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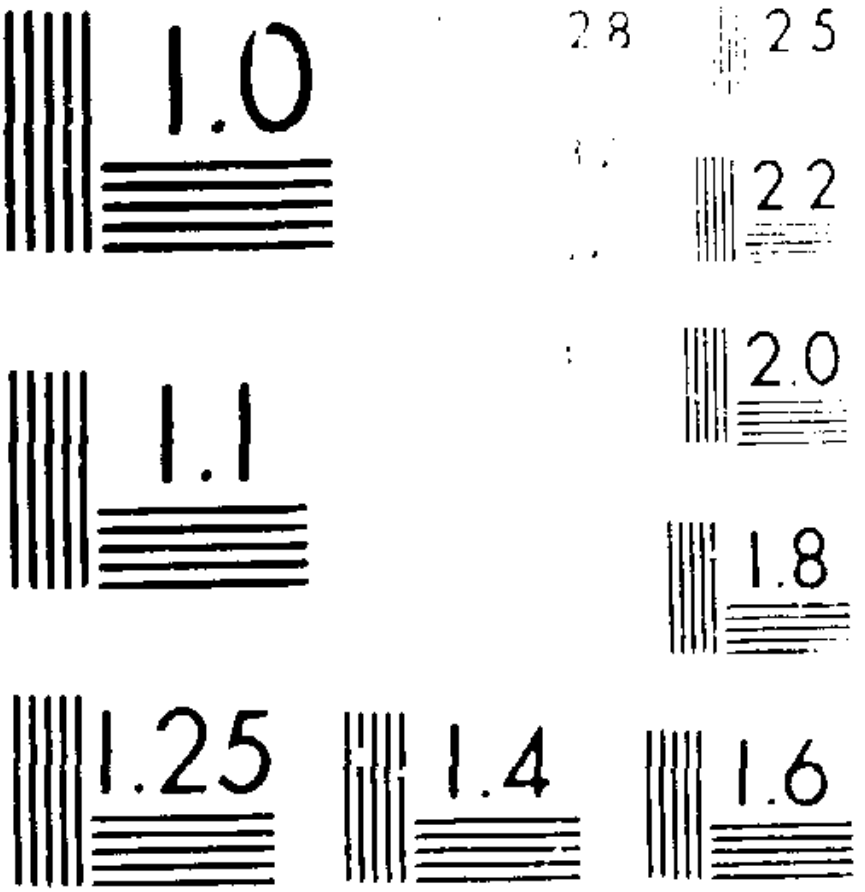
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STRUCTURAL CHANGES IN HUNGARIAN INDUSTRY AND PROSPECTS OF DIVISION OF LABOUR WITH THE DEVELOPING COUNTRIES .

Prepared by the

Global and Conceptual Studies Branch

Division for Industrial Studies

UNIDO Working Papers on Structural Changes

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PREFACE

This study was undertaken in the framework of UNIDO's surveillance of the international restructuring in manufacturing industry. By highlighting pertinent trends in industrial development nationally and internationally, and by indicating the likely direction and possible implications of the restructuring process, this research programme aims at reducing uncertainties and rigidities in the processes of industrialization and restructuring and creating a basis for a forward-looking conception of industrial co-operation between the developed and the developing countries.

The study begins with a brief description of recent developments and of the prevailing industrial and trade structure of Hungary, with special attention being given to current trends in the division of labour between Hungary and the developing countries. Chapter 2 analyses the major factors affecting future developments. Chapter 3 outlines likely directions of future structural changes in the country, and the emerging division of labour with developing countries.

The study was carried out by Rozália Bogó, with assistance from Eva Havasi and Ede Lovas, Senior Researchers at the Institute for Economic and Market Research, Budapest, as UNIDO consultants in co-operation with the UNIDO Secretariat.

The statistical data for the project was sourced from the Central Statistical Office, Budapest.

I. HUNGARY'S INDUSTRIAL AND TRADING STRUCTURE

1.1 THE ROLE OF INDUSTRY IN THE HUNGARIAN ECONOMY: STRUCTURAL CHANGES DURING THE PAST THIRTY YEARS

Hungary is one of the European countries where industrialization had a late start. The industrialisation of the economy - similarly to the majority of the East European countries - began in fact in the years after World War II, i.e. in a period when the overwhelming majority of the Western European countries already possessed developed industrial structures.

In the post-war period, the dominant branch of the Hungarian economy was agriculture: even in 1950, 53 per cent of the active population were employed in agriculture, and the share of agriculture in national income was 48 per cent, whereas that of industry reached some 26 per cent and employed only 19 per cent of the working population. The relative backwardness of the industrial sector is reflected in the fact that in 1950 of 12 per cent of overall fixed assets were in manufacturing.

Main factors determining structural change

After World War II, Hungary's social and political system underwent fundamental changes. The dominant element of this change was the central planning and collective ownership of the basic means of production. Thus, in contrast to the earlier-industrialized countries, structural changes in the economy were mostly carried out through centralized decision-making with market forces playing only an indirect role.

Hungary's home market is relatively small, therefore its economic structure had to principally rely on external markets. As a consequence of social and political orientations, the international atmosphere in the fifties, and efforts to reach economic security in a planned economy, Hungary's economic structure was based on the market requirements of centrally planned countries at the same developmental level. Western markets - especially in the early years of industrialization played only a secondary role.

Hungary is poor in natural resources. In the fifties, she based the satisfaction of the raw material import needs of her industrialization on stable planned economy producers so as to eliminate price fluctuations and discrimination. This integration with other centrally planned economies provided the basis of her economic structure, her market orientation, and her taking part in the international division of labour.

Thus, in the first period of industrialization, development was influenced towards autarchy in two respects: First; under the pressure of external forces, both Hungary and the community of the CMEA countries were aiming at the "internal" development of activities in "key" industries in order to satisfy as many of their needs as possible from home or CMEA production. It was mainly the improvement of the international political atmosphere during the sixties that created the possibility for Hungary and the other CMEA countries to rely more on the international division of labour. Second, Hungary relied almost quite exclusively on the internal possibilities for capital accumulation.

The only productive factor which Hungary had in abundance, until the end of the sixties, was the labour force which gradually became more and more skilled. The mass flow of labour into industry together with extensive investment activity (building up of new branches, establishing new productive capacities) led to the situation whereby substitution of the labour force by mechanization slowed. In some cases this affected the level and the growth of productivity unfavourably and led to the misuse of skilled labour.

As was the case in the earlier industrialized countries, it was industry that played a dominant role in Hungarian structural changes. This concentration of resources towards industrial development led to infrastructure problems arising in the sixties.

These factors not only determined both the rate and pattern of Hungarian industrial development, but they set it apart from the developed European economies.

Flow of productive factors between sectors during the extensive stage of industrialisation

The extensive stage of industrialisation begun in the fifties continued throughout the sixties. The main characteristic of it was the flow of capital and the relatively cheap labour force from agriculture to the industrial sector. This section illustrates the features of this process.

In the fifties, the number of industrial workers increased at an average annual rate of 5.4 per cent and at 2.9 per cent per annum in the sixties; but decreased by an average of 0.2 per cent per annum during the seventies. Over the same decades, the total Hungarian workforce increased at average rates of 1.4 per cent, 0.7 per cent, and 0.3 per cent respectively,

indicating that the rise in industrial employment took place at the expense of other sectors of the economy. Agriculture was most affected, losing half of its workforce between 1950 and 1970 (decreasing at an average annual rate of 2.7 per cent). Another feature of this period was the entry of women into the workforce - currently reaching 44 per cent of total employment - which is high by international levels.

The changing pattern of sectoral employment is illustrated by the following table:

TABLE 1: WORKFORCE, BY SECTOR: 1950 TO 1977 (per cent)

	1950	1960	1970	1977
Industry	19.4	28.4	35.9	34.7
Construction	3.1	5.6	7.3	8.2
Agriculture and forestry	52.0	38.7	25.2	20.4
Transport and telecommunications	4.0	6.2	7.2	7.9
Trade	5.3	6.6	8.0	9.4
Water supply management	-	2.3	1.2	1.4
Services	16.2	14.3	15.2	17.9
TOTAL	100.0	100.0	100.0	100.0

Note: Figures may not add to totals because of rounding.

The peaking of industrial employment in the seventies meant the simultaneous absolute exhaustion of labour reserves. This, combined with a drift from the industrial to the services sector, indicates an increasing reliance on mechanization to raise productivity.

Since 1950, the investment rate has been relatively high and stable at 20 - 25 per cent of GNP. The volume of investment in fixed assets has been increasing at an average annual rate of around 7.5 per cent - with over 40 per cent being concentrated in industry and construction.

While there was considerable redistribution of fixed assets, those of the industrial sector maintained an average annual increase of around 8 per cent.

TABLE 2: DISTRIBUTION OF FIXED ASSETS, (constant 1970 prices) BY SECTOR: 1950 TO 1977 (per cent)

	1950	1960	1970	1977
Productive sector				
Industry	12.5	20.5	26.2	28.9
Construction	0.1	0.5	1.0	1.6
Agriculture, forestry and water supply management	13.9	14.5	14.9	15.7
Transport and telecommunications	25.0	21.0	18.3	17.2
Trade	1.0	1.2	2.0	2.7
TOTAL PRODUCTIVE	52.5	52.7	62.4	66.9
NON - PRODUCTIVE	47.4	42.3	37.6	33.1
TOTAL	100.0	100.0	100.0	100.0

Note: Figures may not add to totals because of rounding.

The table clearly shows a shift in fixed assets towards the productive sector[1] and, more particularly, into manufacturing industries.

During the period from 1950 to 1977, total fixed assets, increased three-fold with the productive sector increasing its fixed assets by 4.5 times, manufacturing by 8 times and construction even more. This contrasts with a much slower rate of increase for transport and communication and for the non-productive sector. It should be noted that, over the period, fixed assets in the transport and communications industries and in the non-productive sector only increased about 2.5 times.

An associated lag in fixed asset investment in infrastructure and public areas caused certain tensions in the economy and this factor has been a matter of some concern since the late sixties. The problem is highlighted by international comparisons.

1/ See Appendix 3 for definitions of productive and non-productive sectors.

TABLE 3: INVESTMENT, BY FUNCTION AND ORIGIN (current prices): 1961, 1970 AND 1977 (per cent)

	1961	1970	1977
Machinery-			
Domestic production	21.5	19.6	18.6
Imports from CMEA countries	12.2	12.1	14.5
Other	3.3	8.3	12.0
Total	36.8	39.9	45.1
Construction	51.6	51.0	46.0
Other	11.6	9.1	8.9
TOTAL	100.0	100.0	100.0

Note: Figures may not add to totals because of rounding.

As can be seen, the increase in machinery imports, particularly from the developed market economies, is quite remarkable. During the sixties about 59 per cent of machinery investment was of domestic origin, with the remaining 41 per cent being shared by imports from the CMEA countries (32 per cent) and developed market economies (9 per cent). However, by 1977 the share of machinery investment had decreased to 41 per cent from domestic production, 32 per cent from the CMEA countries and the developed market economies' share had risen to 27 per cent.

The role of industry in national income

In macroeconomic terms, Hungary's industrialization compares favourably with most of West European countries. The average annual increase in Hungary's national income between 1950 and 1978 was approximately 6 per cent and industrial production rose at about 8 per cent per annum over the same period. These rates are lower than those for the majority of CMEA countries but higher than the average for West European countries.

The steady concentration of capital and labour into the industrial sector, which resulted in such a significant rise in industrial production, led by 1977 to industry increasing its contribution to national income from 26.0 per cent to 46.7 per cent. Agriculture's contribution, on the other hand, decreased from 48.0 per cent to 17.6 per cent.

TABLE 4: CONTRIBUTION TO NATIONAL INCOME, (constant 1970 prices) BY SECTOR: 1950 TO 1977 (per cent)

	1950	1960	1970	1977
Industry	26.0	35.9	42.7	46.7
Agriculture and forestry	48.0	30.2	18.1	17.6
Construction	9.0	11.4	11.9	12.6
Other	17.0	22.5	27.3	23.1
TOTAL	100.0	100.0	100.0	100.0

Hungary, which has such an important rural sector, has reached a level of industrialization where the industrial sector is contributing as much towards national income as in many of the Western industrialised countries. The large workforce in Hungarian industry, however, indicates a need, or at least the potential, for further mechanization and increased productivity.

1.2 THE STRUCTURE OF HUNGARIAN INDUSTRY: DIRECTION OF STRUCTURAL CHANGE

The previous section outlined the main structural changes occurring in Hungary's economy over the past 30 years. In this section the development of Hungarian industry will be examined with the help of some dominant economic indicators, viz. employment, investment and fixed assets, and gross production.[1/] Some attention is also given to the orientation of foreign trade and the dynamics of participation in international division of labour in order to lay the foundation for discussion of prospects for Hungary in respect to these matters.

Employment, investment and fixed assets

Hungarian industrialization was based mainly on heavy industry and the desire to be economically independent. Before World War II, heavy industry provided nearly 37 per cent of industrial production with food production (30 per cent) being the most important; amongst the light industries, textiles dominated (15 per cent of total industrial production).

After the war, more than 90 per cent of industrial investment went into heavy industry and it was this sector that employed most of the labour transferring from agriculture. This complete dominance of heavy industry investment declined

1/ See Appendix 2 for definition.

from the sixties, and by 1977 its share had fallen to about 75 per cent and the employment share was under 60 per cent.

Heavy industry was itself based largely upon three industries: mining, metallurgy and electricity production. These three industries comprised over 40 per cent of industrial investment until the 1960s, when their share began to decrease, but in 1977 they still absorbed almost one-third of total industrial capital investment.

The chemicals industry was given some priority in Hungarian industrial planning, and this is reflected in its investment share which has been increasing since the fifties, from about 11 per cent to some 18 per cent by 1977. The share of machinery investment in total industrial investment during the whole period from 1950 to 1977 was between 18 and 20 per cent.

The development of light industry and the food industry suffered during the fifties, but investment in these areas increased steadily thereafter. The light industry share of industrial investment grew from 3.9 per cent in 1950 to about 12 per cent in 1977, that of the food industry from 5.1 per cent to 15 per cent.

The variance between capital and labour in the different industries and changes since 1965 are shown in Table 5.

Table 6 shows industries ranked by fixed asset valuation and numbers of persons employed in both 1965 and 1977. Some conclusions may be drawn from thi Table:

- Heavy industry dominates.
- Raw materials and semi-manufactures of heavy industry account for a large share of both fixed assets and employment.
- High technology industries - chemicals and electrical engineering - rose in importance while the more traditional mining, metallurgical and textile industries declined.
- The food industry is relatively high in international terms.

Value of production

Value of production data and the contributive share of industry groups to total industrial production provide a comprehensive picture of Hungary's industrial structure.

TABLE 5: INDUSTRIAL FIXED ASSETS (current prices) AND EMPLOYMENT, BY INDUSTRY: 1965, 1970 AND 1977 (per cent)

	1965		1970		1977	
	Fixed Assets	Employment	Fixed Assets	Employment	Fixed Assets	Employment
HEAVY INDUSTRY						
Mining	14.8	10.3	12.8	8.4	8.9	7.0
Electricity production	17.5	2.7	14.3	2.0	15.2	2.2
Metallurgy	12.8	6.1	12.5	5.9	10.1	5.9
Engineering -						
Machinery, equipment	4.2	7.0	4.8	8.8	4.1	8.2
Transport vehicles	5.3	7.7	6.5	6.3	5.6	6.3
Electrical machinery	1.9	3.0	2.0	3.2	3.3	4.0
Telecommunications	2.2	4.5	2.0	4.9	2.8	6.2
Precision engineering	1.1	2.8	1.0	4.8	1.8	3.8
TOTAL ENGINEERING	16.6	29.4	18.4	31.0	18.0	32.1
Building materials	5.6	5.0	5.5	4.7	6.7	4.7
Chemicals	11.2	5.7	13.2	6.3	15.5	6.8
TOTAL HEAVY INDUSTRY	78.6	59.3	76.8	58.3	74.4	58.7
LIGHT INDUSTRY						
Wood working	1.1	3.8	1.2	3.1	1.6	3.1
Paper	1.3	0.8	1.6	1.0	2.3	1.0
Typography	0.6	1.2	0.8	1.2	1.0	1.2
Textiles	6.4	9.4	6.2	8.5	5.8	7.7
Leather, fur, shoes	0.9	3.6	1.0	4.0	1.2	3.8
Clothing	0.4	3.7	0.4	4.3	0.7	4.6
Handicrafts	-	2.8	0.1	4.0	0.3	3.7
TOTAL LIGHT INDUSTRY	11.1	31.0	11.1	27.3	12.8	25.9
Food	10.3	9.7	11.1	10.4	11.6	11.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

_ Less than 0.05 per cent

NOTE: Figures may not add to totals because of rounding.

TABLE 6: INDUSTRIES RANKED BY FIXED ASSETS AND EMPLOYMENT: 1965 AND 1977

	Fixed assets		Employment	
	1965	1977	1965	1977
1.	Electricity	Engineering[1/]	Engineering[1/]	Engineering[1/]
2.	Engineering[1/]	Chemicals	Mining	Food
3.	Mining	Electricity	Food	Machinery
4.	Metallurgy	Food	Textiles	Textiles
5.	Chemicals	Metallurgy	Transport v.	Mining
6.	Food	Mining	Machinery	Chemicals
7.	Textiles	Building materials	Metallurgy	Transport v.
8.	Building mats.	Textiles	Chemicals	Telecom.
9.	Transport v.	Transport v.	Building mats.	Metallurgy
10.	Machinery	Machinery	Telecom.	Building mats.
11.	Telecom.	Telecom.	Metalware	Clothing
12.	Metalware	Electrical mach.	Wood-working	Electrical mach.
13.	Electrical mach.	Paper	Clothing	Metalware
14.	Paper	Metalware	Leather, fur, shoes	Leather, fur, shoes
15.	Tool making	Wood-working	Electrical mach.	Handicrafts
16.	Wood-working	Tool making	Tool making	Tool making
17.	Leather, fur, shoes	Leather, fur, shoes	Handicraft	Wood-working
18.	Typography	Typography	Electricity	Electricity
19.	Clothing	Clothing	Typography	Typography
20.	Handicrafts	Handicrafts	Paper	Paper

1/ Total Engineering: main engineering sub-industries are shown separately.

As the indices in Table 7 show, heavy industry is, again, dominant, increasing the value of production ten-fold over the period studied, compared with a six-fold increase for light industry and 8.5 times for all industries.

The high technology industries, telecommunications and vacuum techniques, instruments, and electrical machinery, in Hungary as elsewhere, showed the greatest increases - reflecting significant increases in productivity. However, some industries occupying large shares of fixed assets and employment, notably mining and textiles, showed relatively insignificant increases in production.

This leads to the conclusion that, by the seventies, capital accumulation was becoming difficult for labour-intensive industries.

The production indices provided the means of calculating ratios of structural change (RSC) for Table 8.

$RSC_a = \frac{ia}{I}$ where i = index of industrial production for an industry (value)

a,b,c = industry identification symbols

I = index of total industrial production (value)

The structural changes evident in Table 8 appear to be similar to those in other industrializing countries. For instance, heavy industry has a ratio of structural change greater than 1, but within heavy industry, mining and metallurgy ratios are well below 1. Again, telecommunications and vacuum techniques, and instruments show very high ratios.

Tables 9 and 10 show industries ranked according to their usage of imported materials.

(1) Engineering remains the most important industry group. (Compared with developed industrial countries, however 27 per cent is not particularly high). It should be noted that the 27 per cent contribution is produced by 3[illegible] per cent of the industrial workforce while the share of industrial fixed assets has remained around the 18 per cent level. This indicates a need for raising productivity through mechanization or more use of modern technology.

TABLE 7: PRODUCTION INDICES, BY INDUSTRY: 1950 TO 1977 (constant 1950 prices)

	1950 to 1960	1960 to 1970	1970 to 1977	1950 to 1977
HEAVY INDUSTRY				
Mining	201	140	115	323
Electricity	277	222	167	1025
Metallurgy	273	173	158	650
Engineering -				
Machinery, equipment	365	186	143	965
Transport vehicles	284	219	171	1060
Electrical machinery	323	236	181	1381
Telecommunications	554	403	232	5169
Instruments	830	312	186	4812
Metalware	327	215	115	807
TOTAL ENGINEERING	343	323	164	1307
Building materials	297	169	140	703
Chemicals	454	332	195	2937
TOTAL HEAVY INDUSTRY	318	210	160	1069
LIGHT INDUSTRY				
Wood-working	404	192	164	1269
Paper	238	324	163	908
Typography	190	229	160	696
Textiles	184	146	131	351
Leather, fur, shoes	281	169	132	627
Clothing	450	163	129	946
Handicrafts	894	216	177	3410
TOTAL LIGHT INDUSTRY	261	171	141	629
Food	218	178	140	542
TOTAL	283	198	152	854

TABLE 8: RATIOS OF STRUCTURAL CHANGE: 1950 TO 1977

	1950 to 1960	1960 to 1970	1970 to 1977	1950 to 1977
HEAVY INDUSTRY				
Mining	0.71	0.71	0.76	0.38
Electricity	0.98	1.12	1.10	1.20
Metallurgy	0.96	0.87	0.91	0.76
Engineering -				
Machinery, equipment	1.29	0.94	0.94	1.13
Transport vehicles	1.00	1.11	1.13	1.24
Electrical machinery	1.14	1.19	1.19	1.62
Telecommunications	1.96	2.04	1.53	6.05
Instruments	2.93	1.58	1.22	5.63
Metalware	1.16	1.09	0.76	0.94
TOTAL ENGINEERING	1.21	1.17	1.08	1.53
Building materials	1.05	0.85	0.92	0.83
Chemicals	1.60	1.63	1.28	3.44
TOTAL HEAVY INDUSTRY	1.12	1.06	1.05	1.25
LIGHT INDUSTRY				
Wood-working	1.43	0.97	1.08	1.49
Paper	0.84	1.18	1.07	1.06
Typography	0.67	1.16	1.05	0.81
Textiles	0.65	0.74	0.86	0.41
Leather, fur, shoes	0.99	0.85	0.87	0.73
Clothing	1.59	0.82	0.85	1.11
Handicrafts	3.16	1.09	1.16	3.99
TOTAL LIGHT INDUSTRY	0.92	0.86	0.93	0.74
Food	0.77	0.90	0.92	0.63

TABLE 9: VALUE OF GROSS PRODUCTION BY INDUSTRY: 1965, 1970 AND 1977 (current prices), (per cent)

	1965	1970	1977
HEAVY INDUSTRY			
Mining	7.3	5.2	3.9
Electricity	5.1	2.9	3.3
Metallurgy	12.7	10.9	9.7
Engineering -			
Machinery, equipment	5.6	6.7	6.3
Transport vehicles	8.2	6.4	7.3
Electrical machinery	3.3	3.3	3.9
Telecommunications	2.9	2.9	4.5
Instruments	1.4	1.9	2.4
Metalware	3.2	3.9	2.9
TOTAL ENGINEERING	24.6	25.1	27.3
Building materials	3.6	3.3	3.0
Chemicals	9.6	11.9	15.5
TOTAL HEAVY INDUSTRY	62.8	59.3	62.7
LIGHT INDUSTRY			
Wood-working	2.3	2.1	2.2
Paper	0.9	1.3	1.4
Typography	0.8	1.0	1.1
Textiles	7.6	7.1	6.1
Leather, fur, shoes	2.1	3.1	2.7
Clothing	2.4	2.4	2.1
Handicrafts	0.4	1.0	1.1
TOTAL LIGHT INDUSTRY	17.2	18.0	16.7
Food	20.2	20.7	19.0
TOTAL	100.0	100.0	100.0

Note: Figures may not add to totals because of rounding.

TABLE 10: INDUSTRIES RANKED BY VALUE OF GROSS PRODUCTION: 1965 AND 1977

	1965	1977
1.	Engineering[1/]	Engineering[1/]
2.	Food	Food
3.	Metallurgy	Chemicals
4.	Chemicals	Metallurgy
5.	Transport vehicles	Transport vehicles
6.	Mining	Machinery, equipment
7.	Textiles	Textiles
8.	Machinery, equipment	Telecommunications
9.	Electricity	Electrical engineering
10.	Building materials	Mining
11.	Electrical engineering	Electricity
12.	Metalware	Building materials
13.	Telecommunications	Metalware
14.	Clothing	Leather, fur, shoes
15.	Wood-working	Instruments
16.	Leather, fur, shoes	Wood-working
17.	Instruments	Clothing
18.	Paper	Paper
19.	Typography	Typography
20.	Handicrafts	Handicrafts

1/ Total Engineering: main engineering sub-industries are shown separately.

(2) The "dynamic" telecommunications and vacuum techniques industries advanced, in the 12 years covered, from 13th to 8th place; electrical engineering from 11th to 9th; and instruments from 17th to 15th.

(3) The following industries: textiles, leather, fur, shoes and clothing have a more important place in the Hungarian industrial structure than in the developed industrialised countries. In 1977 together they provided some 11 per cent of gross industrial production while their share in the industrial production of the majority of West European countries was much lower, even in 1970, and has been decreasing since then. As to the orientation of future development, it should be noted that the import material needs of the textiles, leather, fur and shoe industries are among the largest. In 1972, for instance, in these two industries, 32.7 per cent and 24.9 per cent respectively, of produced value was covered by import materials (the accumulated import material usage is much higher). Some 58 per cent of all the materials used in the textile industry was of import origin. (In comparison, 22 per cent of the materials used directly by all industries comes from imports).

The import material needs of the different branches are shown in Table 11.

The significant decrease of the share of mining and metallurgy proves the structural modernisation of Hungarian industrial production. Nevertheless, both industries occupy an important place in the ranking of industries, and especially so if we take into account the country being relatively poor in natural resources. At the same time, further decreases of the share of mining may be slowed down by the fact that, because of energy price rises, it may be necessary to re-open some mines, the production of which was found uneconomic previously and - by raising the capital intensity of the sector - this will relatively limit capital resources being available for further modification of the industrial structure. The decreasing but still relatively high share of metallurgy causes problems because of the fixed assets-and imported material-intensiveness of the sector. Apart from the relatively overstocked market for metallurgical products and fierce international competition, the energy situation of the seventies has raised further problems for this sector in all the industrialized countries of the world. In Hungary in 1977 it was metallurgy that consumed almost one-third of the total industrial energy consumption. This fact may be critical, not only from the aspect of the direction of future development, but also in respect of the division of labour between Hungary and industrialising developing countries.

TABLE 11: INDUSTRIES RANKED BY IMPORTED MATERIALS USAGE: 1972

	Imported material usage for 100 forints of production		Cumulative imported material usage[a] for 100 forints of final output	
1.	Paper	34.5	Paper	38.5
2.	Textiles	32.7	Textiles	37.2
3.	Chemicals	32.5	Metallurgy	37.1
4.	Metallurgy	31.4	Chemicals	37.0
5.	Leather, fur, shoes	24.9	Leather, fur, shoes	33.8
6.	Typography	22.2	Typography	32.3
7.	Wood-working	19.8	Wood-working	28.6
8.	Telecommunications and vacuum techniques	15.3	Electrical engineering	25.8
9.	Metalware	12.6	Metalware	25.2
10.	Transport vehicles	11.8	Transport vehicles	25.1
11.	Electrical machinery	11.8	Telecommunications and vacuum techn.	22.9
12.	Instruments	11.4	Machinery and equipment	22.3
13.	Machinery and equipment	11.2	Food	22.1
14.	Food	10.7	Clothing	22.0
15.	Building materials	9.8	Instruments	20.6
16.	Mining	8.5	Handicrafts	19.7
17.	Handicrafts	4.2	Building materials	18.4
18.	Clothing	3.4	Mining	14.9
19.	Electricity	1.8	Electricity	12.2

a/ See Appendix 2 for definition.

SOURCE: Nyitrai Ferencné: Ipari strukturánk: változások, hatékonyság, "Our industrial structure: changes, efficiency". Kossuth Könyvkiadó, Budapest, 1977.

One of the main indicators of structural modernization of Hungarian industry is the growing contribution of the chemical industry to gross industrial production. By 1977, chemicals became the third-largest industry, after engineering and food. The production share of the chemicals industry, exceeding 15 per cent, is approximately the same as that of countries with developed industrial structures. Until the mid-seventies the modernization of industry has been followed all over the world by growing energy intensity: Hungary is no exception. The fast development of the chemical industry considerably raised Hungary's energy consumption while the capital- and imported material-intensity of this industry is also among the largest.

The structure of industry energy consumption is shown in Table 12. Thus, the chemicals and metallurgy industries consume nearly two-thirds of industrial energy. Therefore, the further course of the modernization of Hungarian industry should not be the general development of the chemical industry, but an inter-industry structural modification aiming at decreasing the energy- and imported material-intensity of the industry. This also raises the possibility of division of labour with developing countries being in a more favourable position than Hungary in respect of comparative costs.

The share of the food industry in gross industrial production, as already mentioned, is high in international terms also - this can be attributed to the fact that agriculture plays a relatively important role in the Hungarian economy. The relative stability of the share of the food industry - contrary to international tendencies - is due to the fact that food preparation (canning and refrigerating industries, etc.) until the sixties had been lagging behind the possibilities provided by domestic agricultural production and demand on home and world markets, and it was only from the middle of the sixties that this industry began to close the demand gap.

International Division of Labour

The development of Hungarian industry is increasingly reliant upon the international division of labour. This is partly due to the fact that Hungary has a limited home market and is poor in raw materials. Therefore, the only possibility for industrial development and modernization lies in

TABLE 12: ENERGY CONSUMPTION IN MAJOR INDUSTRIES: 1977 (per cent)

Mining	3.3
Electricity	0.4
Metallurgy	30.2
Engineering	8.5
Building materials	12.4
Chemicals	30.9
Total Heavy Industry	85.7
Total Light Industry	6.3
Food	7.4
TOTAL	100.0

Note: Figures may not add to totals because of rounding.

greater orientation towards foreign markets. On the other hand, it is due to the growing industrial character of the Hungarian economy that trading partners can increasingly take part in the international division of labour.

The following table (Table 13) illustrates the point. (See also Tables 22 and A1.)

TABLE 13: RATIO OF EXPORT SALES TO FINAL OUTPUT[a/] BY INDUSTRY: 1965, 1970 AND 1977 (current prices)

	1965	1970	1977
HEAVY INDUSTRY			
Mining	14.9	15.9	18.3
Electricity	0.2	0.4	0.7
Metallurgy	45.1	88.6	87.6
Engineering -	37.2	54.5	69.7
Machinery and equipment	34.7	56.8	69.7
Transport vehicles	47.8	64.2	82.3
Electrical machinery	19.9	37.8	46.7
Telecommunications and vacuum techniques	45.5	59.6	73.5
Instruments	43.6	66.3	77.3
Metalware	21.8	31.5	45.0
Building materials	21.0	20.9	27.4
Chemicals, rubber	23.8	62.3	62.2
TOTAL HEAVY INDUSTRY	31.7	52.2	62.8
LIGHT INDUSTRY			
Wood-working	15.4	15.3	18.9
Paper	13.4	21.7	26.1
Typography	31.1	40.5	47.7
Textiles	33.1	40.3	43.3
Leather, fur, shoes	30.3	46.9	55.5
Clothing	23.6	24.9	41.7
Handicrafts	39.4	27.7	41.3
TOTAL LIGHT INDUSTRY	27.1	32.9	40.6
Food	21.2	22.7	24.9
TOTAL	28.2	38.9	47.9

a/ See Appendix 2 for definition.

Export orientation of Hungarian industry has been significantly intensified since the sixties. In 1965, about 28 per cent of final output was exported: the ratio rose to almost 50 per cent by 1977 - which is high even in international terms.

Mainly, it was the export activity of heavy industry that increased: the export ratio has doubled since 1965 with most heavy industries exporting between two-thirds and three-quarters of their final output. The growth of chemicals exports is outstanding, with the 1965 ratio of 23.8 per cent increasing to 62.2 per cent by 1977.

The fact that the so-called relatively "dynamic" industries - telecommunications and vacuum techniques, instruments, transport vehicles, and chemicals take the lead in export orientation and its growth in the Hungarian economy, shows similarities to world industrial development and the trend towards international division of labour.

Some examples: the instruments industry advanced from 4th place in 1965 to 2nd by 1977; chemicals from 11th to 7th; electrical machinery from 16th to 10th. The textiles industry regressed from 8th place to the 12th place and the clothing industry from 12th to 13th, reflecting a development in accord with characteristic trends in developed industrial countries. At the same time, however, the growing export orientation of the leather and shoe industries - declining more and more in the developed industrialized countries - cannot be considered favourable. In the light of world market phenomena, the high export orientation of metallurgy could also present problems.

Sometimes, there are inconsistencies between the export orientation of industries and the volume of their exports. While, for instance, total engineering only occupies the 5th or 6th ranking according to the degree of orientation, it leads the other industries by a significant margin with 43.4 per cent of gross industrial exports. The food industry, for example, is the third-largest exporter representing 14 per cent of gross industrial exports but was only 17th in the export orientation ranking in 1977.

The import-intensity of Hungarian industry rose parallel to, or in a large extent with, export orientation. In the period between 1965 and 1975, at current prices, industrial exports rose by 193 per cent and import rose by 279 per cent.[1/]

1/ The data refer to gross industrial exports and imports, therefore they include industrial raw materials.

TABLE 14: INDUSTRIES RANKED BY EXPORT ORIENTATION:[a] 1965 AND 1977

	1965	1977
1	Transport vehicles	Metallurgy
2	Telecommunications and vacuum techniques	Transport vehicles
3	Metallurgy	Instruments
4	Instruments	Telecommunications and vacuum techniques
5	Handicrafts	Engineering (Total)
6	Engineering (Total)	Machinery and equipment
7	Machinery and equipment	Chemicals
8	Textiles	Leather, fur, shoes
9	Typography	Typography
10	Leather, fur, shoes	Electrical machinery
11	Chemicals	Metalware
12	Clothing	Textiles
13	Metalware	Clothing
14	Food	Handicraft
15	Building materials	Building materials
16	Electrical machinery	Paper
17	Wood-working	Food
18	Mining	Wood-working
19	Paper	Mining
20	Electricity	Electricity

a/ Measured by the ratio of export sales to final output.

TABLE 15: INDUSTRIES RANKED BY GROSS EXPORT SALES: 1965 AND 1977
(per cent)

1	Engineering (Total)	33.8	Engineering (Total)	43.4
2	Food	17.6	Transport vehicles	15.3
3	Transport vehicles	13.7	Food	13.9
4	Metallurgy	12.9	Chemicals	13.6
5	Chemicals	9.7	Metallurgy	10.3
6	Textiles	9.4	Telecommunications and vacuum techniques	9.3
7	Machinery and equipment	6.8	Machinery and equipment	8.2
8	Telecommunication and vacuum techniques	5.4	Textiles	5.2
9	Clothing	4.0	Instruments	4.4
10	Leather, fur, shoes	3.6	Leather, fur, shoes	4.0
11	Metalware	3.1	Electrical machinery	3.8
12	Instruments	2.8	Clothing	3.2
13	Electrical machinery	2.1	Metalware	2.5
14	Mining	2.1	Building materials	1.5
15	Building materials	1.7	Handicrafts	1.4
16	Handicrafts	1.7	Wood-working	1.1
17	Wood-working	1.7	Mining	1.0
18	Paper	0.3	Paper	0.5
19	Typography	0.3	Typography	0.2
	TOTAL INDUSTRY	100.0		100.0
	Heavy Industry	60.2		69.8
	Light Industry	22.1		13.9

This is reflected in the industrial balance of trade, where, in 1975 there had been a credit balance of 233 million exchange rate forints[2/], by 1975 this had become a deficit of 12.8 billion exchange rate forints. Although the determining force in the formation of the deficit trade balance was world market price changes, this tendency itself gives a characteristic picture of some structural tensions in the Hungarian economy: despite the development of industry and changes in industrial structure during recent years, there were no changes contributing to the compensation of import demands by industry in exports. This, indirectly, also reveals the fact that in comparison with countries with developed industrial structures, Hungarian industrial export ratios of output to consumed materials and semi-manufactured goods (a large part of which is imported) is low (see Section 2.2). The pattern of exports and imports of Hungarian industry have changed (see Table 16 below).

2/ See Appendix 2 for definition.

TABLE 16: GROWTH OF TRADE, BY INDUSTRY: 1965 TO 1975

	Index of:		Trade balance	
	Exports (1965=100)	Imports (1965=100)	1965	1975
			m.exchange rate Ftn.	m.exchange rate Ftn.
Metallurgy	295.4	331.7	- 350.6	- 2.400.9
Engineering	327.1	407.5	1,379.6	320.0
Machinery and equipment	332.3	357.3	- 391.4	- 1.952.0
Transport vehicles	320.5	408.1	613.6	565.9
Electrical machinery	379.4	452.5	74.5	119.0
Telecommunications and vacuum techniques	259.2	552.2	725.5	1.263.6
Instruments	482.8	618.0	202.5	507.3
Metalware	235.1	479.9	154.9	-183.6
Chemicals	275.1	389.3	-1.060.4	- 6.172.5
HEAVY INDUSTRY TOTAL	304.2	386.3	-1.783.9	-15.654.0
Wood-working	285.1	278.8	-449.1	-1.238.8
Paper	657.7	351.5	-422.2	-1.400.2
Typography	224.6	192.5	20.6	66.8
Textiles	214.6	479.3	578.2	- 263.2
Leather, fur, shoes	346.4	298.5	512.0	1.829.7
Clothing	345.5	1.601.1	458.9	1.357.2
LIGHT INDUSTRY TOTAL	285.1	367.1	608.8	441.3
Food	265.1	324.1	1.229.2	2.483.3
TOTAL	293.4	378.8	233.1	-12.751.7

Note: See Appendix 2 for definition of exchange rate forint.

1.3 HUNGARY'S ECONOMIC RELATIONS WITH THE DEVELOPING COUNTRIES[1/]

The share of the developing countries in Hungary's foreign trade

An analysis of Hungarian foreign trade shows that nowadays the developing countries represent only small share in her external economic relations. The share of the developing countries during the last 25 years has been rising slowly and, by 1977, their share was still only about one-tenth of total Hungarian exports and imports.

TABLE 17: HUNGARY'S TRADE, BY ORIGIN AND DESTINATION: 1950 TO 1977
(per cent)

	1950	1960	1965	1970	1975	1977
EXPORTS						
Centrally planned economies	66	73	72	67	71	63
Developed market economies	30	21	21	26	22	29
Developing countries	4	6	7	7	7	8
TOTAL	100	100	100	100	100	100
IMPORTS						
Centrally planned economies	57	72	70	66	65	54
Developed market economies	38	22	23	28	28	37
Developing countries	5	6	7	6	6	9
TOTAL	100	100	100	100	100	100

1/ In Hungarian practice, the developing countries comprise the Latin American States, with the exception of Cuba; the African countries, with the exception of the Republic of South Africa and Rhodesia; all the Asian countries with the exception of the socialist countries of Asia, and Japan and Israel. Throughout this study this definition is therefore used.

Should this share be considered small or large? It does not seem to be too small: comparing it with the CMEA countries one can see that, with the exception of the Soviet Union and Romania which are in a special position, the share of the developing countries in Hungarian foreign trade reaches the international average.

TABLE 18: THE SHARE OF THE DEVELOPING COUNTRIES IN THE FOREIGN TRADE TURNOVER OF THE CMEA COUNTRIES: 1950 TO 1977
(per cent)

	1950	1960	1965	1970	1977
EXPORTS					
CMEA total	4	6	10	11	12
Bulgaria	1	4	5	7	11
Czechoslovakia	11	11	10	9	8
Poland	3	7	8	6	9
Hungary	7	7	8	6	9
GDR	-	4	5	4	5
Romania	5	6	6	10	21
USSR	2	6	14	16	16
IMPORTS					
CMEA total	5	7	8	8	8
Bulgaria	1	2	4	5	5
Czechoslovakia	9	10	9	6	7
Poland	3	7	10	6	5
Hungary	6	4	7	6	10
GDR	-	4	4	4	5
Romania	5	4	6	7	[illegible]
USSR	6	9	10	11	10

SOURCE: CMEA Statistical Yearbooks

Comparing this share to those of the West European countries which had no colonial history, it looks slightly different: there are greater differences amongst these countries - there are countries (e.g. Austria and Switzerland) for which the export shares to developing countries are larger - sometimes twice as much as Hungary's: for other small West European countries, the trade share of the developing countries is similar to Hungary's.

TABLE 19: THE SHARE OF THE DEVELOPING COUNTRIES IN THE FOREIGN TRADE TURNOVER OF SELECTED EUROPEAN COUNTRIES: 1955 TO 1977
(per cent)

	1955	1960	1965	1970	1977
EXPORTS					
Austria	12	8	8	6	15
Denmark	8	10	10	9	12
Finland	10	9	6	6	7
Ireland	4	2	3	3	7
Norway	14	11	10	8	14
Switzerland	23	18	16	16	23
Hungary[a]	9	6	8	7	8
IMPORTS					
Austria	9	7	6	6	9
Denmark	6	6	8	10	12
Finland	9	6	6	8	10
Ireland	13	12	11	9	9
Norway	11	9	9	10	10
Switzerland	11	8	7	7	10
Hungary[a]	9	5	7	6	9

a/ Data for Hungary should not be compared with that shown in Tables 17 and 18, which use other sources.

SOURCE: UN, Direction of Trade

Hungary is a landlocked, small country in Central Europe. Before World War II the main exports were agricultural raw materials and processed farm products to developed countries. After the war, possibilities developed for participating in the international division of labour. As a result of the formation of the CMEA and circumstances in international politics, foreign trade orientation altered. The CMEA countries became Hungary's most important trading partners. Hungary relied mainly on raw materials for industrialization, imported either from the Soviet Union or other CMEA countries, and conversely, these countries became important export markets for Hungary's industrial goods. At the end of the forties and in the early fifties, it was not apparent that countries nowadays called developing countries could play a significant role in foreign economic relations, either in the supply of raw materials and energy or in trading manufactured goods. In Hungary, this question could not arise since there were no traditions of such relations: Hungary had never been a colonial power. The developing countries or their predecessors, the colonies, were only suppliers of goods unavailable elsewhere; they were also export markets for specific goods. The internal development of the Hungarian economy and the changes that have taken place in the world economy in recent years have contributed to an extension of the division of labour between Hungary and the developing countries.

Trade between Hungary and the Developing Countries

Hungary has trade relations with several developing countries, exports to about 90 to 95 countries and imports from 40 to 45. The major share of Hungary's exports, however, are taken only by a few countries.

The traditional concentration of Hungary's exports to developing countries is steadily relaxing. While in 1950 more than 80 per cent of Hungarian exports to the developing countries was delivered to the first three most important partner countries, in 1977 the largest trading partner received 15 per cent of the turnover, the first five countries received more than half and the first ten received three-quarters. One-tenth of the value of Hungary's exports to the developing countries was shared amongst seventy countries.

We can observe a significant decrease of concentration in the field of imports, too. In 1970, however, the portion of the largest trading partner, Brasil, mainly as the consequence of the rise of world market prices for coffee, was extremely high.

TABLE 20: TRADE BETWEEN HUNGARY AND THE DEVELOPING COUNTRIES: 1950 TO 1977
(per cent)

	The share of Hungary's exports to and imports from the developing countries of the:				
	Largest	First three	First five	First ten	First twenty partners
EXPORTS					
1950	43.5	80.9	91.1	97.9	99.8
1955	28.7	64.4	76.6	88.9	99.1
1960	16.1	41.7	60.5	78.0	92.7
1965	22.5	47.4	59.9	76.2	88.5
1970	20.3	40.8	54.1	78.0	91.5
1977	15.0	35.0	52.5	76.1	89.8
IMPORTS					
1950	76.2	90.4	99.7	99.9	99.9
1955	31.0	71.4	87.2	97.4	99.9
1960	34.1	69.7	87.0	95.6	99.9
1965	24.8	45.6	61.8	82.6	95.9
1970	16.6	41.2	58.0	77.0	94.2
1977	32.1	50.3	61.7	79.0	91.0

The data in Table 21 show some selectivity in Hungary's co-operation with the developing countries. Hungary is actively looking for partners and spheres of activities which accord mutual advantages.

Hungary has trade relations with many developing countries and aims to create base markets. On the one hand the main partners are the big developing countries (India, Iran, Brazil, Argentina) and on the other hand, considerable trade was carried on with nearby or easily accessible countries such as those of the Mediterranean and the Middle East.

The fact that the main partners have changed so much, shows how Hungary is attempting to explore the possibilities of co-operation with the developing countries. In the table below those five countries that were Hungary's most important partners in 1950, in 1955, and from 1960 to 1977 are shown.

TABLE 21: HUNGARY's FIVE MOST IMPORTANT DEVELOPING COUNTRY TRADE PARTNERS: 1950 TO 1977

EXPORTS						
Argentina	1950,	1955,	1960,	1961,	1962,	1963
Egypt	1950,	1955,	1960,	1961,	1962,	1963
	1964,	1965,	1966,	1967,	1968,	1969,
	1970,	1971,	1972,	1973,	1975	
Pakistan	1950					
Iraq	1950,	1960,	1962,	1972,	1973,	1974,
	1975,	1976,	1977			
Lebanon	1950,	1966,	1967,	1968,	1969,	1970,
	1971,	1973,	1974,	1975,	1977	
Brazil	1955,	1969,	1972			
Indonesia	1955,	1961,	1964,	1965		
Paraguay	1955					
Iran	1960,	1961,	1962,	1963,	1964,	1965,
	1966,	1967,	1968,	1969,	1970,	1971,
	1972,	1973,	1974,	1975,	1976,	1977
India	1960,	1961,	1962,	1963,	1964,	1965,
	1966,	1967,	1969,	1970,	1971,	1972,
	1973,	1974,	1975			
Ghana	1963,	1964,	1965			
Syria	1966,	1970,	1971,	1972,	1976	
Libya	1967,	1968,	1974			
Algeria	1976,	1977				
Kuwait	1976,	1977				
(15 countries)						

IMPORTS						
Argentina	1950,	1955,	1960,	1961,	1962,	1963,
	1964,	1965,	1966,	1967,	1968,	1969,
	1970					
Egypt	1950,	1955,	1960,	1961,	1962,	1963,
	1964,	1965,	1966,	1967,	1968,	1969,
	1970,	1971,	1972,	1976		
Uruguay	1950					
Syria	1950					
Iran	1950,	1960,	1961,	1962,	1964,	1965,
	1969,	1973,	1975,	1976,	1955	
Indonesia	1955					
Brazil	1955,	1960,	1961,	1962,	1963,	1964,
	1965,	1966,	1967,	1968,	1969,	1970,
	1971,	1972,	1973,	1974,	1975,	1976,
	1977					
Belgian Congo	1955					
India	1960,	1961,	1962,	1963,	1964,	1965,
	1966,	1967,	1968,	1969,	1970,	1971,
	1972,	1973,	1974,	1975,	1976,	1977
Ghana	1963,	1967				
Panama	1966					
Sudan	1968					
Peru	1970,	1971,	1977			
Ecuador	1972,	1977				
Lebanon	1971,	1972,	1973,	1974		
Iraq	1973,	1974,	1975,	1976,	1977	
Morocco	1974					
Algeria	1955					
(18 countries)						

Iran has been among the five most important trading partners for Hungary's exports to the Third World each year since 1960. India and Egypt were, for several years, important export markets. From the second half of the sixties, trade with Lebanon and, during recent years, trade with Iraq, Syria, Algeria and Kuwait has been very important.

The bulk of Hungarian imports from the developing countries, since 1950, came from four countries: Argentina, Egypt, Brasil and India (with the exception of one or two years). Other main partners are: Iran, which was among the first five countries for 10 years, and Lebanon which was among the first five for four years. It was remarkable how Iraq gained importance: in 1971 it was not among the first twenty developing countries exporting to Hungary, however, in 1973 Iraq gained third place and in 1974 and 1975 it took first place as Hungary's trading partner. This was however, influenced by the price of oil.

TABLE 22: HUNGARIAN EXPORTS TO DEVELOPING COUNTRIES, BY COMMODITY: 1963 TO 1977
(per cent)

SITC		1963	1965	1970	1973	1975	1977
0	Food and live animals	5.2	4.0	10.6	8.3	14.6	19.9
1	Beverages and tobacco	-	0.5	0.2	-	-	-
2	Crude materials, inedible: except fuels	0.5	0.1	0.2	0.8	0.6	0.1
3	Mineral fuels, lubricants and related materials	0.9	0.2	-	0.2	-	0.2
4	Animal and vegetable oils and fats	-	-	-	-	-	-
5	Chemicals	7.3	6.9	6.1	8.2	6.9	7.2
6	Manufactured goods classified chiefly by material	44.1	41.8	37.3	33.3	24.2	24.5
7	Machinery and transport equipment	31.7	25.7	37.1	37.9	47.5	39.7
8	Miscellaneous manufactured articles	10.2	10.9	8.5	10.8	6.2	8.2
9	Commodities n.e.c.	-	-	-	-	-	-
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 23: HUNGARIAN IMPORTS FROM DEVELOPING COUNTRIES, BY COMMODITY: 1963 TO 1977 (selected years)
(per cent)

SITC		1963	1965	1970	1973	1975	1977
0	Food and live animals	45.0	42.9	56.0	42.1	36.1	60.0
1	Beverages and tobacco	1.9	0.2	1.1	1.7	0.2	0.1
2	Crude materials, inedible: except fuels	48.1	50.0	28.6	28.5	10.8	15.4
3	Mineral fuels, lubricants and related materials	-	0.2	-	9.5	28.3	12.2
4	Animal and vegetable oils and fats	1.8	1.4	2.9	4.2	2.1	1.1
5	Chemicals	1.2	1.4	2.9	4.2	2.1	1.1
6	Manufactured goods classified chiefly by material	1.6	3.7	9.2	10.6	9.0	6.2
7	Machinery and transport equipment	-	-	0.8	0.2	0.6	1.0
8	Miscellaneous manufactured articles	0.4	0.5	0.8	2.3	2.2	4.0
9	Commodities n.e.c.	-	-	-	-	-	-
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

The bulk of Hungarian exports to the developing countries in the sixties were manufactured goods classified chiefly by material (SITC Section 6) but, by the seventies, machinery and transport equipment (SITC Section 7) became the main export commodities.

Hungary mainly exports manufactured goods to the developing countries, although, as a result of significant increases in the exports of food and live animals, the proportional share of manufacture (SITC Sections 5-8) decreased, and the share of products of SITC Section 0 exports to the developing countries increased from 9.2 per cent in 1963 to 19.9 per cent in 1977.

The majority of Hungary's imports from the developing countries are classified to Section 0 of SITC (food and live animals). The share of imports of manufactured goods (SITC Sections 6 to 8) rose from 2.0 per cent in 1963 by about 11 per cent in ten years. Although there was a decrease between 1973 and 1977, but it can be attributed to the rise of prices of raw materials imported by Hungary from the developing countries, and to the fact that, from 1973, Hungary began to import oil from the developing countries. So, the "entrance" of SITC Section 3 modified the earlier proportions. Amongst Hungary's imports of manufactured goods from the developing countries, the most important are the goods of SITC Section 6: Manufactured goods classified chiefly by materials.

To find out the fields in which the developing countries play an important role in Hungarian foreign trade, it is worth having a look at their shares of trade in the main commodity groups.

TABLE 24: THE SHARE OF THE DEVELOPING COUNTRIES IN HUNGARY'S TRADE, BY COMMODITY GROUP: 1963 TO 1977
(per cent)

	1963	1965	1970	1973	1975	1977
EXPORTS						
SITC 0	1.3	1.3	2.8	2.0	4.8	8.7
1	-	1.2	0.5	0.1	-	-
2	0.7	0.2	0.3	1.0	0.9	0.2
3	2.2	0.4	-	-	-	-
4	-	-	-	1.2	-	0.4
5	6.3	5.8	4.6	4.7	5.9	7.1
6	11.6	13.1	11.1	9.4	9.5	13.3
7	4.5	5.9	5.6	5.4	7.6	10.2
8	3.8	4.8	3.2	3.9	2.8	6.0
9	-	-	-	-	-	-

TABLE 24: (cont.)

IMPORTS							
SITC	0	23.1	24.7	26.2	31.3	34.5	59.1
	1	17.5	3.2	3.8	11.3	1.5	1.0
	2	12.2	9.3	8.9	7.7	14.1	17.4
	3	-	0.1	-	4.9	14.5	9.9
	4	16.6	11.5	7.4	18.6	15.4	20.7
	5	0.7	0.8	1.3	1.9	1.2	0.8
	6	0.4	1.0	1.8	2.2	3.2	3.3
	7	-	-	0.2	0.1	0.2	0.3
	8	0.4	0.4	0.7	-	3.4	8.4
	9	-	-	-	-	-	-

The significance of the markets of the developing countries for Hungarian machinery exports became apparent only in the second half of the seventies. The developing countries, as buyers, are the most important in SITC Section 6: Manufactured goods classified by material. Their share of Hungarian exports of these products exceeded the average share of the Third World in Hungary's total exports (see also Table 17).

The importance of the developing countries as export markets rose to the greatest extent in Section 0: Food and live animals. In the sixties only 1.3 per cent of Hungarian agricultural exports were exported to developing countries, but in 1977 the share rose to 8.7 per cent.

The commodity structure of imports from the developing countries differs markedly from the commodity structure of total Hungarian imports. Regarding goods belonging to SITC Section 0: Food and live animals, imports from the developing countries have a significant role in total Hungarian imports. In the sixties some 25 per cent of all Hungarian food imports originated from the developing countries, and by 1977 this share had almost reached 60 per cent.

In other Sections, those containing raw materials (e.g. Sections 2 +4), the share of the developing countries is also larger than is their share in total Hungarian imports.

Among the Sections for manufactured goods it is Section 6: Manufactured goods classified chiefly by material, where the significance of the developing countries had risen steadily during the period covered and their share reached 3.3 per cent in 1977 compared with 0.4 per cent in 1963.

It is remarkable that in Section 8: Miscellaneous manufactured articles, the share of the developing countries (which was insignificant previously) reached 3.4 per cent in 1975, and 8.4 per cent in 1977.

In order to give a better idea of the commodity structure of Hungary's trade with the developing countries, the turnover is analyzed for one year (1977) in detail and for this analysis, Hungarian statistical commodity classifications are used.

In the following, the commodity structure of trade between Hungary and the developing countries is shown. Firstly, the main articles representing a great part of trade - in trade between Hungary and the developing countries are analyzed; and secondly the articles in Hungarian foreign trade for which the developing countries represent main export or import markets: in other words, articles for which division of labour with the developing countries is the most important are examined.

Important articles in trade between Hungary and the developing countries

In 1977, in Hungary's trade with the developing countries, there were 13 export commodities and 10 import commodities that exceeded 300 million forints (approximately US$7 million).

These important commodities in trade between Hungary and the developing countries cover 19 per cent of the value of the total Hungarian exports and 16 per cent of the value of imports. They represent almost 40 per cent of Hungarian exports to the developing countries and approximately 80 per cent of imports from those countries.

TABLE 25: IMPORTANT ARTICLES IN HUNGARY'S IMPORTS FROM THE DEVELOPING COUNTRIES: 1977

		Total Hungarian imports	Imports from developing countries	Share of developing countries
		m. Fts.	m. Fts.	per cent
1	Petroleum crude	18.591	3.134	16.7
2	Natural phosphates	1.287	489	38.0
3	Crude rubber	645	644	99.8
4	Raw cotton	3.304	1.569	47.5
5	Cotton yarn	1.591	390	24.5
6	Animal feedstuffs	1.455	493	33.9
7	Oil seed and cake and other oil seed residuals	6.936	5.275	76.1
8	Coffee	6.768	7.756	99.8
9	Cocoa beans	1.632	1.632	100.0
10	Tropical fruits	1.290	639	49.5
	TOTAL	43.499	21.021	48.3
The share of the 10 articles in turnover		16.3 %	79.3 %	na

na-not applicable

TABLE 26: IMPORTANT ARTICLES IN HUNGARY's EXPORTS TO THE DEVELOPING COUNTRIES: 1977

		Total Hungarian exports	Hungarian exports to developing countries	Developing countries share
		m. Fts.	m. Fts.	per cent
1	Ingots and other primary forms of steel	8.972	1.512	16.9
2	Equipment for distribution of electricity	644	387	60.1
3	Pharmaceutical materials	3.576	668	18.7
4	Milling machines	359	359	100.0
5	Buses	10.923	511	4.7
6	Equipment for electric substations	472	442	93.5
7	Electric lamps	2.149	309	14.4
8	Medicaments	5.871	372	6.3
9	Cotton fabrics	2.236	680	30.4
10	Poultry, fresh, chilled and frozen	5.261	1.370	26.0
11	Tomato pulp	561	351	62.6
12	Cattle	3.521	694	19.7
13	Poultry farm equipment	751	468	62.4
	TOTAL	45.296	8.123	17.9
	Share of the 13 articles in turnover	18.98%	30.59%	na

na - not applicable

18 per cent of the value of the Hungarian exports of these important articles was exported to developing countries. Among the 13 commodities there are those which are exported by Hungary only and/or mainly to the developing countries (e.g. milling equipment and equipment for electricity substations) as well as articles which represent a major part of Hungarian exports and where only small quantities are exported to developing countries (e.g. buses and medicaments).

Hungary satisfies almost half of her needs (48.3 per cent) from the 10 most important commodities imported from the developing countries. There are some commodities on the list that Hungary imports almost exclusively from the developing countries.

The majority of the most important commodities in Hungary's exports to the developing countries are manufactured goods, but the range is quite extensive: there are exports which are only partially processed - among them ingots of steel and cotton yarn; and agricultural products, e.g. beef, tomato pulp.

The majority of the important commodities in Hungarian imports from the developing countries are almost exclusively raw materials, fuels and agricultural products.

Characteristic "developing country products" in Hungarian trade

Tables 27 and 28 show commodities exported by Hungary mainly to the developing countries or imported from them. These are the goods in which international division of labour with the developing countries exceeds the importance of that with other trading groups, i.e. the developed market economies and the CMEA countries.

The range of goods exported to and imported from developing countries is quite substantial. Among the Hungarian export items, about 4 per cent mainly go to developing countries and more than 10 per cent of import items come mainly from developing countries.

In 1977, one-fifth of Hungarian exports to the developing countries was represented by such commodities of which developing countries took more than 50 per cent among the export markets. On the other hand, 60 per cent

TABLE 27: GOODS IMPORTED BY HUNGARY MAINLY FROM THE DEVELOPING COUNTRIES:[a] 1977

	Total Hungarian imports	Imports from developing countries	Share of imports from developing countries
	m.exchange rate Fts.	m.exchange rate Fts.	per cent
Crude rubber	645	644	99.8
Tanning material	72	58	81.2
Jute	56	56	100.0
Fibre crop	45	37	82.4
Schoolbags and portfolios	5	3	54.5
Synthetic shoes	3	3	100.0
Men's cotton underwear	168	84	50.1
Children's cotton underwear	72	40	55.4
Trousers	121	77	63.6
Women's leather and fur coats	73	70	95.3
Women's dresses	14	11	78.1
Women's slacks and skirts	48	45	94.1
Castor oil	34	34	100.0
Volatile oil	109	61	55.8
Husked rice	361	220	60.9
Oilseed feedstuff	6,936	5,275	76.1
Cocoa butter	46	40	87.5
Cocoa and coffee products	38	28	73.3
Other nuts	83	83	100.0
Tea	90	50	55.2
Pepper	110	109	99.2
Other spices	30	27	90.1
Green coffee	6,768	6,756	99.8
Cocoa beans	1,632	1,632	100.0
Raisins	65	63	97.4
Dates	23	23	100.0
Bananas	279	279	100.0

a/ Criterion for selection: more than 50 per cent of the total imports of the product originated from the developing countries.

TABLE 28: GOODS EXPORTED BY HUNGARY MAINLY TO THE DEVELOPING COUNTRIES: a/ 1977

	Total Hungarian	Exports to developing countries	Share of exports to developing countries
	m.exchange rate Fts.	m.exchange rate Fts.	per cent
Electricity wires	644	387	60.1
Bridge structures	24	24	100.0
Lifts	16	16	99.7
Forges, machine presse	56	46	81.4
Machine tools	34	51	60.7
Flyer spinning frames	39	39	100.0
Spinning machines	101	81	80.0
Clothing factory equipment	14	11	79.8
Slaughtering equipment	175	100	57.2
Canning factory equipment	325	293	90.3
Milling equipment	359	359	100.0
Railcars	10	10	100.0
Passenger carriages	100	95	95.6
Electric meters	179	146	82.0
Locks	256	211	59.3
Tools	89	57	64.6
Household soda siphons	82	58	70.7
Bicycles	238	186	78.0
Domestic washing machines	44	44	98.9
Photographic film	88	61	70.1
Rubber shoes	8	8	100.0
Cotton and cotton canvas	172	110	63.7
Silk and silk textiles	8	5	59.1
Sewing thread, knitting yarn	330	290	88.0
Boy's overcoats	14	12	86.7
Boy's jackets	13	12	94.1
Mutton	147	81	55.1
Tomato pulp	561	351	62.6
Poultry	258	180	69.9
Eggs	751	468	62.4

a/ Criterion for selection: more than 50 per cent of total exports of the product were exported to the developing countries.

of Hungary's imports from developing countries consisted of products mainly from the Third World.

The bulk of articles exported mainly to developing countries are machinery items, including complex production lines. In imports, the majority of the goods are traditionally that of developing countries. It is remarkable though, that among the 27 commodities imported from the developing countries, there are eight manufactured commodities.

Hungarian trade includes a number of characteristic products for export to or import from developing countries which are not only exchanged in simple foreign trade transactions, but also produced as part of some kind of co-operation.

Forms of economic relationships other than trade

Nowadays, the concept of foreign trade not only covers the simple sale and purchase of goods: much more meaning is attributed to it - different services, selling and buying techniques, technical achievements and scientific technology are also included. There are numerous products in international trade that not only require the sellers to deliver the goods, but also to provide special services, e. g. after-sales services. There is a closer connexion than hitherto between machines representing up-to-date technology and the expertise necessary for their installation, operation and maintenance.

In the economic relations between Hungary and the developing countries, forms of co-operation other than foreign trade are gaining importance. This is not to say that in the framework of economic relations the dominant role of foreign trade is jeopardized, it means rather that the traditional forms of foreign trade - the buying and selling of goods - are being modified into wider forms of international economic relations.

Forms of co-operation other than foreign trade between Hungary and developing countries are related, in most cases, to foreign trade turnover.

Furthermore, commodities that are impossible to sell without some form of international liaison represent an increasing part of Hungarian exports to developing countries. The delivery of Hungarian machinery, for example, may include transfer of Hungarian licences and know-how. Hungarian specialists may undertake to install the exported equipment and bring it into operation: production and trade may be organized by Hungarian specialists; workers in factories may be trained by Hungarian specialists to operate and maintain machines imported from Hungary. Hungary, on the other hand, aims at organizing the production of goods that had been traditionally produced in Hungary, in developing countries. This co-operation in production may take different forms: from simple co-operation activities to establishing joint ventures.

Some examples of this kind of co-operation, e.g. the redeployment of traditional Hungarian export articles are set out below:

- Hungary has established assembling factories for buses in Iraq and for television sets in Egypt;
- Incandescent and fluorescent lamp and electrical meter factories have been established in India, Sri Lanka, Peru and other developing countries;
- Joint venture pharmaceutical companies have been established in Nigeria and India;
- Canning factories, slaughter-houses and other factories have been established in Algeria and Iraq.

Apart from this, the range of trade is widened by the export of expertise. This includes, for example: geological and hydrological explorations; planning of roads, railways, housing, civic buildings; plans for city development, and so on.

There is also extensive training of developing country students at the higher educational (including post-graduate) and technical levels in Hungary. The number has increased four-fold during the seventies.

The most important elements of scientific and technical co-operation, independent of foreign trade, involve the education of students and the training of specialists and providing experts.

In the framework of scientific and technical co-operation, independent of trade transactions, more than 200 Hungarian experts worked in developing countries in 1965, increasing to 300 in 1970 and to 773 in 1978. These were working in many fields, including agriculture, public health, geology and education.

2. FUTURE DEVELOPMENT OF HUNGARIAN STRUCTURE

2.1 INTRODUCTION

In recent years, structural adjustment has been the main problem in almost every developed country. World economic events of the early seventies revealed, in most countries, the shortcomings of economic performance.

In this respect Hungary is no exception. Hungary - realizing 40-45 per cent of her national income and an even greater part of industrial output through the channels of foreign trade - was affected by the disadvantageous effects of world market changes right at the time when she had already reached the stage when the earlier extensive industrialization - because of the exhaustion of capital and labour reserves - had to be replaced by a new stage: that of intensive industrial development based on increased efficiency and productivity.

The first part of our paper analyzed the formation of the present Hungarian industrial structure as being the result of a fast, basically extensive industrialization process. The fact that industry had become a sector determining the character of the whole national economy, and that in Hungary a developed industrial sectoral structure was formed, must be attributed to the process that capital resources were concentrated on constructing new productive capacities, and that huge masses of people either began work at that time or were freed from the rural sector and moved in to industrial employment.

Thus, the fact that the problem of structural adjustment came to the fore in Hungary, must be partly attributed to the modification of internal economic conditions, and partly to world economy phenomena.

These two circumstances cannot be divided; all the more so in case of such an open economy country as Hungary now is, because they affect the Hungarian economy in close interrelation. In this interrelation (taking into account that Hungary is a small country) the effects of external factors on Hungary's economy were much more important than her influence was on the world economy.

2.2 CHANGED CONDITIONS OF ECONOMIC DEVELOPMENT

Exhaustion of labour reserves

By the end of the sixties, the labour force reserves were running out. The total number of active earners in the period 1970-1978 rose at an annual rate of only 0.3 per cent, while over the preceding two decades there had been a three-fold expansion. As we have seen, in Hungary in the seventies, the number of industrial employees decreased and the flow of labour to the services sector began.

The efficient employment of the labour force is impeded by certain structural tensions: in some professions and fields there is a scarcity of workers with the required skills. Hungary's labour shortage sets it apart from the developed market economies which were, by the seventies, experiencing high levels of unemployment.

Higher prices for raw materials imports

It had already become evident by the late sixties that in future the relatively cheap raw material and energy imports from the CMEA countries would be limited. The other CMEA countries also experienced fast industrialization processes and, therefore, their raw material and energy needs rose too, while extraction of such resources could only be increased at a more limited and less efficient rate than hitherto. Apart from this, the changes in world prices had the consequence that prices of energy and raw materials in CMEA mutual trade gradually approached higher levels.

Therefore, Hungary is now forced to obtain a growing proportion of her raw materials and energy at world prices, and from markets other than the CMEA countries. Furthermore, she has to pay continually, but gradually, rising prices for imports from the CMEA countries.

Foreign markets

For several years the conditions of realization for the Hungarian industry were advantageous both on the domestic market and the CMEA markets receiving the majority of Hungarian manufactured goods. On both markets a sellers' market operated, i.e. investment and consumer demand alike were so high that, for several years, only the satisfaction of quantative demands dominated, and quality criteria were pushed to the background. The rapid widening of the demands of developed market economies for years also contributed to the fact that Hungarian industry saw no realization problems. According to market judgment, the Hungarian industrial structure seemed to be satisfactory.

The CMEA countries carrying out industrialization processes similar to that of Hungary also reached the stage of exhaustion of resources for extensive development at the end of the sixties and the beginning of the seventies: the criterion of quality became critical for further industrial development.

As the result of economic growth slowing down in the OECD countries, and due to the competition of newly industrialized Southern European and developing countries, Hungarian manufactures had to face more and more difficulties of realization in OECD markets.

Limited capital resources

As shown above, industrialization in Hungary was carried out in circumstances of rapid growth of national income and investment rates. In the present stage of development the capital-intensity of the economy is still growing. This is partly due to the establishment of plants of high

technical levels and the fact that the introduction of advanced technological processes demands large investments. Concurrently, it becomes more and urgent to develop public infrastructure. Additionally, Hungary is forced - also in accordance with world trends - to explore and further utilize her domestic raw material and energy resources, since - as was discussed above - one of the key problems of the Hungarian economy lies in the fact that her limited resources are now imposing restraints upon further industrialization.

In comparison with previous decades, the growth rate of the national income has decreased and a significant part of its increment has been lost through a deterioration in the terms of trade in recent years. Furthermore, as the consequence of the economic policy aimed at a gradual rise in the standards of living, the investment share of national income cannot be higher than the present level.

In order to be able to satisfy the requirements of modern development, Hungary has to aim at increasing the efficiency of investments. In the future, for the establishment of new production units, a more serious project funding selection is necessary. A greater part of planned new investments will be concentrated, not on creating new production units, but will be directed to rationalization of existing productive activities and on raising their productivity. The absorption of foreign capital resources into the Hungarian economy is also expected to increase.

2.3 MAJOR PROBLEMS OF HUNGARIAN INDUSTRIAL STRUCTURE

As a consequence of the changing conditions of economic development several problems of the industrial structure arose in the seventies. Some would still have arisen without the changing of the world economy situation, while others were directly connected with international relationships.

A major problem for Hungary is that the production structure of the industry is much wider than is necessary for efficient production runs.

It has been a characteristic feature of Hungarian industrialization that when new capacities were created and began operating, the previous, inefficient, production units were rarely closed down. In engineering, for instance, in 1976 the share of articles discontinued was about 1 per cent of the total value of production. Besides new products, outmoded articles are therefore still being produced in many factories. Consequently, the number of articles produced is gradually rising, and there are only a few avenues for efficient production runs.

Final production orientation

There is a related problem in Hungarian industry, namely that the dominating attitude is centred around final products. That is, in Hungary, co-operation and specialization among the enterprises for the division of production processes (i.e. co-operation on the level of processing and production of spare parts and components) play a less important role than elsewhere.

This feature is reflected to some extent, in Hungary's participation in the international division of labour. Hungarian exports are mostly final products, i.e. needing little, if any, further processing. Hungarian industry generally is less equipped for the production of intermediate and semi-finished products. Thus, there are constraints upon the extent of which Hungary can develop the international division of labour.

Raw materials, energy and labour intensity

As detailed in the first part of this paper, during the extensive stage of industrialization, raw materials, energy and labour were in plentiful supply in Hungary, but by the seventies, in fact they became bottle-necks. As a consequence of both its industry and commodity structure, manufacturing consumes disproportionate levels of energy and raw materials.

Unsatisfactory adjustment to world markets

It is important for any country, and particularly for such an open economy as Hungary, how well her products meet the requirements of foreign markets.

The majority of the developed market economies suffered serious terms of trade deterioration for two to three years after 1973 because of the rocketing prices for oil and other raw materials. Most countries, however, in a few years, diminished their problems or found some form of compensation for them by raising exports. Hungary's worsening terms of trade have, however, continued (see Appendix 1 for statistical details) to deteriorate.

Worsening selling opportunities on the OECD market caused the greatest problems for Hungary. While in the period 1970 to 1977, the volume of the imports of Hungary from the OECD countries had risen by 68 per cent, her exports to this region grew by only 34.8 per cent. Despite the more advantageous development of the volume of trade with other regions, a significant balance of trade deficit had accumulated by 1977: this was mainly a consequence of price movements that were unfavourable to Hungary. Hungary's terms of trade deteriorated by 18 per cent between 1970 and 1977, in the dollar accounting turnover by more than 20 per cent, and in the rouble accounting turnover by nearly 16 per cent.

Hungarian enterprises and consumers were for some years protected from effects of rising world prices by the State covering trade losses due to rising import prices. On the other hand, CMEA trade is dominant in Hungary's total turnover, and pricing in this market was more favourable than in the world market. As a consequence, the problems of structural adjustment only arose later than in the developed market economy countries.

2.4 FUTURE STRUCTURAL ADJUSTMENT

In 1977 a decision was made in economic policy that provided directives for the long term modification of the Hungarian economic structure, taking into account the new situation on world

markets. The decision creates a close interrelation between the necessity of the modification of the economic structure and adaptation to current external economic conditions.

According to this, Hungarian enterprises are now defining programmes concerning the modification of their production structure. A fundamental modification of the price system - that is relating Hungarian prices to world market prices - became operative in 1980.

In this chapter the main fields of State stimulation of industry are outlined together with the measures considered necessary for creating more efficient Hungarian industrial structure in the future.

Raising efficiency in capital and labour is a key issue, and particularly so as labour, capital accumulation and currency resources become further limited. Hence, there must be more international division of labour and a less comprehensive range of manufactured products, i.e. more specialization with longer production runs.

The basic lines of the adjustment processes are outlined below as characteristic examples.

2.4.1 Raw material and energy savings

Priority is likely to be given to solutions that emphasize energy and raw material savings. The main reasons for this are:

- Hungary obtains the majority of her raw material and energy needs from imports. The main reason for the deterioration of the terms of trade in recent years was that world market prices for raw materials and energy imported by Hungary were rising quicker than prices for articles produced on the basis of these imports and exported by Hungary. According to forecasts, this trend is not likely to change significantly in the foreseeable future.
- The costs of the extraction of domestic raw materials and energy resources, mainly fuels and electric energy, have risen more quickly than production costs in other industries. This trend seems to be continuing.
- In Hungary there is a shortage of labour for the extraction of her limited natural resources.

In order to slow down the growth of energy consumption, it is necessary to modernize the energy producing sector. A significant energy economy can be achieved by the modification of the production structure. There may be possibilities, for example, for limiting energy consumption in the major energy consuming industries (e.g. chemicals, metallurgy).

The main lines for the formation of an energy-conserving industrial structure may involve the following industries:

Basic chemicals (industrial raw materials)

In the future, Hungary will not aim at establishing new petrol chemistry plants for the production of raw materials but will instead develop the existing raw material base (ethylene

and propylene production). The establishment of optimal size manufacturing plants satisfying domestic demand is planned, and energy-intensive products which cannot be economically produced in Hungary will be imported.

Metallurgy

The share of metallurgy is high in Hungarian industrial output. Metallurgy produces almost 10 per cent of gross industrial production value and is therefore the third-largest industry. This share is extremely high, taking into account the fact that this industry depends for its basic inputs almost entirely on imports. There is practically no iron mined in Hungary; and there is a scarcity of coking coal and other raw materials for steel metallurgy in the country. Thus, raw materials for metallurgy have to be imported, and, moreover, this industry has heavy energy requirements.

Thus, in order to decrease energy and raw material consumption in metallurgy, the following changes are expected:

- Modernization of outdated production technologies, e.g. the replacement of the Siemens-Martin steel production technology by the less energy-intensive converter technology.
- In the interest of decreasing coke consumption, the iron content of foundry loads will be gradually raised, e.g. by using concentrates.

Besides energy consumption in these major consuming industries, it is a central goal for all industries to decrease unit raw material and energy consumption. As a direct consequence of this aim, selection criteria for new investment will be concerned with energy savings.

2.4.3 In order to make better use of available raw materials and fuels, Hungary should develop higher levels of processing for all products where the conditions of efficient realization apply.

The following ideas have been suggested:

Iron metallurgy

Hungarian iron metallurgy now mostly produces basic steel products. The world market prices of these products are much lower than they are for high quality and alloy steels. Therefore, the main line of long term development is basically not quantitative development (building new foundries), but to produce more high quality alloy steels for both the domestic and international markets. The manufacturing of steel products into specialized secondary and tertiary articles (cable, wire, steel construction, etc.) should also be encouraged. In this way domestic demand should be better satisfied and more flexibly, and wastage would be reduced.

Aluminium industry

Aluminium is one of the few industries for which Hungary has a significant domestic raw material base. This industry may develop along the same lines as iron metallury. The basic

target of the industry to meet the domestic demand for aluminium is through the best use of domestic resources. Exports must rely on this base and technical and scientific capacities must also be developed abroad (in the developing countries) so that mutual advantages can be derived from the international division of labour.

Light industry

For light industries, the main goals are: decreasing the growth of mass production, raising the share of articles better adapted to market requirements and fashion trends, and raising quality standards. The basis of structural development is production from available raw materials in accordance with the value judgements of the domestic and the international markets, i.e. a range of products of significantly higher value and quality.

In the development of the textiles and clothing industries, the starting point must be constrained by the fact that, under present circumstances, the volume of production can rise only moderately. A clear selection of production items is therefore required. The present tendency of development aiming at widening all the markets and satisfying domestic demand mainly by domestic production will gradually change. In the future, the satisfaction of domestic demand for mass-produced textiles and clothing semi-manufactured goods, Hungary will rely more on imports. The main target of structural development in the Hungarian textiles and clothing industries is to develop the production assortment towards articles that satisfy more up-to-date and sophisticated demand.

Food

The food industry provides the greatest volume of exports among Hungarian industries. The main goal of further development of this industry is to raise overall quality standards and to modernize the manufacturing of Hungarian agro-based products. Accordingly, the development of the meat industry (particularly poultry), vegetable oils and refrigerated food industries will be most important.

Chemicals

A generally higher level of processing is required. Within the framework of this industry, the production of biologically active products (pharmaceutical, agricultural and horticultural chemicals) and the production of intermediate goods, locally manufactured inputs into these articles will rise faster than the average.

2.4.3 Meeting foreign trade requirements

One of the main aims behind structural change in Hungary is to meet the demands of the world market more efficiently. In this respect, the most important development envisaged is in the

field of engineering. Engineering plays a decisive role in Hungary's economic development and in the foundation of long term external market balance. An extremely fast rate of expansion should be achieved in machinery exports to developing countries in the first place and also to developed market economies. This, however, can be achieved only by the significant modernization of this industry, and if it takes market requirements into account to a greater extent than at present.

In the framework of Hungarian engineering, those fields of productive activity will get priority that compete efficiently internationally. Those whose background of scientific and technical development is on international level will also be encouraged. These areas include, for example:

- transport vehicles production
- vacuum techniques articles and equipment
- some fields of electronics
- some machine tools
- medical instruments
- agricultural and food industry machines
- certain metalwares.

The further development of those industries which may possibly reach the international level will be carried out in a selective way, but the conditions - investment, technical development and realization - cannot yet be precisely defined. They would include, for example, certain electronic machines and instruments, computer hardware and durable consumer goods.

3. POSSIBILITIES FOR DIVISION OF LABOUR BETWEEN HUNGARY AND THE DEVELOPING COUNTRIES

3.1 PRESENT AND FUTURE ECONOMIC RELATIONS

Hungary needs to and wants to develop her economic relations with the developing countries on the basis of mutual advantage, and her attitude is that such relations should develop in accordance with the specific character of the partner countries and Hungarian development targets.

In earlier years it was in the field of foreign trade that economic relations between Hungary and the developing countries grew in a dynamic way. For some years, however, a new trend has been apparent, namely that economic relations have been developed not only in the final stage of the production process, i.e. realization, but at earlier stages, even in planning. When narrowing the present Hungarian industrial product range (which is considered to be presently too wide), the possibilities of imports from the developing countries, or the redeployment of the production of some goods into developing countries, must also be taken into consideration.

There are numerous areas for co-operation between Hungary and the developing countries in the intermediate stages of the production process, and relations of this kind - parallel with the modification of the Hungarian production structure - will be encouraged.

In spite of the fact that co-operation between Hungary and the developing countries is extending gradually to production processes, division of labour will be realized mostly through the channels of foreign trade.

On one hand, this means the dynamic growth of traditional trade relations. On the other hand, it also reveals that foreign trade relations play an important role in the creation of the long term forms of economic co-operation.

It is likely that by the end of the eighties, the share of the developing countries in Hungarian foreign trade will grow to 12-15 per cent from the present 8-9 per cent.

Character of economic relations

Economic relations between Hungary and the developing countries may largely be identified by their export or import character. The forms of co-operation connected in one way or another with Hungary's exports to developing countries may all be considered as being of export character. For example:

- Services related to export transactions:

  licences and know-how together with complete factory equipment;

  installation and training, managing production for a given time, etc.

- Co-operation in production:

  establishing production of goods hitherto exported by Hungary to developing countries. This may be realized in different forms, for instance through simple co-operation, joint ventures, redeployment of production.

- Rendering supportive services:

  e.g. planning geological and hydrological exploration works, etc.

Among the forms of economic relations of import character, the following should be mentioned:

- Participation in the development of those industries in the developing countries, the products of which are imported by Hungary.
- Consideration of imports from developing countries in planning for the Hungarian economy.

Until the mid-seventies, the relations of export character played a decisive role in Hungary's co-operation with the developing countries.

In the future, however, beyond the development of relations of export character, one can also reckon upon the development of relations of import character. In this field it is extremely important that, in the future, the importance of Hungary as a market for the manufactured goods of the developing countries will constantly grow. In Hungary, the programme of the modification of industrial structure prescribes that, before ceasing the production of certain goods, the manufacturing factory has to prove that the home market can be supplied with those goods from other sources. This kind of 'guaranteeing the supply' will be realized, in the majority of cases, by imports from the developing countries, particularly as in the production of the majority of goods in question, the developing countries have comparative advantages vis-à-vis Hungary.

3.2 Participation of the main Hungarian industries in division of labour with the developing countries

Manufacturing industry

Hungary participates in the development of manufacturing in developing countries by supplying the necessary machinery, complete factories, and by various forms of technical and scientific co-operation, or alternatively, by redeployment of production.

In this respect Hungary contributes by encouraging import substitution, and for certain products, by encouraging export orientation. Hungary in supplying machines, equipment and technologies and establishing joint ventures, can make significant contributions to the production in developing countries of: pharmaceuticals, food preparation, medical instruments, buses, incandescent lamps, fluorescent lamps, electric meters, electrical wire, cables, telephone exchange, transformers, electrical pumps.

Another significant area for international division of labour lies in redeployment of the production of some articles for which the developing countries have comparative advantages. For the countries involved, it means export-oriented development of industry, because, by redeploying the production to these countries, Hungary will wish to cover her needs through imports from the developing partner. In this respect, the redeployment of some articles of the textiles, clothing, leather and shoe industries, and also some simple instruments, tools, ironware and aluminium ware is to be expected.

How major Hungarian industries take place in the division of labour with the developing countries is outlined below.

Engineering

Engineering products represent a large share in Hungary's exports to the developing countries (see Table 22, Chapter 1), and the developing countries are extremely important markets for Hungary's machinery exports to regions other than the CMEA countries. In 1977, for example, 76 per cent of Hungary's machinery exports were directed to CMEA countries and the share of the developing countries in the Hungarian machinery exports outside the CMEA was 43 per cent. In the future, Hungary intends to increase her machinery exports to the developing countries, and it is one of the targets of the long term plan of the development of Hungary's external economic relations that, by 1990, in exports to developing countries, 50 per cent will be machinery products.

For Hungary, limited natural resources and high and still rising prices for raw materials and energy make it necessary to raise the export shares of those products which are of high technology and sell well, in order to improve Hungary's terms of trade. It is the engineering industry that has the greatest potential to meet these needs.

Developing countries are important for Hungarian engineering mainly as an export market. This is realized both through foreign trade transactions and export-type co-operation.

In the future, the share of complex systems in Hungary's machinery exports to the developing countries is expected to grow. This form of trade transaction is becoming more and more important for the developing countries. Hungarian engineering - in accordance with long term development plans - may undertake the export of complex systems mainly in the following fields:

- medical systems,
- education systems,
- agricultural and food industry plants,
- telecommunications systems.

According to the long term development plan, targets for the exports of Hungarian machinery to the developing countries will most probably include:

- transport vehicles (buses, railway rolling stock, motor cars),

- equipment for food industry plants (canning factories, slaughtering stations, grain mills),
- equipment for the bauxite, alumina and aluminium industries,
- machinery and equipment for shipping ports,
- machinery and factories for the production of electrical machinery and electrical appliances,
- factories for the production of cables and electric wires.

The above products already comprise a significant share of Hungary's exports to the developing countries (see Tables 26 and 28, Chapter 1).

Apart from the above, the following machinery and equipment may be exported to the developing countries in greater proportion:

- Automatic devices - mainly automatic systems for oil and gas pipelines or important telemechanic tools for energy and water supply, e.g. telemeters, signals, remote control equipment, railway safety automata.
- Computer equipment, e.g. equipping educational computer centres.

Hungary's export-type economic co-operation with the developing countries is based mainly on machinery exports. This is because the majority of machinery exported by Hungary, apart from simple foreign trade transactions needs other services, e.g. installation, operational and maintenance expertise, licences.

Machinery generally comprises the initial imports of developing countries, in which case Hungary could undertake the organization of production in these countries. That is, she can undertake not only the delivery of machines and equipment, but can also provide the expertise to establish operations. In the future it is most probable that Hungary will establish some form of production co-operation in the following fields:

- Assembling factories of Ikarus buses; delivery of spare parts for other types of buses; joint planning of vehicle types in accordance with special local requirements.
- Vacuum technique products; the production of mainly incandescent and fluorescent lamps.
- Electrical machinery; electric meters, electric motors, coupling devices.
- Instruments; mainly medical, geodesy and optical instruments - from the simplest portable devices to complicated precision instruments.
- Telecommunication articles; radio and television receivers, microwave equipment.

Engineering is considered to be an 'exporting sector'. Until now, the importing of machinery from the developing countries has been limited to some licensed products (pocket radios, minicomputers). As a result of modifications of the Hungarian industrial structure it is probable that there will be an expansion of machinery imports from the developing countries. Ceasing the production of some goods in Hungary will necessarily be followed by imports, and these will most likely come from developing countries. In some cases the short-fall in supply will be met by starting import-type co-operation or by organizing the redeployment of production. This will probably affect the following products:

- simple machine tools,
- hand tools,
- metalware,
- domestic appliances.

Chemicals

The pharmaceutical industry is of special importance in international relationships. Considering its level of development and production structure, the Hungarian pharmaceutical industry is amongst World leaders and so Hungary can provide much valuable assistance in this field to developing countries.

Of Hungarian pharmaceutical exports to the developing countries, generally about one-third is comprised of final products medicaments, and the remainder is generally made up of pharmaceutical raw materials and partly processed products. This illustrates that Hungary's participation in the international division of labour in this industry is not concentrated only on final products, but that products of the intermediate stages of production are also exported, contributing to the development of the pharmaceutical industry in the developing countries that import these products.

Within the pharmaceutical industry, there are numerous avenues for co-operation between Hungary and the developing countries. This industry already has different functioning forms of production co-operation and joint ventures companies in the developing countries. The following are the main fields where long term co-operation either exists or can be established for the production of:

- various vitamins,
- antibiotics,
- medicaments for curing various tropical diseases, e.g. Chloroquin against malaria,
- vaccines, and
- steroid preparations, hormones.

The Hungarian pharmaceutical industry also plans to establish import-type co-operation because, in order to be able to keep pace with the rapid change of pharmaceutical technologies and to have capacities for the production of new medicaments, she is forced to cease the production of some preparations, and can undertake the redeployment of these products to the developing countries so that she will satisfy her demand with imports from these alternative sources.

The production of textile auxiliary materials, detergents and shellacs will not be encouraged to develop further within Hungary. Therefore, in this field also there are possibilities for import-type co-operation, or for redeployment of production to particular developing countries.

Among the remaining sub-industries of the chemical industry, it is the plant-protective industry where the further widening of export-type relations is expected, concentrating on the developing countries as export outlets for its products.

The basic materials and processed goods of the petrochemical industry are heavily reliant upon export outlets also. Here, Hungary must rely heavily upon imports, and conversely, in particular developing countries, petrochemicals have been the main lines of industrial development.

Iron and steel metallurgy

The structural modification of the Hungarian iron and steel industry aims at the production of technically more-developed, manufactured (therefore relatively less raw material- and energy-intensive) products. On the other hand, various developing countries - mostly those rich in natural resources - plan the intensive development of iron and steel metallurgy. In the first stage of industrial development such countries will mainly be selling those products which Hungary does not intend to specialize in. Therefore, she may contribute to the development of iron and steel metallurgy in the developing countries by providing an export market for their products. It is all the more important because there are already signs emerging that the developing countries are going to have - not in the least as the result of the protectionist measures of the industrialized developed market economies - grave market realization problems in the near future.

Aluminium

Hungary has relatively ample bauxite reserves. Hungarian experience in bauxite mining, producing aluminium oxide, and in the aluminium industry is significant in international terms, and should be taken advantage of in relations with the developing countries. Developing countries that export bauxite are now aiming at increasingly processing the raw material before exporting, i.e. producing alumina in the initial period, and later moving into manufactured and semi-processed aluminium goods. This, of course, requires the establishment of an aluminium metallurgy industry. Here is one obvious field for industrial co-operation between Hungary and the developing countries. The Hungarian industry is able to help in the foundation of the whole (or some stages) of aluminium industries in developing countries by delivering technology, machinery and plant and also by offering the services of specialists who are experienced in such tasks.

Co-operation between Hungary and the developing countries in the aluminium industry began almost a quarter of a century ago. The first important stage of this co-operation was inaugurated in 1955 when Hungary took part in the foundation of India's aluminium industry. At present, a great number of Hungarian specialists work in different developing countries, helping mainly in the exploration of bauxite deposits or in feasibility studies concerning the full-scale development of aluminium industries.

Delegating aluminium industry experts to the developing countries or training their specialists in Hungary will play an important role in future relationships. Additionally, there are avenues for productive co-operation with developing countries that have some comparative advantage in the production of aluminium (countries with bauxite deposits, relatively cheap energy, and good transport

facilities). Taking into account, however, the capital-intensity of the aluminium oxide industry and aluminium metallurgy, Hungary could not undertake development of optimal plant capacities in the developing countries without some assistance. In order to carry out investments like this, the contribution of a third country would be necessary - maybe that of an oil exporting country.

Light industry

There are several possibilities for the importing of raw materials for Hungarian light industry and for the redeployment of industry consequent to the modification of the industry structure. There is also potential for the import of manufactured goods from developing countries.

Consumption of imported raw materials in Hungarian light industry is quite high: mainly in the textiles, leather and shoe industries where the bulk of imported raw materials comes from developing countries. It could be more advantageous, both for the developing countries and Hungary, if the latter bought these materials in manufactured form.

In accordance with this concept, the first steps for the formation of co-operation between Hungary and the developing countries have already been taken, and there are broad possibilities for its future development, for instance:

- Textiles: The redeployment of yarn spinning to the developing countries that supply raw materials has already begun and will continue. Table 28 in the first chapter shows that spinning equipment is currently exported to developing countries.
- Leather and shoe industries: Part of the capacity of the Hungarian shoe-uppers production is already redeployed to developing countries that have their own leather production.

It has already been underlined in the study that one of the major problems of Hungarian industry - and particularly light industry - is that the range of products is too wide. Therefore, one of the main directions in future industrial concepts will be to narrow the range of articles produced. In this process, Hungarian light industry must increasingly rely on the possibilities of division of labour with the developing countries. Some commodities will no longer be produced in Hungary and, depending on comparative advantage, production will be redeployed to developing countries. In other words: Hungarian light industry counts on the present production capacities and export potential of the developing countries, or production capacities built in the developing countries, in order to satisfy Hungary's import demand for products that will no longer be produced domestically.

This kind of redeployment of production has already begun in the case of some products and is to be continued with the following articles:

- men's shirts
- work clothes

- cotton and cotton-type men's underwear
- women's underwear, knitwear
- bedding, towelling
- sports shoes
- posture control shoes
- workers' protective gloves
- sport balls.

Infrastructure

One of the bottle-necks in the process of industrialization can be caused by inadequate infrastructure. Hungary contributes substantially to the development of the industrial infrastructure in developing countries in various ways. In fact, the development of infrastructure can be another main area of international division of labour between Hungary and the developing countries.

The study has so far dealt with the division of labour in the major industries. Attention is now drawn to other areas of co-operation in which Hungary possesses some comparative advantage or has experience. For Hungary, the experience gained in these matters amounts to considerable comparative advantage that could prove to be of great value in future years.

Education

The lack of skilled labour in the developing countries is a grave problem, contributing as it does, to delays in the process of industrialization. All the developing countries make serious efforts to alleviate this problem. Many of their future specialists and technicians are being trained abroad, and there are firm intentions in many of the developing countries to establish their own national educational systems. Hungary has a well functioning education system and experienced manpower in this field. The country therefore has assisted the developing countries by training specialists at home and abroad and education will remain a major field of technical and scientific co-operation. The most important elements in this form of co-operation are as follows:

- Education at intermediate school, high school and post-graduate levels of students from the developing countries in Hungary.
- Provision of Hungarian teachers to developing countries.
- Exports of complex educational systems and equipment to the developing countries. This means the delivery of educational 'hardware', e.g. demonstrative aids; equipment biology, physics and chemistry laboratories: measuring and laboratory instruments; demonstrative machines for apprentice workshops; etc.
- Supply of the 'software' for these projects, i.e. educational programmes, books, technical and university lecture notes.

Public Health

In the majority of the developing countries, the development of a modern public health network is either on the agenda today, or will be in the near future. With its experience and resources in this field Hungary can contribute to this task by the following:

- Delivery of complete hospitals, and polyclinical instruments.
- Co-operation in the pharmaceutical industry: delivery of complete pharmaceutical factories, joint medical research, delivery of know-how, licensing production.
- Secondment of Hungarian physicians and medical specialists to the developing countries.
- Training physicians and pharmacists from the developing countries in Hungary.

Transport

Hungary can contribute to the development of the transport sector in developing countries in various ways:

- Hungarian exports to the developing countries: buses, railway rolling stock, motor cars, shipping port equipment and cranes.
- Establishing assembling factories for bus production.
- By planning and constructing activities: e.g. planning of railways - determining the line, equipping station buildings; supplying safety equipment; planning roads and bridges; constructing underground lines; development of ports; planning the public transport network of towns, etc.

Telecommunications

For the majority of developing countries, the development of telecommunications is a major issue. In this respect Hungary can co-operate with the developing countries since it has acquired special technical qualifications in this field. Besides exporting telecommunications products, there are also possibilities for co-operation in the development and production of complex local telecommunications systems. Long term co-operation is thus expected in the following fields:

- telephone exchanges
- uhf radio telephones
- microwave equipment
- radio and wireless transmission equipment
- radio and television receivers
- equipment for radio and television studios.

Electrification

It is a vital part of the industrialization programme of the developing countries to develop their electricity networks. A great part of Hungary's exports related to electrification consists

of centralized energy-producing and distribution equipment such as power station equipment, electrical sub-stations, transmission lines, etc. but there are also numerous consumer goods exported, e.g. incandescent lamps, fluorescent lamps and electric meters. The production of such goods has already been organized by Hungary in some developing countries.

Management of water supplies

Supplying the population and industry with water; river control; irrigation; draining marshes; constructing canals are all important problems for the developing countries; Hungarian organizations are experienced in this field also, and further co-operation will be encouraged.

Co-operation between Hungary and the developing countries in the management of water supplies is dominated by "intellectual exports". Many Hungarian experts have taken part in solving water supply problems in developing countries while planning and research institutions in Hungary provide plans and feasibility studies.

Mining

For mining, Hungary can take part mainly through research and exploration works. Many Hungarian geologists are working in the developing countries on the exploration for new raw materials deposits. Geodesy measuring instruments occupy an important place in Hungarian ex, ,s to tha developing countries. Mining infrastructure exports are also important. These include, for example, mining equipment, conveyers, telecommunications equipment.

There are only few raw materials for the extraction of which Hungary can deliver technologies or machinery. Among them, however, the most important is bauxite and in this connexion the development of the whole sector is included. As has already been shown, Hungary can contribute tc the development of the aluminium industry in various ways.

Another area in which Hungary possesses skills which are available for co-operation is in oil and natural gas extraction, e.g. drilling and construction of pipelines and compressor stations.

Agriculture, food industry, and rural industrialization

Of Hungary's exports to the developing countries, nearly one-fifth is food. The most important items are beef-cattle and tinned food. Most of the complete factories exported by Hungary to the developing countries are food industry plants. Hungary pl-ns also to export complex agricultural systems, e.g. poultry farming systems, tomato growing and processing systems, etc.

Naturally, this will mean for Hungary and her developing partners, not only sale and purchase transactions, but all that follows such elements of agricultural co-operation - supply of technologies, delegation of experts, experimentation for the best breeding stock under local conditions, etc.

Hungary also exports horticultural chemicals, veterinary instruments and medicaments, and will possibly take part in experimentation with, and production of, these articles, too.

The problems of rural industrialization are closely related to agricultural development. Generally this means the processing of agricultural products, i.e. the development of the food industry in simple and complex forms, and last but not least, training the rural population in simple industrial activities.

It can be assumed that, also, in the future Hungary can successfully offer its products and services to developing countries in establishing minor plants for producing articles to meet local demands.

The main areas for co-operation in rural industrialization are in:

- Building materials factories based on local supplies: cement, lime, tiles, mosaics, prefabricated elements, bricks, plaster, etc.
- Small metal working factories: production of metalware, forges, workshops for the production of agricultural tools, small aluminium working factories, etc.
- Small wood working factories: production of furniture and joinery articles and prefabricated building units.
- Leather and bristles working factories: production of technologically simple shoes, bags, brushes, etc.
- Processing of vegetable raw materials: cocoa, sisal fibre processing, basket weaving, etc.

4. SUMMARY AND CONCLUSIONS

4.1 Hungary is a small, socialist country, realizing 40-45 per cent of her national income through foreign trade. Changes in conditions of the world market have, therefore, considerable influence on the Hungarian economy. On the other hand, it became increasingly obvious that Hungary's economic performance had serious shortcomings in the international context. Particularly, the world economy events of the early seventies revealed those shortcomings of the Hungarian economy. The disadvantageous development of the world economy affected Hungary just at the time when the previously more easily available sources of industrialization had been exhausted and a switch over to a new type of development was needed.

4.2 One important change in the external conditions of the Hungarian economy was the significant cost increase of imports. Imports of cheap raw materials and fuels had been a basic parameter of past economic development. Another factor of growing importance was the increasing difficulty that Hungarian exports encountered in foreign markets. Demand for Hungarian export products in the developed market economies did not develop satisfactorily and the trend towards increased protectionism in these markets caused severe problems in certain sectors of Hungarian foreign trade: Hungary's export prices rose slower than did her import prices. Hence, the Hungarian terms of trade deteriorated sharply and a significant trade deficit accumulated. This meant that the capital resources available for the Hungarian economy were reduced at a time when capital requirements were growing, due to increased capital intensity and investment for rationalization of the production structure.

4.3 The main problems of the present Hungarian industrial structure seem to be the following:

- the raw material and energy content of the production is disproportionately high;
- the commodity range of production is too wide as non-efficient production has not yet been sufficiently curtailed;
- the production is final-product-oriented, i.e. vertical integration in manufacturing is not sufficiently developed;
- production has not been sufficiently adjusted to world market demand, i.e. there is an inflexible structure.

4.4 In the future, policy will be oriented towards the strengthening of the process of Hungary's integration of the international division of labour. It is recognized that a small country like Hungary cannot afford to decrease its participation in the international division of labour and in the rapid structural adjustment of the world economy in a period when the commodity composition of world trade is changing so quickly, and when more and more new manufacturing exporters are appearing on international markets.

4.5 Raising the efficiency of investment and labour is thus a key issue for the Hungarian economy. All the more so, as in the following period the structural changes must be carried out

at a time when labour force, capital and foreign currency resources will be more limited than hitherto. As only the main lines of structural change are being decided at governmental level, Hungarian enterprises can be expected to assume an increasingly independent role in attaining goals of higher efficiency of industrial production. This means that enterprises will have to compete for obtaining bank credit rather than using general government resources.

4.6 Industrial growth in Hungary is expected to be significantly slower in the 1980s than in the sixties and seventies. The annual growth rate may reach only 3-4 per cent until 1985. The possibility of attaining a more rapid growth in the second half of the decade depends on future overall internal and external developments. It is expected that even the growth of the most dynamically developing industry sectors cannot, in the near future, counterbalance the impact of the stagnant or regressive sectors. Investment available for industry will be kept on the present level with priority for development of energy resources and export promotion.

4.7 Industrial infrastructure will also be developed but the relative backwardness in this field, owing to its high capital intensity, is expected to continue being a constraint throughout the 1980s.

4.8 Faster development is planned for the services sector. To this end, necessary manpower will also come from industry.

4.9 The present sectoral structure of industry will be basically maintained in the coming decade. However, significant changes are required within product composition and in the modernization of technological processes, with particular emphasis being laid on savings in per unit use of raw materials and energy. Vertical integration in manufacturing will be supported, including also the creation of more flexible, small-size enterprises.

4.10 As to the future developments of various sectors of industry, the following pattern can be outlined:

i) Food industries, together with branches providing assistance to agricultural production will develop, with maximum utilization of the very favourable endowments of Hungarian agriculture.

ii) The most dynamically developing sectors in manufacturing industry are electronics, computer techniques, professional telecommunications and part of the instruments industry. Other sub-sectors of capital goods production will generally maintain their present role, with difference between groups of products.

iii) Chemical industries will not develop as fast as in the previous two decades; they can expect less investment, with the exception of export-oriented production.

(iv) The textile-garment industry will remain at its present level, with major changes in product composition favouring more highly processed goods.

v) Special emphasis will be laid on the development of energy supply. Coal production will come again to the fore. The first atomic power station will be in operation by 1985. However, a very significant part of the Hungarian energy demand will be supplied by international co-operation (electric power, natural gas, and oil).

4.11 Taking the above into account, the direction of future structural changes in the Hungarian economy will be the development of a commodity structure which corresponds more to the comparative advantages of the country. The main task for Hungary is to find a more efficient way for integration with the world economy than hitherto. It will mean expanding relations with all the countries, either developed or developing, where there is potential for mutually advantageous trade and co-operation.

4.12 The main endeavour of the Hungarian economic policy is to achieve a favourable balance of payments equilibrium. For this reason, exports must exceed imports by 4 per cent during the first half of the decade. Beside the very intensive co-operation with the other CMEA member countries, major emphasis will be laid on exports to developed and developing market economies.

4.13 In its restructuring process, Hungary will have to give increased attention to the growing importance of the developing countries in the world-wide industrial division of labour. Hungary has to reckon with the developing countries in several aspects:

- Markets for Hungarian products

  The commodity structure of Hungarian exports to the developing countries resembles a developed country's pattern (if comparing it with the composition of Hungary's total exports, or especially with that of the developed market economies). The importance of developing countries as markets for certain Hungarian products is considerable, primarily for machinery. Most Hungarian co-operation with the developing countries has developed from export transactions, e.g. delivery of complete factories, or agro-industrial complexes, and is always connected with the transfer of technology, licences, and providing experts to assist in the organization of the work.

- Suppliers of imports

  One of the main reasons for the fact that the developing countries represented only a small share in Hungarian foreign trade, was the relatively little need for importing the traditional products of the Third World. However, since the mid-seventies, this situation has been changing. Hungary's needs for the raw materials and fuels of the developing countries have been growing (e.g. Hungary began to import crude oil from the developing countries as she was unable to meet the increment of her requirements by imports from the CMEA countries), and the developing countries are becoming more and more important suppliers of certain manufactured products. Within the framework of narrowing the too wide scale of production, Hungary intends to import and help in the production of those manufactures for which the developing countries have comparative advantages.

- Competitors on foreign markets

  The manufactured exports of the developing countries influence the structural changes in Hungary, not only through the home market, but also in the intermediation of foreign

trade. Analysis of the commodity structure of Hungarian exports and those of the developing market economies shows considerable similarity. Consequently, they often appear on the markets of the developed economies as sellers of the same products. In the case of products for which the developing countries have comparative advantages, Hungary is gradually losing her market position. In spite of the short term problems, surmounting of which is rather difficult for Hungary, this competition with the manufactures of the developing countries may also induce structural changes in industry and it will thereby contribute to the world-wide restructuring of production.

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APPENDICES

APPENDIX I: STRUCTURE OF HUNGARIAN FOREIGN TRADE

TABLE A1: STRUCTURE OF HUNGARIAN EXPORTS: 1963 TO 1977
(per cent)

		1963	1965	1970	1973	1975	1977
0	Food and live animals	19.7	18.1	19.7	20.8	19.2	19.8
1	Beverages and tobacco	1.7	2.6	2.6	2.5	2.5	2.1
2	Crude materials, inedible except fuels	3.7	3.4	4.3	4.6	3.8	4.6
3	Mineral fuels, lubricants and related materials	2.0	1.4	1.1	1.1	2.0	3.1
4	Animal and vegetable oils and fats	0.8	0.5	0.4	0.4	0.5	0.6
5	Chemicals	5.6	6.8	6.8	7.1	7.0	8.8
6	Manufactured goods classified chiefly by material	18.5	18.4	17.2	16.8	15.2	15.8
7	Machinery and transport equipment	34.6	34.8	34.2	33.3	37.0	33.5
8	Miscellaneous manufactured articles	13.3	14.0	13.7	13.4	12.9	11.8
9	Other	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL EXPORTS	100.0	100.0	100.0	100.0	100.0	100.0

Source: Hungarian Statistical Yearbooks

TABLE A2: STRUCTURE OF HUNGARIAN EXPORTS TO CMEA COUNTRIES: 1963 TO 1977
(per cent)

	1963	1965	1970	1973	1975	1977
0 Food and live animals	12.2	12.0	13.7	15.9	16.5	16.8
1 Beverages and tobacco	2.0	3.1	3.4	3.2	3.1	2.9
2 Crude materials, inedible except fuels	2.4	2.2	2.5	2.4	2.5	2.5
3 Mineral fuels, lubricants and related materials	1.2	1.1	0.7	0.4	0.7	0.8
4 Animal and vegetable oils and fats	0.4	0.3	0.1	0.1	0.2	0.3
5 Chemicals	6.3	7.4	7.6	7.0	6.7	8.4
6 Manufactured goods classified chiefly by material	17.2	15.7	14.4	12.4	12.6	12.8
7 Machinery and transport equipment	43.9	43.5	44.7	43.8	44.2	43.6
8 Miscellaneous manufactured articles	14.4	14.7	15.0	14.8	13.5	11.7
9 Other	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Hungarian Statistical Yearbooks

TABLE A3: STRUCTURE OF HUNGARIAN EXPORTS TO DEVELOPED MARKET ECONOMIES: 1963 TO 1977
(per cent)

		1963	1965	1970	1973	1975	1977
0	Food and live animals	47.0	42.7	36.8	38.0	29.1	25.9
1	Beverages and tobacco	1.2	1.6	1.1	1.2	1.2	1.0
2	Crude materials, inedible except fuels	8.8	8.2	9.6	8.8	8.8	10.2
3	Mineral fuels, lubricants and related materials	4.9	2.9	2.2	1.8	6.9	8.6
4	Animal and vegetable oils and fats	2.1	1.4	1.3	1.3	1.5	1.5
5	Chemicals	3.1	4.7	5.1	5.0	8.0	10.1
6	Manufactured goods classified chiefly by material	17.1	21.5	25.6	24.5	21.4	19.6
7	Machinery and transport equipment	5.1	4.5	7.0	7.2	10.3	10.2
8	Miscellaneous manufactured articles	10.7	12.5	11.3	12.2	12.7	21.9
9	Other	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Hungarian Statistical Yearbooks

TABLE A4: STRUCTURE OF HUNGARIAN IMPORTS: 1963 TO 1977
(per cent)

		1963	1965	1970	1973	1975	1977
0	Food and live animals	9.0	8.3	8.7	8.8	7.3	10.0
1	Beverages and tobacco	0.5	0.3	1.2	0.9	0.9	0.8
2	Crude materials, inedible except fuels	18.3	18.0	13.2	11.9	10.3	8.8
3	Mineral fuels, lubricants and related materials	11.8	12.1	9.1	9.4	13.5	12.3
4	Animal and vegetable oils and fats	0.5	0.5	0.3	0.3	0.3	0.2
5	Chemicals	7.9	8.5	9.1	11.6	11.6	12.9
6	Manufactured goods classified chiefly by material	16.5	18.4	20.9	20.7	19.8	18.7
7	Machinery and transport equipment	30.7	29.0	32.1	31.1	31.7	31.3
8	Miscellaneous manufactured articles	4.7	4.8	5.3	5.0	4.7	4.8
9	Other	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Hungarian Statistical Yearbooks

TABLE A5: STRUCTURE OF THE HUNGARIAN IMPORTS FROM CMEA COUNTRIES: 1963 TO 1977
(per cent)

		1963	1965	1970	1973	1975	1977
0	Food and live animals	3.4	4.8	3.4	3.1	3.7	2.8
1	Beverages and tobacco	0.4	0.3	1.5	1.0	1.0	1.0
2	Crude materials, inedible except fuels	16.6	16.6	13.0	11.0	10.4	8.7
3	Mineral fuel, lubricants and related materials	16.2	17.0	12.7	13.6	17.2	20.7
4	Animal and vegetable oils and fats	0.2	0.2	0.2	0.2	0.2	0.1
5	Chemicals	5.6	5.7	6.3	7.1	7.2	7.0
6	Manufactured goods classified chiefly by material	15.9	16.3	18.9	21.1	18.9	17.7
7	Machinery and transport equipment	36.6	33.8	38.6	37.8	36.4	37.0
8	Miscellaneous manufactured articles	5.5	5.3	5.4	5.1	5.0	5.0
9	Other	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Hungarian Statistical Yearbooks

TABLE A6: STRUCTURE OF THE HUNGARIAN IMPORTS FROM THE DEVELOPED MARKET ECONOMIES: 1963 TO 1977
(per cent)

		1963	1965	1970	1973	1975	1977
0	Food and live animals	19.7	11.9	14.4	13.1	8.6	6.9
1	Beverages and tobacco	0.6	0.3	0.5	0.6	0.7	0.7
2	Crude materials, inedible except fuels	17.3	15.9	11.6	9.8	7.2	7.2
3	Mineral fuels, lubricants and related materials	1.5	0.4	1.8	0.9	0.8	0.6
4	Animal and vegetable oils and fats	1.1	1.0	0.6	0.4	0.3	0.2
5	Chemicals	15.6	17.9	16.3	21.1	14.7	23.5
6	Manufactured goods classified chiefly by material	21.3	27.0	27,1	27.1	24.1	23.5
7	Machinery and transport equipment	19.6	20.9	21.7	26.2	28.2	31.3
8	Miscellaneous manufactured articles	3.3	4.4	5.7	5.8	4.7	4.7
9	Other	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Hungarian Statistical Yearbooks

TABLE A7: HUNGARIAN FOREIGN TRADE, PRICE INDICES AND TERMS OF TRADE: 1970 TO 1977
(base year 1970 = 100.0)

	Foreign trade in roubles			Foreign trade in dollars			Total trade		
	Export prices	Import prices	Terms of trade	Export prices	Import prices	Terms of trade	Export prices	Import prices	Terms of trade
1970	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1971	99.6	101.8	97.8	101.4	102.2	99.2	100.3	101.7	98.6
1972	100.2	104.0	96.3	105.0	104.4	100.6	101.9	104.1	97.9
1973	100.7	104.2	96.6	110.3	121.6	98.1	107.0	110.7	96.6
1974	102.0	105.2	97.0	141.8	196.6	83.6	115.3	128.9	89.4
1975	117.0	132.2	88.5	132.5	170.2	77.8	122.3	147.2	83.1
1976	112.4	129.8	86.6	125.3	150.9	83.0	116.6	137.3	84.9
1977	116.0	138.1	84.0	129.8	162.5	79.9	120.6	147.0	82.0

Source: Hungarian Statistical Yearbooks

TABLE A8: BALANCE OF HUNGARIAN TRADE: 1971 TO 1977 1/
(million forints)

	Foreign trade in roubles	Foreign trade in dollars	TOTAL
1971	-9,148.0	-14,587.8	-23,735.8
1972	6,083.6	-3,018.5	3,065.1
1973	11,255.2	5,193.8	16,449.0
1974	3,319.6	-28,005,5	-24,685.9
1975	-14,930.0	-23,617.5	-38,547.5
1976	-8,871.9	-14,651.7	-23,532.6
1977	-4,776.1	-23,599.2	-28,375.3

1/ Exports fob; imports cif

Source: Hungarian Statistical Yearbooks

APPENDIX 2: DEFINITION OF TERMS

National Income: (net domestic material product)
Net value produced in the sectors of material production. It can be calculated from gross output by deducting material costs and the depreciation of fixed assets.

Productive Sector: (material sector)
Five sectors of the national economy - industry, construction, agriculture, trade, transport and telecommunications - give the material production of the country, including material services - cargo transport, stocking and packing, etc.

Non-productive Sector: (non-material sector)
Three sectors of the national economy - public services and housing, medical care; amusement and recreation services; administration and other services - in the system of sectoral classification belong to non-material services.

Services:
The sphere of services includes both the material services (cargo, transport, stocking, and packing, etc.) and the non-material services (medical care, amusement and recreation, etc.). In some foreign statistics only the activities of the non-material sectors are called services, but in Hungary the term is used in a wider sense.

Accumulative import material usage:
This represents all imported goods used in an industry, including those produced by another industry and used as an input, e.g. imported dyes, used in the textiles industry - in themselves, chemicals industry products - are included in the textiles industry in Hungarian industrial classification.

Gross production: (gross output)
Gross output is the total production value of an enterprise or industry of the national economy, calculated on the basis of the realization of the enterprise or industry in question. Besides the value of realized goods, it also includes the value of the increase in stock of semi-manufactured and unfinished goods. It is a cumulative value because of each product includes the value of raw materials used, i.e. the output of another enterprise or industry that is used in the production of the industry in question.

Final output:
The value of the goods of a certain enterprise or industry designed for final usage (consumption, investment or export). It differs from gross output because it does not include semi-manufactured goods sold to other enterprises for further manufacturing.

Exchange rate forint:

A term used in foreign trade statistics. Between 1946 and 1975 the value of exports and imports measured in foreign currencies was converted to forints at the exchange rate fixed by the Hungarian National Bank. (It has not been used since 1 January 1976) Now, foreign currencies are converted to forints at the commercial rate for statistical use.

Extensive and intensive industrialization:

The main difference between extensive and intensive industrialization lies in the fact that, in the case of extensive industrialization there are new production forces at disposal, e.g. labour entering the workforce from households, farms, etc. and newly discovered raw material deposits, etc. Extensive development is realized by creating new capacities, e.g. foundation of new branches, building of new factories, etc. In the case of the intensive industrialization the main factor is the raising of productivity. In this case the new investments also serve the goal of efficiency.