since heavy industry

generally requires more capital per unit of production, the share of manufacturing in total investment is also assumed to have increased, while its share in total employment has remained modest.

Table 3. Relative share of light and heavy manufacturing in total manufacturing in developing Asia and Pacific[a] 1960-1976

(percentage)

	1960	1965	1970	1976
Light industry	69.0	61.6	57.9	55.0
Heavy industry	31.0	38.4	42.1	45.0
Total	100.0	100.0	100.0	100.0

Source: UNIDO Industrial Development Survey (draft)

a/ The table includes developing countries of West Asia.

3.4 The ability of individual countries to develop a wide range of heavy industries, however is restricted by the size of their domestic markets as determined by income levels and population. Due to differences in resource endowments, population resources and population growth, light industry may remain relatively important in many countries for some time though, in general, its importance is declining in the process of development. It is also a well documented fact that light manufacturing export has contributed to the gains of many developing countries in Asia and Pacific. To a large extent future changes in the relationship between heavy and light industry also hinges upon future policy approaches. For instance increased emphasis upon basic needs, industrial decentralization, small-scale production activities and closer links between industry and agriculture will no doubt unfold a wide spectrum of new opportunities for light industry though some heavy industries will also be affected.

3.5 Further insight into the industrial growth process is provided in Table 3.2 which exhibits data on the rate of expansion of individual branches of industries for the period 1960-1974 and of the structure of manufacturing production. With a few exceptions, most of the products belonging to the basic necessities category have been faced with slow growth in particular food processing, textiles, leather, tobacco and furniture. A few products of the basic necessities category have shown dynamic growth primarily due to specialization for exports. For instance, in the case of wearing apparel the dynamic growth pattern of Asia and

Table 3.2 Rate of Expansion of Manufacturing Production 1960-74 and structure of Individual Branches of Industries in Asia and Pacific

ISIC	Branch	Average Annual Rate of Growth of Production 1960-74		Structure of Manufacturing Production	
		percentage	No. of countries	Relative weight measure	Equal Weight measure
311	Food Manufacturing	5.0	17	12.66	19.95
313	Beverages	8.9	16	2.69	3.98
314	Tobacco	2.7	14	5.18	6.80
321	Textiles	3.5	14	15.34	13.29
322	Wearing Apparel	12.8	7	5.40	4.17
323	Leather manufactures	2.1	13	0.89	0.60
324	Footwear	12.1	7	1.97	0.78
331	Wood	8.8	13	3.39	5.20
332	Furniture	1.2	12	0.82	1.45
341	Paper	8.7	14	1.38	1.34
342	Printing	9.7	15	2.39	2.44
351	Industrial Chemicals	13.2	9	3.13	1.72
352	Other Chemicals	6.3	8	4.21	4.29
353	Petroleum refineries	2.0	9	9.61	7.11
354	Products of Petroleum and coal	-	-	0.28	0.52
355	Rubber manufactures	6.0	17	2.11	2.32
356	Plastics	-	-	1.36	1.54
361	Pottery	-	-	1.10	0.72
362	Glass	8.3	6	0.81	0.74
369	Other non-metallic	10.5	9	2.95	3.18
371	Iron and Steel	7.4	8	3.49	1.54
372	Non-ferrous metal	10.8	7	1.37	1.39
381	Metal products	7.4	13	3 86	3.63
382	Non-electrical machinery	10.1	12	2.43	1.46
383	Electrical machinery	15.6	14	3.65	3.16
384	Transport equipment	5.6	14	3.60	3.96
385	Professional and scientific equipment, photo, etc.	-	-	1.31	0.68

Source: UNIDO's Industrial Development Survey (draft)

the Pacific is heavily influenced by exports from Hong Kong. The observation that the manufacturing branches catering to basic necessities have generally been slow growing is important since these industries account for an overwhelming proportion of manufactured output; between 40 and 50 per cent depending upon products included and method used in assessing the industrial structure. The common trend towards an industrial structure relying heavily upon slow growing basic consumer goods industries have important implications for future growth prospects of industry in those countries and raises the general question of how a basic needs approach especially in the low income countries can be made compatible with a growth oriented approach towards industrialization. One aspect is that higher growth of demand for basic necessities may be stimulated by improved income distribution, product development and distribution, while associated changes in the pattern of savings will affect industrial investment. The most dynamic industries in the past appearing in Table 3.2, however, are found in the heavy industries category primarily capital goods; consumer durables and also intermediate goods. The relatively high growth enjoyed by most branches in these categories and in particular electrical machinery is to a large extent explained by the individual performance of Iran, the Republic of Korea and Singapore.

3.6 The process of structural change within the manufacturing sector may be analyzed in terms of the composition of manufacturing output according to end-use. A country's ability to provide a widening range of manufactured products either for domestic consumption or for exports, offer one measure of progress towards increased self-reliance, attained through a more broadly based industrial sector and a more diversified trading pattern. Indications of a broadening industrial base and greater economic self-reliance would generally be an increasing share of the production of capital goods and consumer durables and also industrial supplies and intermediates. The data in Table 3.3 shows no evidence of such a trend in Asia and Pacific for the period 1965-1975 except in the case of Singapore and the Republic of Korea where significant gains were made in the production of these products. Both India and Hong Kong had already attained a relatively broad industrial base in 1965 but a slight decline was observed in the share of capital goods and consumer durables from 1965 to 1975.

3.7 In comparison with more advanced industrial structures, the developing countries of Asia and Pacific are thus relatively underrepresented in capital goods and consumer durables, such as engineering and related industries, non-electrical machinery; paper and paper products; professional and scientific

equipment; iron and steel; transport equipment; electrical equipment and plastic products. There is some evidence to suggest that underrepresentation is, in the first instance, mainly due to factors hindering long production runs while it can be attributed, in the second instance, to a slow rate of technical diffusion. This general description of underrepresentation, however, does not apply to all developing countries of the region. For example, in Hong Kong and Singapore, electrical machinery assumes an importance similar to that in the developed countries. Further, the transport branch assumes a relatively large share due to the automobile and shipbuilding industry in Iran, the Republic of Korea, and Singapore.

Table 3.3 The composition of manufacturing value added by end-use in selected developing countries in Asia and the Pacific, 1965 and 1975

(as percentage of total MVA)

Country	Mainly consumer non-durables[a]		Mainly supplies and intermediates		Mainly capital goods and consumer durables		Other manufactures	
	1965	1975	1965	1975	1965	1975	1965	1975
Hong Kong[b]	32	41	35	30	27	23	6	6
India	9	7	39	41	29	27	23	25
Korea, Republic of[b]	14	16	34	31	13	26	39	27
Mayalsia, Peninsular[b]	8	8	44	45	16	12	32	35
Philippines	14	20	29	25	10	8	47	47
Singapore	14	10	24	20	32	50	30	20
Sri Lanka	23	21	30	31	17	15	30	33
Thailand	17	19	21	23	13	9	49	49
Sample average	16	18	32	31	20	21	32	30

Sources: UNIDO Industrial Development Survey (draft).

a/Mainly consumer non-durables include the following ISIC categories: 322, 323, 324, 332, 342, 3522, 261, 390. Mainly supplies and intermediates include the following ISIC categories: 321, 331, 341, 351, 352 less 3527, 354, 355, 356, 362, 369. Mainly capital goods and consumer durables include the following ISIC categories: 381, 382, 383, 384, 385. Other manufactures include the following ISIC categories: 311/2, 313, 314, 353, 371, 372.

b/Value added refers to 1974 instead of 1975.

Note: Due to statistical consideration certain consumer non-durables, notably food manufactures, beverages and tobacco had to be included under other manufactures.

3.8 While embryonic capital goods industries are present in many developing countries yet the general picture, apart from the exceptions noted, is one of heavy reliance upon imports. Typically, the established capital goods industries provide simple, made-to-order products for small enterprises in the field of food processing, repaires, textiles, metal working, etc., while more sophisticated capital goods are imported under the umbrella of favourable trade and investment policies.

3.9 In regard to consumer durables, some governments have effectively encouraged the establishment or expansion of productive capacity by applying import restrictions and capital investment incentives. Only in a few cases, however, did these measures provide sufficient impetus to the speed of industrialization. A combination of middle income country with sufficient market to facilitate large production series and the existence of backward linkage intermediate goods industries capable of providing a proportion of the input required for the production of durables seems to characterize the successful cases.

3.10 Recently, some Asian economies pursuing outward oriented policies have encouraged the rationalization and expansion of their capital goods sector by the adoption of more sophisticated technologies and products, in part as a result of increased exposure to foreign competition. The lessons to be drawn from their experience seem to be that the key to progress of the capital goods sector is first and foremost a process of feed-back from technologically advanced competitors and customers rather than the size of the domestic market. Increased co-operation between countries of unequal level of development would thus appear more promising than between economies at the same level of development.

3.11 Sustained industrial progress requires changes in the present pattern of industrial specialization in Asia and the Pacific. In the context of the aspirations expressed in the Bangkok Declaration it is important to note that those branches in which the developing countries of Asia and Pacific are currently specialized do not promise to be dynamic industries in the future. The prospects, however, appear to depend to some extent upon future policy approaches towards the creation of new domestic demand. For the most part the brst prospects would appear to be among the intermediate industries, engineering industrial and

capital goods industries.[1/] This would seem to underline the need for further restructuring of industry in developing Asia and the Pacific.

IV. Trade and Industrialization

4.1 During the 1970's the developing countries of Asia and Pacific made significant gains in manufactured exports. The share of developing Asia and the Pacific in world manufactured exports increased from an average of 3.07 per cent in 1970/1971 to 4.9 per cent in 1975/1976. The share of this region in world manufactured exports is thus considerably higher than the region's share of world manufacturing value added of 2.5 per cent and also significantly higher than any other developing region. The contribution of manufactured exports has thus been vital to the industrialization process of Asia and Pacific and far greater than in any other developing region of the world. Almost two-thirds of total manufactured exports of developing countries (64.8 per cent) now originate in developing Asia and Pacific as against around half in 1970/1971 (Table 4.1)

4.2 The progress achieved in manufactured exports has been reflected in all major industrial branches. Table 4.1 shows that during the present decade developing Asia and the Pacific increased their share of world manufactured exports in all eight major SITC categories. In clothing almost one-third (31.3 per cent) of world manufactured exports originates in developing Asia and the Pacific and in textile yarn and fabrics one-seventh (13.9 per cent). The corresponding share of other categories were as follows: other manufactures (8.3 per cent); non-ferrous metals (5.9 per cent); metal products (3.5 per cent); machinery and transport equipment (2.2 per cent); iron and steel (1.7 per cent) and chemicals (1.5 per cent).

1/ An examination of which industries tend to lead the growth process has been undertaken as part of the UNIDO Industrial Development Survey. This analysis does not refer to, but includes developing countries of Asia and the Pacific. Part of this analysis is summarized in Annex I and Annex II. For further details reference is made to the Industrial Development Survey. An ex I contains an analysis of growth elasticities for 111 countries classified into four country groups at the ICIS 3 digit level (28 industrial branches) for the period 1969-1973. The growth elasticity which relates per capita branch production to changes in the level and per capita GDP is more important in determining the production structure than the size elasticity. The latter is an indication of the importance of the size of the domestic market. For branches where long production runs and economies of scale are crucial, size elasticities tend to be relatively high. Annex II contains an analysis of income elasticites and estimates of per capita apparent consumption at different levels of development for 34 industrial commodities.

Table 4.1 Share of developing Asia and the Pacific in total manufactured exports of world and of developing countries 1970/71 - 1975/76

	Share of developing Asia and Pacific in			
	World Manufactured Export		Manufactured Exports of Developing Countries	
	1970/71	1975/76	1970/71	1975/76
	- percentage -			
Textile Yarn and Fabrics [SITC 65]	10.6	13.9	72.4	73.0
Clothing [SITC 84]	18.8	31.3	90.2	88.1
Chemicals [SITC 5]	1.2	1.5	29.3	27.5
Non-ferrous metals [SITC 68]	3.9	5.9	14.1	24.8
Iron and Steel [SITC 67]	1.1	1.7	31.6	51.4
Metal Products [SITC 691-695, 698, 812]	2.2	3.5	62.9	74.0
Machinery and Transport Equipment [SITC 7]	0.9	2.2	58.1	68.4
Other Manufactures a/	5.2	8.3	64.3	75.3
Total Manufactured Exports	3.1	4.9	51.6	64.8

Source : Annex III.

a/ other manufactures in SITC [6 + 8] - [SITC 65, 67, 68, 84, 691-695, 698 and 812]

4.3 The favourable performance of manufactured exports from developing Asia and Pacific can be attributed to the success of a small number of countries. Among a sample of 73 developing countries, seven developing countries of Asia and Pacific contributed more than half or 55.3 per cent of total manufactured exports in 1972 including: Hong Kong (19.6 per cent); The Republic of Korea (10.7 per cent); India (9.5 per cent); Singapore (7.4 per cent); Pakistan (2.9 per cent); Thailand (2.7 per cent) and Malaysia (2.5 per cent). This group of successful exporting countries of manufactures bears a strong resemblance with the group of countries which achieved impressive rates of growth of domestic manufacturing. All these countries achieved rates of growth of manufacturing value added in excess of 10 per cent from 1960-1975. Rapid industrial growth in developing Asia and Pacific has thus been confined almost exclusively to countries with successful export performance. Basically in these countries manufactured exports played a vital role as a source of additional growth for domestic industry; in providing foreign exchange required to obtain the necessary capital goods and technologies to further the process of industrialization; relieved some countries of the smallness of domestic markets and possibly encouraged development along lines which relfect present areas of comparative advantage. Experience has also demonstrated that the pattern of industrialization can be heavily influenced by, but is by no means dependent upon, an abundance of natural resources since trade in raw materials and semi-manufactures can enable a country to overcome natural resources constraints. In developing their manufacturing export sector several developing countries have adopted special incentives to export, exchange rate policies aimed at keeping export prices highly competitive and macro-economies policies intended to provide for rapid investment and export-led growth. There is some evidence to suggest that changes in trade pattern of manufacturing may also be related to the development and direction of rather sophisticated and complex organizational structures.

4.4 Despite the dramatic increase in manufactured export which occurred in many developing countries of Asia and Pacific in some cases 40-50-fold (Singapore and Thailand), only Hong Kong has an export surplus of manufactures with developed market economies, while Singapore, the Philippines, Thailand, India, Malaysia and the Republic of Korea all recorded net deficits in manufactured trade with the developed market economies. Moreover, in all these countries the deficit has increased substantially since 1964. The net effect of successful export expansion, though still limited to a few developing countries, has thus been closely associated

with increased imports from developed market economies and on the balance benefitted exporters in developed market economies as well. Thus, the successful exporting countries are to a higher degree customers than competitors with exporters in developed market economies (Annex V).

4.5 An analysis of trade by end-use in eight developing countries of Asia and Pacific shows a general pattern of dependence upon imports for the main supply of capital goods and consumer durables and upon natural resources related activities in the case of production and exports. In Table 4.2 the dominance of exports of "other manufactures" (43 per cent), high in natural resource content, is apparent except in the case of Hong Kong with a small resource base and the Republic of Korea where domestic processing activities prior to exports are considerable. The data also shows a substantial and encouraging increase in the export of capital goods and consumer durables from 9 to 16 per cent, in particular in the case of Singapore, Malaysia, Hong Kong and the Republic of Korea, while in other countries this category is quite insignificant. Concomitantly a significant decline occurred in the exports of intermediate, particularly in India, the Republic of Korea and Sri Lanka though not in Malaysia. This general decline may be due to domestic markets replacing foreign purchasers of these goods.

4.6 The data further underlines the heavy dependence of Asian developing countries upon imports of "capital goods and consumer durables", 38 per cent of total manufactured imports, except in the case of Sri Lanka; and also, although to a lesser extent, upon "supplies and intermediates". Increased domestic supply of these categories of manufactured products appears to be an important avenue for further industrialization, in particular the latter group which requires less sophisticated technologies than the former.

4.7 In evaluating the performance of manufactured exports of Asia and the Pacific it is noteworthy that the achievements were in large part due to significant improvement in the competitive position particularly in the case of machinery of transport equipment; other manufactures; clothing; textile yarn and fabrics. On the other hand, the product composition of Asian manufactured exports made a negative impact upon the export performance in the sense that exports were concentrated among product categories for which growth of demand was relatively low during the 1970's, in particular textile yarn and fabrics. In contrast, exports of the more dynamic product categories were negligible. Moreover, manufactured exports were concentrated on export markets which grew relatively slowly. While

Table 4.2 Imports and Exports of Manufactures by end-use in selected developing countries, 1965-75

[in per cent of total imports/exports]

	IMPORTS								EXPORTS							
	Mainly cons. non-durabl.		Mainly supplies and intermed.		Mainly cap.goods and cons.durabl.		Other Manufact.		Mainly cons. non-durables		Mainly supplies and intermed.		Mainly cap.goods and cons.durabl.		Other Manufact.	
	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	19
Hong Kong a/	11	11	38	34	25	31	26	24	64	65	19	11	13	23	4	1
India	2	2	15	39	57	33	26	26	10	18	69	28	4	15	17	39
Korea Rep. of a/	3	5	52	29	24	49	21	17	31	41	44	26	7	20	18	13
Malaysia, Peninsula a/	8	5	2	19	37	49	32	27	3	6	8	23	6	26	83	45
Philippines	3	3	22	34	48	39	27	24	1	6	20	16	0	1	79	7
Singapore	9	7	23	20	28	46	40	27	8	7	20	11	22	33	50	49
Sri Lanka	5	2	30	32	19	14	46	52	38	9	42	29	-	2	20	60
Thailand	7	4	28	27	40	46	25	23	3	11	27	24	1	4	69	61
Sample average	6	5	29	29	35	38	30	28	20	20	31	21	9	16	43	43

Source : UNIDO Industrial Development Survey

a/ Value added refers to 1974 instead of 1975

Note: For a breakdown of ISIC categories by end-use see footnote to Table 3.3

the competitive position of Asian and Pacific countries has thus improved significantly in recent years, the exports in which they specialize are not products which have experienced buoyant world demand and their markets have been growing relatively slowly. Increasing the present rate of structural change in the manufacturing sector coupled with a fair treatment of market access and careful selection of markets and products would no doubt improve the prospects for growth.

4.8 In 1973 the developing countries in general accounted for only 7 per cent of the manufactured imports to developed market economies and only 1 per cent of the developed market economies' domestic sales of manufactured goods consisted of products from developing countries. These figures would seem to suggest considerable possibilities for further expansion of manufactured exports to developed market economies and serve to empahsize the presently marginal role that developing countries play as suppliers of manufactured goods to these countries, a fact which contrasts with many of the protectionistic fears being voiced in the developed countries. Trade prospects will largely depend upon the continued diversification of products exported and markets supplied which would depend upon continued changes in the structure of domestic industry in developing countries. Continuous shifts in specialization of exports among developing countries of the region is taking place as a result of dynamic changes in comparative advantages. A further widening and deepening of the products exported and markets supplied seem in line with changes in areas of comparative advantages usually associated with industrialization. A more diversified export pattern, as a consequence of structural changes in domestic production, show promise of integrating more closely the economies of developing and developed countries. In such a trend towards increased interdependence, the manner in which the interests of producers in the two economic groups are tied through technologies, areas of specialization, cost considerations, market conditions for products and inputs and pertinent policies become equally important with the question of market access in influencing future development.

V. Review of Industrialization in Selected Developing Countries

5.1 As presented in the Industrial Development Survey the following cursory review of the salient features of industrialization in three selected countries, India, the Republic of Korea and the Philippines, serves to illustrate the observed trends and also to illuminate how resource endowments, market size, etc., effect growth performance of industry and the choice of industrial policies. The review reconfirms the observed trend regarding the growth of heavy industry and, in India, the associated growth of the public sector. Both India and the Republic of Korea have developed an industrial structure similar to that of developed market economies. In spite of its fairly large market Korea's reliance on export-led growth has been somewhat unique; in both India and the Philippines a new emphasis upon the role of domestic demand is noted, while export policies remain important. There is a clear intention of the countries to alter their existing pattern of industrial specialization.

5.2 India's industrial structure, with a large domestic market, comprises a wide range of industrial activities. The basic pattern of structural change, begun in the 1950's and continued into the 1970's, is an increasing role for the capital goods industries which have expanded mainly at the expense of those light industries which are agro-based. The production share of light industries declined from 47 per cent in 1963 to 35 per cent ten years later. Thus, India's structure, in terms of light and heavy industry, would be quite similar to the average for developed market economies.

5.3 The performance of different sectors has been subject to considerable variation. Among the more dynamic products basic industrial chemicals, pharmaceuticals, paper and paper products, engineering, silk and rayon textiles deserve mention. Growth in basic industries such as iron and steel and cement has somestimes lagged, creating capacity utilization problems and aggravating the unemployment situation.[1/]

5.4 Beginning as early as 1956 with the Industrial Policy Resolution of that year, the Government's approach has been characterized by an emphasis on heavy industries with a predominant role for the public sector. The significance of State participation varied among sub-sectors from one of exclusive responsibility (iron and steel, heavy electrical machinery, aircraft and shipbuilding) to that of simply taking the initiative in the creation of new industries (machine tools,

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1/ Government of India, Draft Five-Year Plan, 1978-1983, (Planning Commission, New Delhi), 1978, pp. 184-186.

chemicals, fertilizers, synthetic rubber, etc.). The development of industries outside these two categories was left to the private sector.

5.5 Policy emphasis now seems to have shifted from heavy industry as the prime engine of growth to rural development and small-scale industry. A large number of products is reserved for exclusive manufacture in the small-scale and cottage industries sector. Demarcation, controls and licensing are the main instruments for achieving current objectives.

5.6 With regard to trade, licensing procedures and import formalities have recently been streamlined in anticipation that accelerated industrial growth and investment will result in additional imports. With certain exceptions - in particular, engineering goods - the export performance of industry has sometimes been disappointing despite the high priority the field receives in policy decisions.

5.7 India's export strategy has recently undergone some revisions. The prominence of these policies, however, is not so great as in other countries which is explained in terms of the export sectors' relatively small share in GDP.[1/] In an effort to make export opportunities more attractive without incurring significant increases in domestic prices, several steps have been taken. These include the extension of cash assistance to new product categories and more generous import replenishment licenses for exporters. Future policy directions are likely to emphasize employment-generating activities and technological choices which are compatible with this emphasis. Production of these sub-sectors will still be largely intended for the large domestic market rather than for export.[2/]

5.8 Among the countries reviewed here, structural shifts were by far the largest in the case of the Republic of Korea. In 1963 light industry still accounted for 63 per cent of manufacturing value added; but, by 1974, the share had fallen to 47 per cent. A further indication of the extent of manufacturing growth in the country is demonstrated by the fact that, in 1975, the sector's share in Korean GDP exceeded the corresponding share recorded for Japan. In that year per capita GNP was $541, an intermediate income level among the developing countries. This fact, coupled with the country's relatively large population, meant that its domestic market size was certainly sufficient to accommodate industries requiring economies of scale for efficient production.

1/ For an example of the important, but limited, role in which export development is viewed, see the summary of the statement by the current Minister of Commerce on "India's New Export Strategy", India Abroad, 19 August 1977.

2/ Government of India, op.cit., p. 186.

5.9 Despite its relatively large domestic market, Korea's reliance upon export-led growth is well known and somewhat unique among the countries considered here. During most of the period shown, export expansion accounted for 38 per cent of manufacturing growth while import-replacement contributed only 2 per cent.[1/] Among all developing countries, Korea's manufactured exports of engineering and metal products and textiles are substantial.[2/] This export success is reflected in the relatively high shares recorded for textiles, iron and steel, electrical machinery and transport equipment.

5.10 With such a heavy reliance upon exports, coupled with the fact that the major foreign markets are limited to a small number of developed countries, the impact on the economy of the current world slump has been considerable. Unlike some countries, Korea's policy response has included measures intended not only to reduce imports but also to further encourage the export drive. Domestic tariffs on imported raw materials and intermediate products were reduced to temporize the increase in import prices; price controls in the form of "standard" and "ceiling" prices for many manufactured products were introduced; trade promotion activities were intensified with emphasis on market diversification and the Won was devalued. Import substitution measures have not been ignored, however. These include the provision of financing on preferential terms for exports using domestically produced materials (e.g. apparel made of synthetic fibres rather than cotton or wool); restricted licensing of imports of several types of machinery and an increase in the number of items subject to maximum advance import deposit requirements.

5.11 Examining the three most recent Five-Year Plans, spanning the period 1962-1976, a decreased emphasis on rapid growth has been noted. The major themes carried through the first two plans have been summarized as an emphasis on manufacturing rather than agriculture, an emphasis on light rather than heavy industry, on labour-intensive rather than capital-intensive and a "specialized" (export) rather than "integrated" (import substitution) products.[3/]

1/ The reamining contribution to industrial growth (60 per cent) was provided by domestic demand. See Charles Frank, Kwang Kim and Larry Westphal, Foreign Trade Regimes and Economic Development: South Korea, (Columbia University Press, New York), 1975, p. 95.

2/ For detailed figures see UNCTAD, "Review of Recent Trends and Developments in Trade in Manufactures and Semi-manufactures", (TD/B/C.2/190), pp. 31-33.

3/ Paul. W. Kuznets, Economic Growth and Structure in the Republic of Korea, New Haven, Yale University Press, 1977, p. 213.

Table 5.1 **Distribution of output by manufacturing branch in selected Asian countries, various years**

(per cent)

Industrial Sector	ISIC	India		Republic of Korea		Philippines	
		1963	1973	1963	1974	1963	1974
Food Products	311/2	12.8	7.4	8.8	5.8	27.9	31.1
Beverages	313	0.4	1.3	9.1	7.7	7.5	5.6
Tobacco	314	2.2	2.3	13.7	3.1	4.1	6.2
Textiles	321	22.4	17.1	17.4	15.2	6.7	7.6
Wearing Apparel, except footwear	322	1.4	0.3	2.1	4.3	2.8	1.0
Leather and products	323	0.4	0.4	0.3	0.9	0.3	0.1
Footwear	324	1.3	0.2	0.3	0.3	...	0.2
Wood Products except furniture	331	1.2	0.6	3.4	1.8	5.1	3.1
Furniture and fixtures, except metal	332	0.3	0.5	0.7	0.3	0.8	0.5
Paper and products	341	0.8	2.5	3.8	2.5	2.3	3.5
Printing, publishing	342	1.0	1.5	4.1	2.1	3.1	1.7
Industrial chemicals	351	8.8[a]	13.5	9.6[a]	5.7	8.4[a]	2.9
Other chemical products	352	[a]	4.6	[a]	4.3	[a]	1.2
Petroleum refineries	353	1.7[b]	1.8	2.4[b]	5.4	7.2[b]	8.0
Misc. Petroleum and coal products	354	[b]	0.3	[b]	1.1	[b]	0.2
Rubber products	355	2.8	2.6	2.9	2.6	2.9	2.1
Plastic Products	356	...[c]	0.4	...[c]	1.1	[e]	1.1
Pottery, china and earthenware	361	4.5[c]	3.9	6.0[c]	0.2	4.1[c]	0.3
Glass and glass products	362	[c]	0.4	[c]	0.9	[c]	1.1
Other non-metallic mineral products	369	[c]	1.8	[c]	4.4	[c]	2.8
Iron and steel	371	8.7	8.3	2.9	8.1	1.5[d]	2.7
Non-ferrous metal basic industries	372	1.5	0.9	0.5	1.1	[d]	0.8
Metal products except machineryetc.	381	3.6	3.2	2.3	3.2	3.9	2.2
Machinery, except electrical	382	6.8	7.8	2.3	2.2	0.9	2.1
Electrical machinery, apparatus etc.	383	4.4	6.6	2.4	8.6	4.5	3.0
Transport equipment	384	11.5	8.4	3.3	5.0	5.5	3.0
Professional photographic goods, etc.	385	1.3	1.5	1.6	0.5	0.8[e]	0.1
Other manufacturing	390	...	0.4	...	1.9	[e]	0.3

Note: Percentages may not sum to 100 due to rounding.

a/ 352 is included in 351

b/ 354 is included in 353

c/ 362 and 369 are included in 361

d/ 372 is included in 371

e/ 356 and 390 are included in 385

Source: UNIDO Industrial Development Survey

5.12 In the Philippines the shift in industrial structure has been relatively modest, a slight decline in light industry's share from 62 to 61 per cent. The relative increase in the importance of food products (ISIC 311/2) compensated for the modest decline in several other light industry sub-sectors. The share of light industry, while relatively high for a country with a large domestic market, would be partially explained by the country's abundant endowment of agricultural and forest resources.

5.13 In the past, the Philippine industrialization effort has been described as one of traditional import substitution in final consumption goods as well as extractive and agro-processing industries for export.[1/] Import-replacement of non-durable and, later, durable consumer goods set off progressive changes in the traditional economic structure. At the same time traditional exports provided the foreign exchange to pay for the intermediate inputs and machinery needed for the growing production of consumer goods. More recently, a shift of emphasis has occurred stressing the development of intermediate and capital goods for the domestic market, coupled with the export of non-traditional manufactures.[2/]

5.14 Tax exemptions or credits which serve as indirect subsidies have long been a prominent feature of the Philippine industrial policy approach. Although it is difficult to identify, by sub-sector, those activities which have benefitted most from this programme, the most exemptions appear to have been concentrated among heavy industries and light industries based on the country's abundant resources.[3/]

5.15 Most incentives focus on capital-related activities.[4/] In 1970-1972, approximately 80 per cent of the total estimated tax relief provided by the Board of Investment took this form. More recently, policymakers have introduced modifications intended to favour employment-generating activities. Registered establishments, for example, are entitled to deduct one-half of the cost incurred for labour training from their taxable income. The Board of Investment also introduced

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1/ For a summary of policy directions in the Philippines, see World Bank, The Philippines: Priorities and Prospects for Development, (The World Bank, Washington, D.C.) 1976, especially Chapters 8 and 9.

2/ Various studies have called for a reform in the tariff system as a first step mounting an export drive. See, for example, John H. Power and Gerardo P. Sicat, The Philippines: Industrialization and Trade Policies, (Oxford University Press, London), 1971, Chapter 6.

3/ For a list of product lines exempted from taxes, see Ibid., p. 83.

4/ These include, for example, reductions in transport duties on machinery, compensating taxes on imported machinery, tax credits for locally produced machinery, accelerated depreciation, reinvestment allowances, etc.

the requirement, applying to many industries, that a new project should generate at least one job for every US $4,000 of imported equipment or, failing to do this, the project must earn through exports within five years the foreign exchange it uses in excess of US $4,000 per job created. Steps such as these provide increased benefits to labour-intensive and/or export-oriented industries although the main thrust of Philippine industrial policy continues to be aimed at the encouragement of capital-intensive activities among the heavy industries sector.

VI. Industrial Growth Prospects for Developing Asia and the Pacific in the Light of the Lima Target

6.1 To gain some insight into the dimensions of future changes in the growth of world manufacturing and its distribution among developing regions, UNIDO has undertaken an analysis of possible scenarios for the world industrial situation in the year 2000 including the position of developing Asia and the Pacific. These scenarios are intended to serve merely as broad indications of possible directions and magnitude of change rather than projections and may also suggest broad policy areas where adjustment pressures may apply. The many statistical and econometric assumptions involved in this exercise are elaborated in full detail in the Industrial Development Survey and are not discussed here.

6.2 The examination of industrial growth prospects and the derivation of three illustrative "world industrial maps" ir year 2000 was based upon several considerations which are briefly mentioned here. Firstly, it was kept in mind that in the past the world industrial structure was able to accommodate significant changes within a relatively short period of time (1960-1975), which suggests considerable flexibility in the adjustment process. Secondly, the rate of progress in the manufacturing sector is closely related to the level of development. Typically the rate of structural change begins from a relatively small share of manufacturing at low levels of per capita income; increases rapidly over the intermediate income level and continues to grow at high levels of income, albeit at a slower pace, as the country enters the mature or developed stage. Typically large countries appear to reach a phase of rapid structural change at an earlier stage of development than other groups, followed by small countries with modest resources and small countries with ample natural endowments and an industrial orientation. Small countries with a primary orientation generally achieve a phase of rapid structural changes in industry at a relatively late stage in their development (see Annex VIII). Finally, to take into account

the interrelationship between growth of manufacturing and the development of other economic sectors the "scenarios" were based upon explicit assumptions of growth of total GDP on the basis of which implied growth rates and shares of manufacturing value added were derived.(see Annex IX).

6.3 The basic considerations underlying the assumptions in regard to future growth in the different economic groupings are as follows. In the developed market economies there are reasons to expect that future growth will not match previous levels due to i.a. structural considerations and trends in savings, investment and demand. In centrally-planned economies the conclusion is similar, though for different reasons; future growth of manufacturing is not likely to match historical growth due to i.a. manpower considerations, shifts in sectoral priorities and rising raw material costs. In regard to the developing countries the historical growth pattern was treated as a lower limit for manufacturing growth until year 2000. The pace of structural change in the manufacturing sector has been found to be greatest over the intermediate level of per capita income, somewhere between 300 $ - 800 $ depending upon market size and policy orientation. Many of the low income developing countries [less than 265 $] like Afghanistan, Burma, India, Indonesia, Pakistan and Sri Lanka, where more than two thirds [68 per cent] of the population of developing Asia and Pacific live, and also Bangladesh for which lack of data, however, preclude a review, have not yet reached this threshold. However, many may be expected to reach this threshold during the next 25 years and the overall effect upon the region's growth performance could be quite significant. Thus, a new era of greater participation by more people in the industrial growth process in Asia and the Pacific may be visualized.

6.4 The results of this exercise in terms of the three scenarios are summarized in the following table and Figure 6.1. The table compares with a share of developing Asia and Pacific in world manufacturing value added in 1976 of 2.5 per cent and an average annual rate of growth of manufactures of 7.7 per cent (historical growth) during the period 1960-1975. In the following each of the three scenarios is briefly explained.

Table 6.1 Share of world industrial production in year 2000

	Developing countries	Developing Asia and the Pacific	Assumed GDP growth rates in developing countries	Implied annual growth of MVA in developing countries
I. Historical scenario	13.9	5.1	Historical growth rates achieved 1960-1975	8.0
II. Lima scenario	25.7	9.5	2 per cent above historical average for each country	10.5
III. High growth scenario	23.8	7.4	2 per cent above historical average for each country except "exceptional growth" countries assumed to grow at their historical average	10.1

Source: UNIDO Industrial Development Survey (draft).

6.5 The historical scenario assumes a continuation of each country's past growth rates identical with those attained from 1960-1975. According to this scenario the developing countries would achieve a share of only 13.9 per cent of world manufacturing production by the year 2000 while the share of Asia and Pacific would be 5.1 per cent. The historical scenario is not to be regarded as a realistic feasibility for the future but rather intended to serve as an illustrative case. Obviously the share of developing countries including Asia and Pacific fall far below the Lima target, in fact this target requires a dramatical departure from historical trends. A continuation of historical growth trends would aggravate existing imbalances in the world industrial map. Most gains would largely be eroded by population increases. The historical scenario thus underlines the need for national and international action if such conditions are to be avoided.

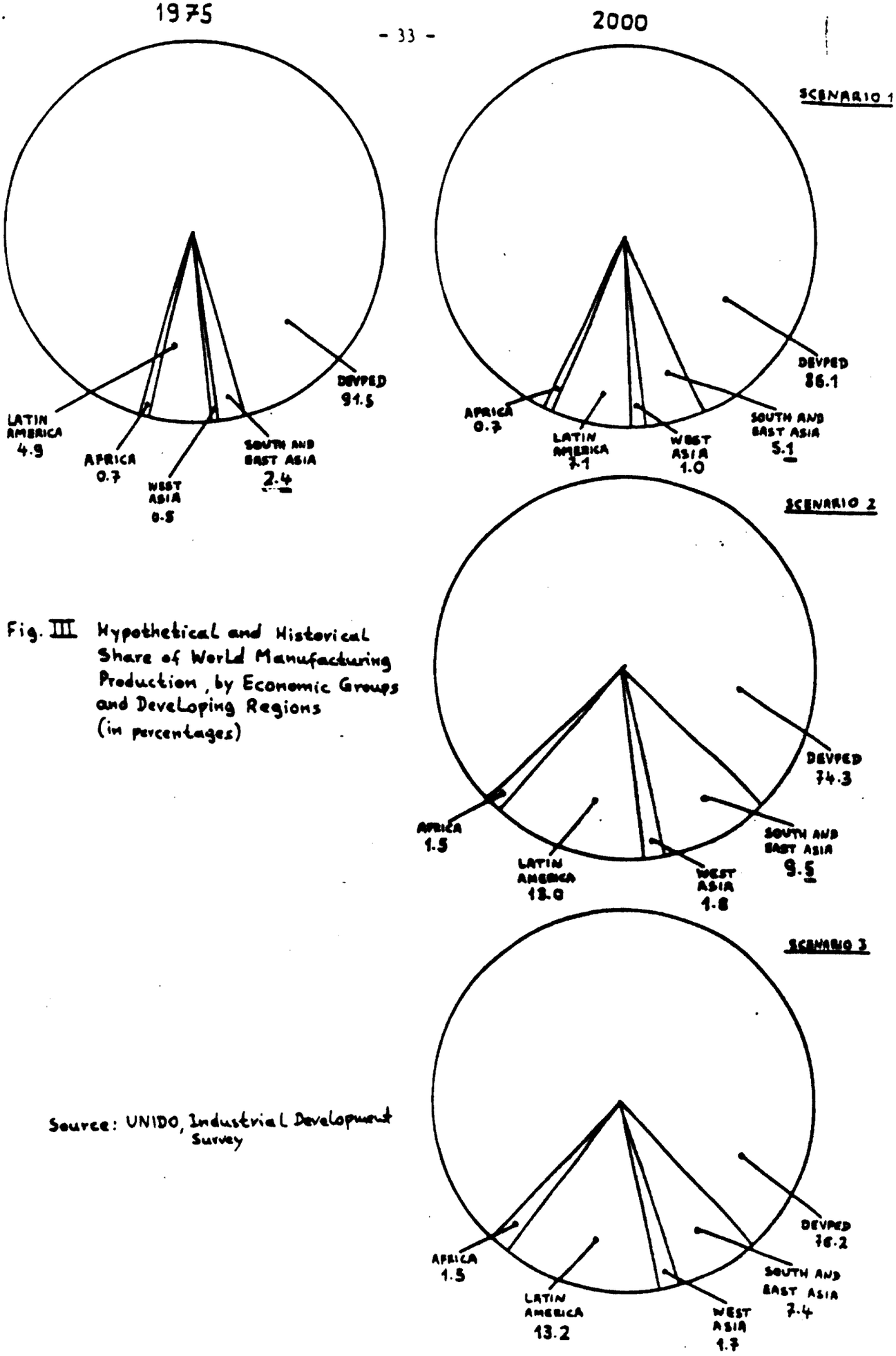


Fig. III Hypothetical and Historical Share of World Manufacturing Production, by Economic Groups and Developing Regions (in percentages)

Source: UNIDO, Industrial Development Survey

6.6 In regard to the Lima scenario the assumption of a one-per-cent drop in the GDP growth rate of each developed country coupled with a two-per-cent increase in the growth of GDP in developing countries would lead to a share of developing countries of world industrial production of 25.7 per cent by the year 2000 while the share of Asia and the Pacific would be 9.5 per cent or close to the regional target of 10 per cent. The implied growth rate of manufacturing value added for developing countries would be 10 5 per cent. These assumptions would imply that world income and world manufacturing production would be somewhat less than in the case of the historical scenarios. The Lima scenario appears to be extremely optimistic in terms of growth implications for those developing countries which in the past achieved "exceptional" growth rates such as Hong Kong, Iran, the Republic of Korea, Singapore and Thailand. It is unlikely that the exceptional growth rates achieved by these countries in the past can be surpassed in the future. Thus the Lima scenario is regarded as a maximum or optimistic alternative and contrasts with the historical scenario which represents a minimum or pessimistic alternative.

6.7 The third scenario, the high growth scenario, is like the preceeding alternative, optimistic in its assumptions of income growth in the developing countries. GDP growth in the developed countries is assumed to be one per cent below historical levels. The exceptional growth achieved by some developing countries in the past such as Hong Kong, Iran, the Republic of Korea, Singapore and Thailand is assumed to continue in the future, while the remaining developing countries will manage a two-per-cent increase in GDP rates of growth of above past growth rates. The implied growth rate of manufacturing production in developing countries would be 10.1 per cent. In this scenario the developing countries share of world production would reach 23.8 per cent by the year 2000 while the share of South and East Asia would be lower than the Lima target, 7.4 per cent as compared to 10 per cent. Although this scenario represents an optimistic illustrative alternative, the assumed rates of growth appear to be more feasible gauged against historical performance.

6.8 The resultant per capita value of GDP and MVA associated with the three scenarios are summarized in Table 6.2. A comparison of the three scenarios reveals that only in Scenario II and III the gap in per capita values between the developed and developing countries would be reduced which underlines the importance of departing from historical growth rates in the future. In regard to developing Asia and the Pacific the MVA per capita would increase from $25 in 1975 to $124 in year 2000 in the historical scenario, $222 in the Lima scenario

Table 6.2 Per Capita Values of GDP and MVA in developed and developing countries in 1975 and the year 2000

[in US$]

	1975		Year 2000					
			Scenario I Historical scenario		Scenario II Lima scenario		Scenario III High-growth scenario	
	GDP per capita	MVA per capita	GDP per capita	MVA per capita	GDP per capita	MVA per capita	GDP per capita	MVA per capita
Developed Countries	2671	861	8581	2919	6773	2392	6773	2392
Developing Countries	266	51	738	196	1170	345	1023	311
Africa	183	24	315	51	503	101	482	96
Asia and Pacific	156	25	549	124	865	222	647	168
Latin America	675	164	1595	548	2540	944	2540	944
West Asia	509	80	1661	341	2624	591	2214	550

Source: UNIDO Industrial Development Survey (draft)

and $168 in the high growth scenario. Thus, in terms of MVA per capita in year 2000 the Lima scenario and high growth scenario would be 1.8, respectively 1.4, the level to be expected from the historical scenario. The level of per capita MVA in developing Asia and Pacific relative to the level in developed countries would be 4.3 per cent, 9.3 per cent and 7.0 per cent in respect of the historical, Lima and high growth scenarios. The historical scenario would provide practically no improvement in relation to the situation in 1975. Viewed from a different perspective, the level of per capita GDP and MVA in developing Asia and the Pacific in year 2000 would approach the corresponding level of Latin America in year 1975 in respect of the high growth scenario and exceed it in the case of the Lima scenario. While the level of per capita MVA in Asia and the Pacific was approximately the same as in Africa in 1975, the prospects for growth in Asia and the Pacific would appear to be significantly brighter than for Africa and better than for any other developing region in the case of all three scenarios.

VII. Summary of Implications for Industrial Policies and Strategies

7.1 In regard to the pattern and distribution of industrial growth the observations were made that the share of developing Asia and Pacific in world industrial production is still modest and limited to 2.5 per cent; that the share has increased more rapidly than other developing regions except West Asia; and that the regional industrial structure is dominated by a few large countries. Industrial growth has been spearheaded by a few rapidly growing economies primarily pursuing outward looking policies and in these countries significant changes have occurred in the overall economic structure. Moreover, industrial growth has primarily been confined to a few developing countries at the intermediate and advanced levels of development, while industrial progress has been slow or marginal in the lower income developing countries, below a per capita income of $265, where more than two-thirds of the population of developing Asia and the Pacific live.

7.2 Sustained industrial progress requires changes in the composition of industrial output in developing Asia and the Pacific. Branches of industries in which the developing countries are currently specialized do not promise to be dynamic industries in the future. Prospects, however, appear to depend to a large extent upon future policy approaches towards new domestic demand. At the more

general level the best prospects appear to have been among the intermediate, engineering and capital goods industries, which would seem to underline the need for further restructuring of industry in developing Asia and Pacific.

7.3 During the 1970's significant gains were made in manufactured exports, primarily due to improved competitiveness and the region's share of world manufactured exports reached 4.9 per cent which is significantly higher than the region's share of world manufacturing value added and also significantly higher than any other developing region of the world. Progress has been reflected in all major manufacturing categories, but confined to a limited number of successful exporting countries primarily the more advanced countries, where manufacturing exports have been vital to the process of industrialization. The general pattern of trade in manufactures, which has benefitted exporters in developed market economies as well, is still characterized by dependence upon imports for the main supply of capital goods and consumer durables and upon industrial resource related activities for exports. Future growth prospects appear to depend upon continued diversification of products and careful selection of markets, which in turn would depend upon continued structural changes in domestic industry.

7.4 Increasing the rate of growth of manufacturing value added ab ve historical achievements is critical to the achievement of a higher share of developing Asia and Pacific in world manufacturing value added by the year 2000. Illustratively it may be mentioned that if past growth rates were simply to continue and assuming a slowdown of growth in developed countries, developing Asia and Pacific may only achieve a share of 5.1 per cent in world manufacturing value added in the year 2000. If each developing country achieves a two-per-cent increase above their historical rates, the region's share may increase to 9.5 per cent. Since it is unlikely, however, that future growth in "exceptional growth" countries like Hong Kong, Iran, the Republic of Korea, Singapore and Thailand, can be surpassed in the future, the assumption of a continuation of historical rates for these countries combined with a two-per-cent increase in each of the other developing countries may lead to a share of developing Asia and Pacific in world manufacturing value added of 7.4 per cent in the year 2000.

7.5 The achievement of higher rates of growth of manufacturing value added in the future, requires significant changes in the structure of production, in foreign trade and in industrial investment. In the past significant impetus to industrial growth came from external demand sources. While external demand will no doubt continue to play a vital role to further industrialization in many

countries in line with dynamic changes in comparative advantages, the major impetus to industrial growth must necessarily come from new domestic demand and import replacement in regard to the four key areas singled out by the ESCAP Meeting of Ministers of Industry in November 1977, namely:

(i) the strengthening of linkages between industry and agriculture;

(ii) the development of small-scale industries and their linkages with large and basic industries;

(iii) the orientation of industry to satisfy the basic needs of the poor; and

(iv) the dispersal and location of industries away from metropolitan areas.

A real yardstick of progress will, no doubt, be the performance of the low income countries (less than $265 per capita income) where the major part of the population of developing Asia and Pacific so far has failed to participate in the mainstream of industrial progress.

Growth and size elasticities for country groups, 1969-1973

ISIC	Branch	Large countries		Small countries with modest resource endowments		Small countries, ample resources and a primary orientation		Small countries, ample resources and an industrial orientation	
		Growth elasticity	Size elasticity	Growth elasticity	Size elasticity	Growth elasticity	Size elasticity	Growth elasticity	Size elasticity
311	Food	1.07	-0.11	0.54	-0.45	1.46	-0.10	0.77	0.17
313	Beverages	1.15	-0.62	0.53	-0.25	0.71	0.33	0.81	-0.33
314	Tobacco	0.65	-0.12	1.38	0.29	0.57	0.01	0.51	-0.08
321	Textiles	1.02	-0.04	0.99	0.63	1.19	0.33	0.98	0.11
322	Wearing apparel, exc. footwear	1.55	-0.59	1.05	-0.20	1.54	-0.23	1.43	-0.13
323	Leather + leather + fur prod.	1.15	-0.28	0.96	0.43	1.42	-0.22	0.92	-0.06
324	Footwear	1.14	-0.57	0.70	-0.29	1.34	-0.19	0.87	-0.15
331	Wood products, exc. furniture	1.19	-0.31	0.93	-0.16	1.79	0.05	1.48	0.22
332	Furniture + fixtures, exc. metal	1.57	-0.23	1.04	0.24	1.66	-0.28	1.47	-0.26
341	Paper + paper products	1.77	-0.17	1.54	0.12	1.84	0.22	1.72	0.45
342	Printing, publishing	1.50	-0.17	1.32	-0.23	1.90	-0.03	1.58	0.01
351	Industrial chemicals	1.67	0.18	1.44	-0.01	2.06	0.61	1.82	0.09
352	Other chemical products	1.35	0.10	2.36	1.22	1.55	0.11	1.07	0.16
353	Petroleum refineries	1.05	-0.04	2.03	-0.15	1.41	1.41	0.42	0.15
354	Misc. products of petroleum and coal	1.13	0.10	0.98	0.32	0.91	0.39	2.15	-0.17
355	Rubber products	1.22	0.27	1.71	0.43	1.41	0.25	1.24	-0.02
356	Plastic products	1.49	-0.12	2.13	0.27	1.85	0.17	1.28	-0.34
361	Pottery, china and earthenware	1.13	-0.41	0.46	-0.14	1.16	0.32	1.73	-0.17
362	Glass + glass products	1.58	-0.13	0.84	-0.21	1.99	0.09	1.60	0.57
369	Other non-metallic mineral prod.	1.22	-0.19	1.09	0.18	1.26	-0.26	1.15	-0.06
371	Iron + steel basic industries	1.81	0.27	2.09	-0.04	2.40	0.21	2.16	0.31
372	Non-ferrous metal basic ind.	1.44	0.09	1.23	-0.07	2.89	0.56	2.10	1.00
381	Metal products exc. machinery	1.48	-0.15	1.36	0.20	1.65	-0.18	1.53	0.21
382	Machinery, except electrical	2.05	0.40	1.98	0.44	2.43	-0.17	2.34	0.18
383	Electrical machinery, apparatus, etc.	1.77	0.11	2.28	0.10	2.30	0.40	1.78	0.34
384	Transport equipment	1.86	0.25	1.60	-0.52	2.37	0.34	1.85	0.29
385	Professional, photographic goods, etc.	2.10	0.40	1.50	0.26	1.73	-0.94	1.91	0.16
390	Other manufacturing industries	1.29	-0.11	1.01	-0.58	1.56	-0.02	1.49	-0.46

Source: UNIDO based on data provided by the United Nations Statistical Office.

Note: The estimating equation for the regression analysis was $\ln(V/N) = a + b \ln Y + c \ln N$ where V is value added in millions of 1970 US dollars, Y is per capita GDP and N is population in millions. Data includes both developing and developed countries. For a definition of country coverage, see the annex to chapter III.

Income elasticities and estimates of per capita apparent consumption

Commodity (equation form)[a]	Number of observations	Adjusted co-efficient of determination ($\bar{R}^2$)	Elasticities at per capita income of				Average per capita consumption in kg at per capita income of			
			$300	$500	$1,000	$3,000	$300	$500	$1,000	$3,000
Cotton yarn (E)	43	0.388	0.99	0.78	0.50	0.06	1.24	1.95	3.05	4.15
Cordage, rope and twine (A)	24	0.639	0.82	0.82	0.82	0.82	0.12	0.19	0.33	0.82
Wood pulp, mechanical (A)	27	0.666	1.48	1.48	1.48	1.48	0.88	1.87	5.22	26.56
Pulp of fibres (C)	27	0.213	0.68	0.41	0.20	0.07	0.87	1.14	1.40	1.60
Wood pulp, sulphate and soda (D)	22	0.784	1.86	1.54	1.30	1.14	2.10	4.96	13.15	49.51
Newsprint (A)	32	0.825	1.11	1.11	1.11	1.11	1.37	2.41	5.18	17.45
Other printing and writing paper (D)	46	0.884	1.08	1.16	1.22	1.26	1.28	2.28	5.21	20.38
Kraft paper and paperboard (A)	28	0.849	1.35	1.35	1.35	1.35	1.13	2.25	5.75	25.48
Other machine-made paper and paperboard (D)	40	0.735	1.42	1.17	0.99	0 87	2.74	5.28	11.11	30.56
Packing containers of paper and paperboard (D)	26	0.800	1.71	1.35	1.08	0.90	1.78	3.86	8.85	25.70
Chlorine (E)	20	0.726	2.68	2.28	1.73	0.87	0.21	0.74	2.97	12.37
Sulphuric acid (D)	36	0.574	2.05	1.42	0.95	0.64	5.14	12.31	27.50	63.80
Nitric acid (C)	22	0.554	5.32	3.19	1.60	0.53	0.16	1.37	6.78	19.64
Caustic soda (A)	28	0.723	1.05	1.05	1.05	1.05	1 41	2.47	5.10	16.12
Nitrogenous fertilizers (A)	44	0.235	0.47	0.47	0.47	0.47	7.36	9.37	13.01	21.80
Insecticides, fungicides (C)	19	0.319	0.86	0.51	0.26	0.09	0.69	0.93	1.27	1.59
Rubber, synthetic (D)	17	0.920	1.58	1.20	0.92	0.73	0.51	1.02	2.13	5.17
Soap (C)	67	0.316	0.38	0.23	0.11	0.04	2.10	2.11	2.74	3.05
Washing powder and detergents (A)	42	0.828	1.06	1.06	1.06	1.06	1.00	1.73	3.60	11.57
Carbon black (D)	20	0.872	1.12	1.00	0.92	0.86	0.27	0.47	0.91	2.39
Printers' ink (A)	28	0.873	1.29	1.29	1.29	1.29	0.04	0.09	0.21	0.86
Distillate fuel oils (E)	66	0.831	1.28	1.20	1.08	0.89	45.04	84.84	186.41	547.78
Residual fuel oils (E)	57	0.767	1.54	1.33	1.05	0.60	65.70	136.60	311.52	772.75
Cement (E)	76	0.898	1.29	1.10	0.85	0.44	71.26	131.49	258.50	583.43
Wire rods (E)	24	0.598	1.29	1.06	0.75	0.27	4.25	7.75	14.55	29.47
Plates (heavy), over 4.75 mm (C)	20	0.690	4.69	2.81	1.41	0.47	0.66	4.31	17.62	45.03
Wire, plain (A)	21	0.773	0.97	0.97	0.97	0.97	1.70	2.79	5.45	15.74
Tubes, welded (A)	22	0.611	1.01	1.01	1.01	1.01	1.67	2.79	5.60	16.92
Copper, refined, unwrought (C)	22	0.518	3.28	1.97	0.98	0.33	0.29	1.06	2.81	5.47
Aluminium, unwrought (A)	30	0.407	0.97	0.97	0.97	0.97	0.97	1.60	3.12	6.01
Lead, refined, unwrought (E)	30	0.709	1.92	1.59	1.15	0.46	0.23	0.57	1.48	3.89
Zinc, unwrought (A)	25	0.812	0.89	0.89	0.89	0.89	0.49	0.77	1.42	3.77
Tin, unwrought (A)	23	0.379	0.75	0.75	0.75	0.75	0.03	0.05	0.08	0.19
Nails, screws, nuts, etc. (A)	25	0.874	0.98	0.98	0.98	0.98	0.52	0.86	1.70	4.98

Source: UNIDO based on data supplied by the United Nations Statistical Office.

a/ A: log-log; B: semi-log; C: log-inverse; D: log-log inverse; E: log-log square.

Exports in Million US Dollars, f.o.b.

	World	Developed market economies	Developing market economies	Africa	Latin America	Developing Asia: West Asia	Developing Asia: Asia and Pacific	Centrally-planned economies: Europe	Centrally-planned economies: Asia	OPEC countries
Textile yarns and fabrics (SITC 65)										
1970-1971	13,232	10,414	1,936	202	190	141	1,401	578	309	82
1975-1976	28,664	20,954	5,472	395	703	381	3,993	1,311	928	135
Index	2.166									
Clothing (SITC 84)										
1970-1971	6,760	4,386	1,411	-	70	-	1,273	850	115	-
1975-1976	18,760	9,700	6,662	-	382	-	5,866	1,858	541	-
Index	2.775									
Chemicals (SITC 5)										
1970-1971	23,144	20,465	942	150	438	94	276	1,601	119	64
1975-1976	64,887	56,776	3,681	344	1,664	660	1,011	4,103	329	605
Index	2.804									
Non-ferrous metals (SITC 68)										
1970-1971	11,345	7,227	3,163	1,460	1,236	-	447	907	53	-
1975-1976	19,780	13,218	4,733	1,593	1,827	-	1,173	1,645	185	-
Index	1.743									
Iron and steel (SITC 67)										
1970-1971	17,388	14,454	599	-	178	-	189	2,353	80	-
1975-1976	45,207	38,666	1,513	-	385	-	777	4,834	194	-
Index	2.600									
Metal products (SITC 691-695, 698, 812)										
1970-1971	6,649	6,116	229	-	-	-	144	285	20	-
1975-1976	17,588	16,122	824	-	-	-	610	577	64	-
Index	2.645									
Machinery and transport equipment (SITC 7)										
1970-1971	96,697	84,999	1,476	79	433	96	858	10,155	62	59
1975-1976	261,402	227,275	8,300	173	1,834	607	5,617	25,669	158	-
Index	2.703									
Other manufactures[a]										
1970-1971	38,435	31,784	3,081	499	674	202	1,981	3,098	452	212
1975-1976	95,837	77,437	10,529	829	1,991	902	7,928	6,873	996	532
Index	2.493									
Total manufacturing exports (5 + 6 + 7 + 8)										
1970-1971	213,650	179,845	12,737	2,390	3,219	533	6,569	19,827	1,210	417
1975-1976	552,125	460,148	41,714	3,334	8,786	2,550	27,037	46,870	3,395	1,272
Index	2.584	2.559	3.275	1.395	2.729	4.784	4.116	2.364	2.806	3.050
Share in world										
1970-1971	100.00	84.13	5.96	1.12	1.51	0.25	3.07	9.28	0.57	0.20
1975-1976	100.0	83.34	7.56	0.60	1.59	0.46	4.90	8.49	0.62	0.23

a/ Other manufactures : (6 + 8) - (SITC 65, 67, 68, 84, 691-695, 698 and 812)

Shares in world exports of manufactures, developing countries, 1970-1971 and 1975-1976

(in per cent)

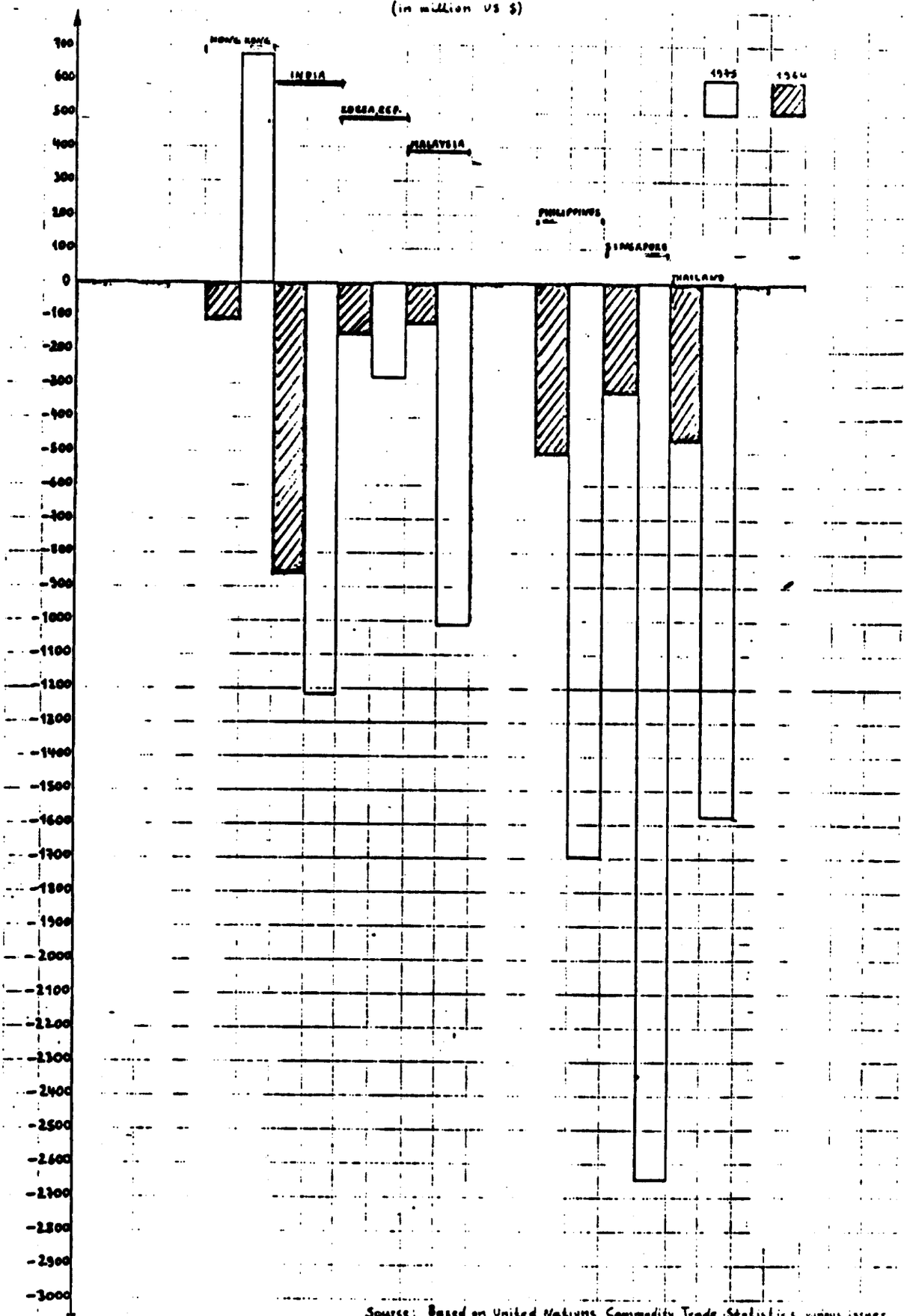
Exporting areas	Average 1970-1971	Average 1975-1976
Africa	1.12	0.60
Latin America	1.51	1.59
Asian Middle East	0.25	0.46
Asia and Pacific [b]	3.07	4.90
OPEC countries	0.20	0.23
Centrally planned economies of Asia	0.57	0.62

b/ Including developing Oceania

Source: Based on United Nations, Monthly Bulletin of Statistics, Vol. XXX, No. 8, August 1976, Vol. XXXI, No. 5, May 1977 and Vol. XXXII, No. 6, June 1978

ANNEX V

Net Manufactured Trade of Selected Developing Countries with Developed Market Economies, 1964 and 1975
(in million US $)



Source: Based on United Nations, Commodity Trade Statistics, various issues

a/ 1965 instead of 1964.
b/ 1974 instead of 1975.

Appendix Table The estimated competitiveness effect in Asia and the Pacific

(Million current US dollars f.o.b.)

	Textile yarns and fabrics	Clothing	Chemicals	Non-ferrous metals	Iron and steel	Metal products	Machinery and transport equipment	Other manufactures	Total
Change in performance	372.8	2,576.6	297.8	18.0	288.6	237.9	3,461.9	2,809.1	10,062.7
Commodity-composition effect	- 585.6	243.2	60.7	- 375.9	3.0	8.8	102.1	- 180.3	- 724.0
Market-composition effect	- 178.7	83.3	47.2	14.2	69.4	16.1	- 48.0	- 215.5	- 212.0
Competitiveness effect	1,137.1	2,250.1	189.9	379.7	216.2	213.0	3,407.8	3,204.9	10,998.7

Source: UNIDO, based on United Nations, Monthly Bulletin of Statistics, Vol. XXX, No. 8, August 1976, Vol. XXXI, No. 5, May 1977, and Vol. XXXII, No.6 June 1978.

Appendix Table . The estimated competitiveness effect in centrally-planned economies of Asia
(Million current US dollars f.o.b.)

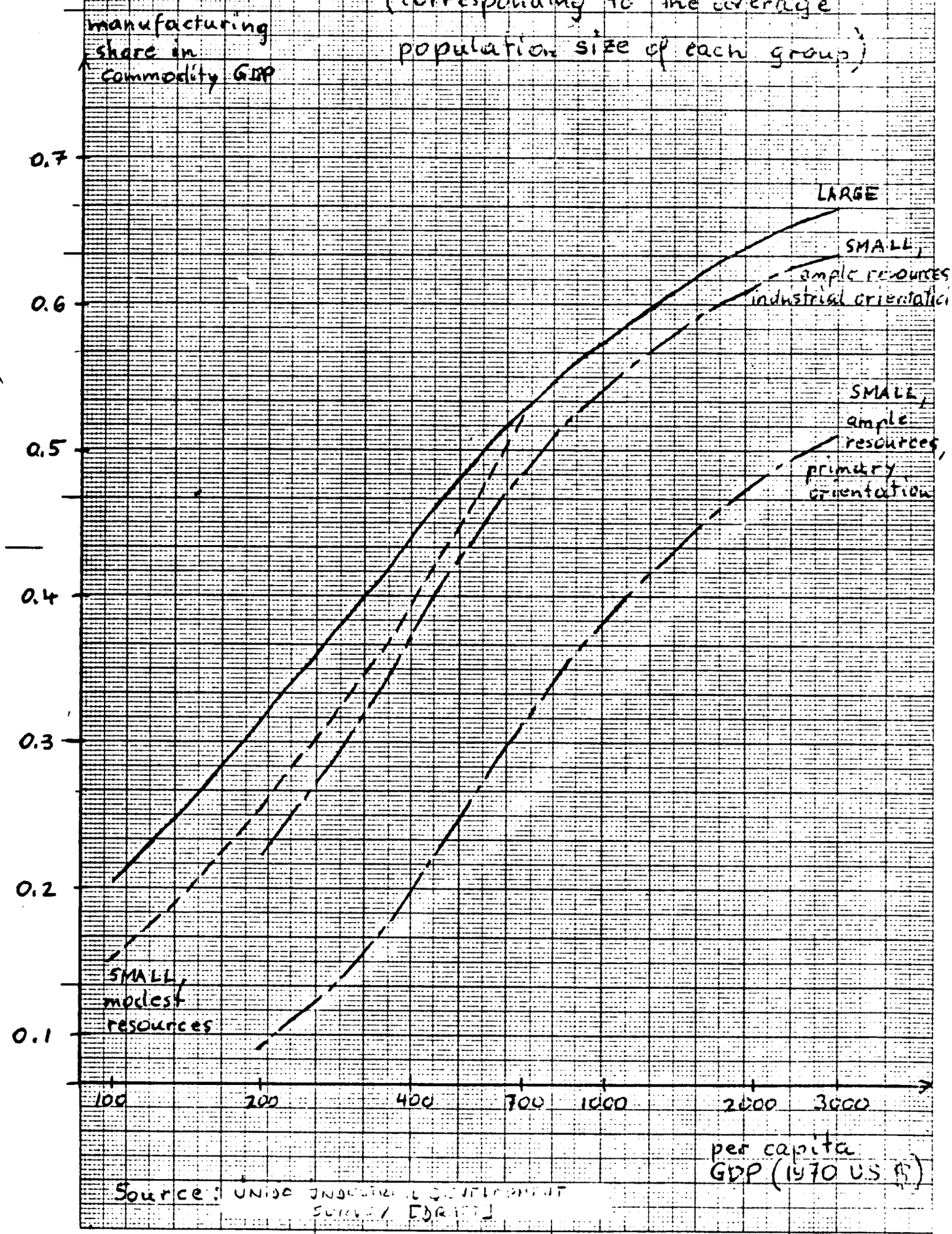
	Textile yarns and fabrics	Clothing	Chemicals	Non-ferrous metals	Iron and steel	Metal products	Machinery and transport equipment	Other manufactures	Total
Change in performance	129.5	243.8	21.5	48.0	-12.7	12.3	- 2.2	-172.0	268.2
Commodity-composition effect	-129.2	21.9	26.2	-44.6	1.3	1.2	7.4	- 41.2	-157.0
Market-composition effect	28.2	- 9.2	1.2	3.1	43.5	-	42.1	155.2	264.1
Competitiveness effect	230.5	231.1	- 5.9	89.5	-57.5	11.1	-51.7	-286.0	161.1

Source: UNIDO, based on United Nations, Monthly Bulletin of Statistics, Vol. XXX, No. 8, August 1976, Vol. XXXI, No. 5, May 1977, and Vol. XXXII, No.6 June 1978.

ANNEX VIII

Estimated Growth Paths of MANUFACTURING, by Country Groups

(corresponding to the average population size of each group)



Source: UNIDO INDUSTRIAL DEVELOPMENT SURVEY, EDRIED

Growth rates 1975-2000

(Percentage)

	Historical rates of growth, 1960-1975		Historical scenario		Lima scenario		"High growth" scenario	
	in GDP	in manufacturing value added	Assumed GDP growth rates	Implied manufacturing value added growth rates a/	Assumed GDP growth rates	Implied manufacturing value added growth rates a/	Assumed GDP growth rates	Implied manufacturing value added growth rates a/
Developed countries	4.9	6.0	1960-75 average for each country (5.6) b/	5.7	1 per cent below historical average for each country (4.6)	4.9	1 per cent below historical average for each country (4.6)	4.9
Developing countries	5.7	7.4	1960-75 average for each country (6.8)	8.0	2 per cent above historical average for each country (8.8)	10.5	2 per cent above for all countries but "exceptional growth" countries which are assumed to grow at their historical averages (8.2)	10.1

a/ These growth rates were derived from the equations once assumptions about growth in GDP had been made.

b/ Derived growth rates of the country groups as a whole are given in parentheses.

Note: All figures are based on 1970 prices.

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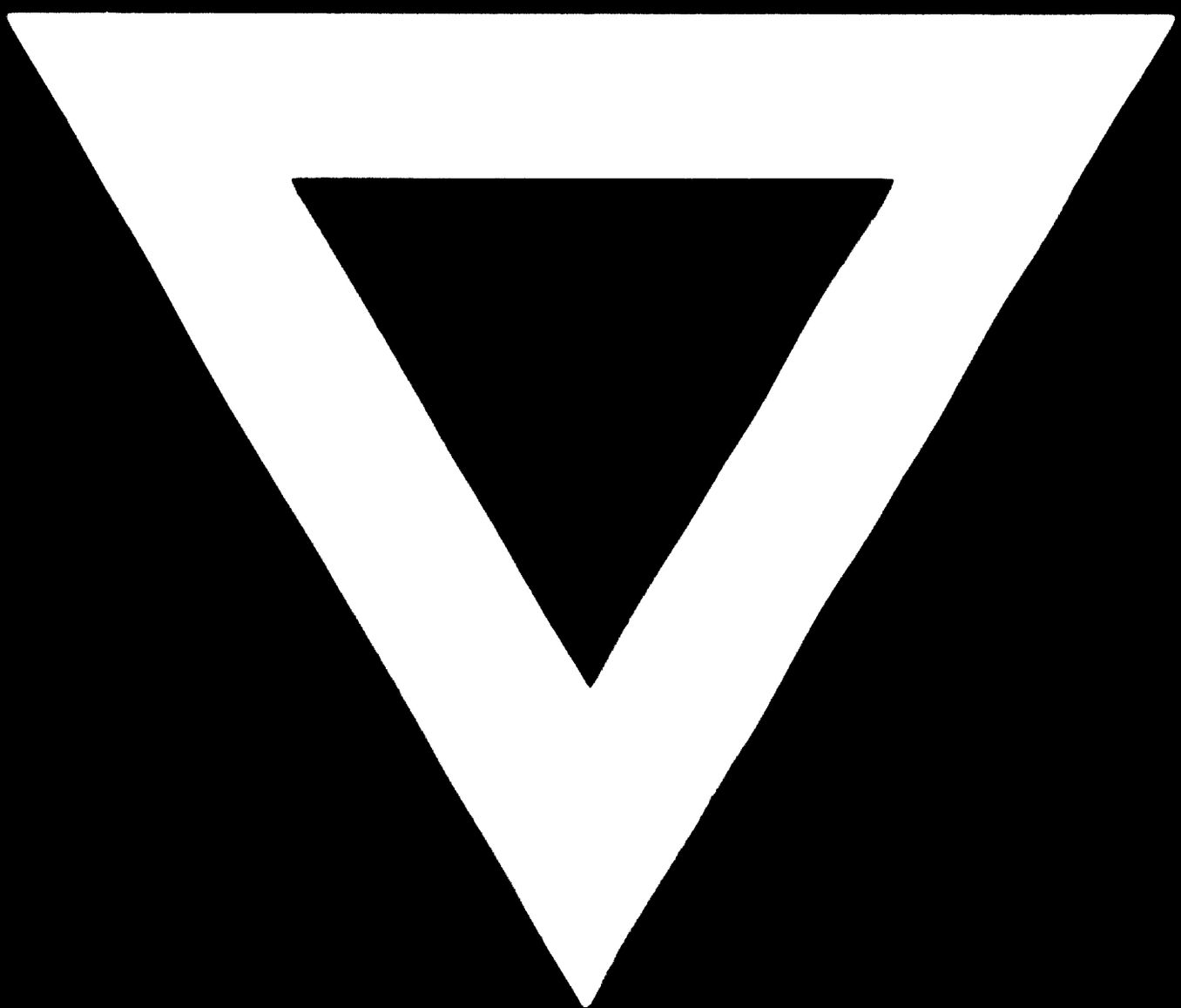

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