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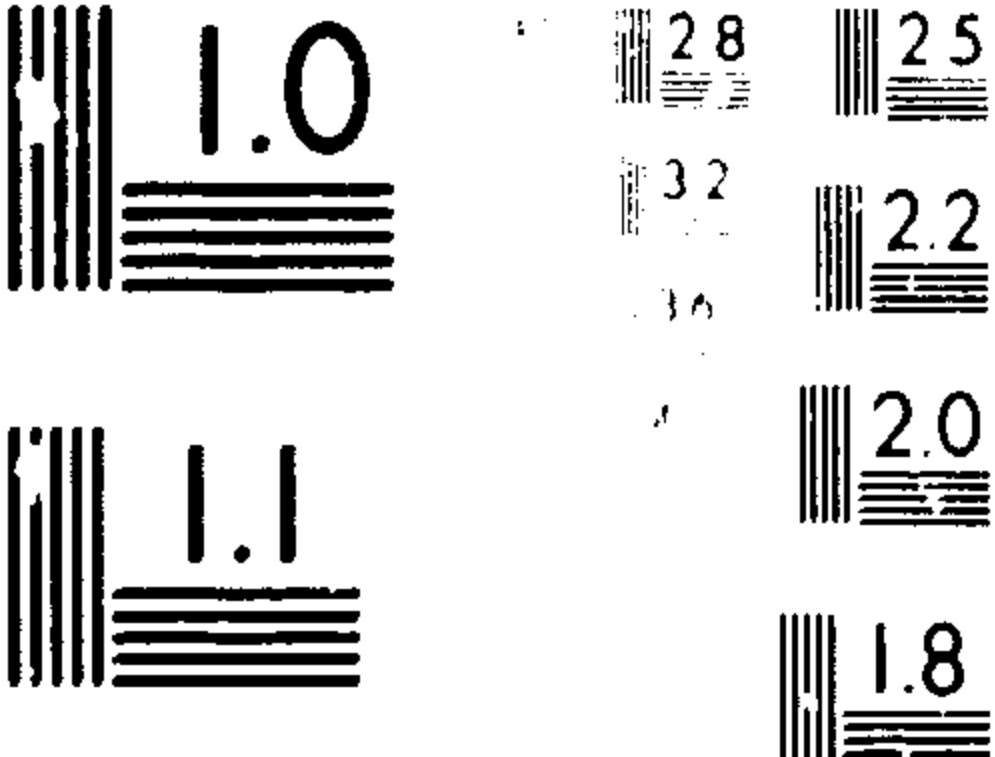
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United Nations Industrial Development Organization

Distr.
LIMITED

ID/WG.357/4
19 January 1982

ENGLISH

Research Seminar on Structural Changes in Industry in European CMEA Countries

Budapest, Hungary, 22 - 26 March 1982

INDUSTRIAL SPECIALIZATION IN CMEA COUNTRIES
SELECTED ISSUES*

by

Zoltan Román**

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V.82-20711

Preface

This study was originally undertaken for the Industrial Development Survey of UNIDO "World Industry in 1980" and had been concluded in December 1980. The contents of the study were used in the above publication. Similar country and regional studies were prepared in the framework of the research programme of UNIDO on industrial redeployment and structural change. This programme constitutes a surveillance of the international industrial restructuring process, aiming at highlighting pertinent trends in industrial development nationally and internationally. By identifying the factors that determine structural changes and indicating the likely direction and possible implications of this process, uncertainties and rigidities in this process might be reduced and a basis created for a forward-looking conception of industrial co-operation between the developed and the developing countries.

Publication of this study contributes to a series of analyses undertaken on selected centrally planned economy countries in Europe. It attempts to analyse past and prospective changes in the industrial structure of the East European region and to highlight some major features of these changes. The first chapter of the study describes the factors and constraints of the industrial growth, the second the pattern of industrial output, the third part deals with foreign trade whereas the last chapter analyses the economic policies of the CMEA countries with respect of industrial specialization.

The study was carried out by Mr. Zoltan Román, Director of the Research Institute of Industrial Economics of the Hungarian Academy of Sciences, as a UNIDO consultant.

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Introductory remarks

The community of the Council of Mutual Economic Aid /CMEA/ includes at the present time as full members 7 European countries /Bulgaria, Czechoslovakia, GDR, Hungary, Poland, Romania, USSR/ and 3 non-European countries /Cuba, Mongolia, Vietnam/. A number of other countries take part in some activities of the CMEA, too: Yugoslavia as associate member, Finland, Iraq and Mexico with a special status of co-operation, Afghanistan and some African developing countries with observer status. This papers deals with only the European member-countries of the CMEA.

All statistical data quoted in this paper if not otherwise indicated are taken from the official publications of the CMEA Secretariat. In these statistics some concepts, definitions, classifications differ from those used in the United Nations publications. If needed for adequate comparison or interpretation, special reference to these differences will be given.

In order to give an overview of the countries studied Table 1 presents some basic figures. The seven European CMEA-countries show both fundamental common characteristics - as the social ownership of the overwhelming part of the means of production and the central planning of the economy - and significant differences i.a. in the size, level of development, institutional set up and the system of economic guidance of the country.

Table 1. Some basic data of the seven CMEA-countries, 1978.

Country	Area /1000 qkm/	Population /millions/	Consumption of electric energy		Share of agricultural earners /%/	Relative per capita GDP/unweighted average=100/ x/
			total $/10^9$ kWh/	per capita /kWh/		
Bulgaria	111	8,8	31,4	3561	25,2	86
Czechoslovakia	128	15,2	62,2	4097	14,5	124
GDR	108	16,8	96,8	5777	10,6	129
Hungary	93	10,7	30,1	2813	21,7	94
Poland	313	35,0	115,2	3286	30,8	94
Romania	238	22,0	62,3	2861	32,8	73
USSR	22402	262,4	1189,7	4533	20,9	100

x/ Estimates on 1973, from the Economic Bulletin for Europe, Vol.31. No.2. p.15.

The differences can be characterized concerning the size of the countries by the ratios 1:201 /area/ and 1:297 /population/, concerning the economic potential 1:347 /GDP/ and 1:379 /consumption of electric energy/, concerning the relative level of development 1:1,77 /GDP per capita/, 1:2 /per capita consumption of electric energy/, 1:3 /share of agricultural earners/. In case of the size and the economic potential Bulgaria and the USSR, in case of the level of development Romania and the GDR are the two poles. From the seven countries two are federal republics: Czechoslovakia and the USSR. The share of the state-owned enterprises in total industrial output is dominant in all these countries but the agriculture is not collectivized in Poland. In the system of economic guidance central planning has a decisive role in all

CMEA-countries but the autonomy of the enterprises, the use of direct and indirect means of control is not the same. Therefore, beside common features the possibilities, the aims and instruments for industrial specialization are different in these countries.

I. Growth, its factors and constraints

1. The growth of the CMEA economies

The CMEA countries measure economic growth according to their MPS accounts by the increase in per capita national income originated in the material sphere of production, i.e. they exclude services which are not related to the production and distribution of goods. Estimates on their growth rates of per capita GDP according to the SNA definitions seldom show significant differences while recalculations of other types aiming at corrections of price deflators and other basic components of the index numbers might lead to greater divergences. On the other hand, in the MPS framework industrial output is seen as amounting for a larger proportion of total economic activity and makes comparisons with western economies difficult. In this study the data published by the statistical offices of these countries will be used /in many cases as processed by UN agencies/.

Table 2 presents data on the growth of per capita national income by countries /according to the terminology used in UN statistical analyses: net material product, NMP/. The highest growth had been achieved by the two countries /Romania and Bulgaria/ starting from the lowest level; in case of the figures on the GDR it must be taken into account that this country in 1950 was still in the stage of the post-war recovery.

Table 2. The growth of the national income /NMP/ by countries, 1951-1979.

1950=1

Country	National income			Per capita national income		
	1960	1970	1979	1960	1970	1979
Bulgaria	2,8	5,9	11	1,7	5,1	9
Czechoslovakia	2,1	3,2	4,8	1,9	2,8	3,9
GDR	2,6	4,0	6,1	2,8	4,3	6,7
Hungary	1,8	3,0	4,9	1,7	2,7	4,2
Poland	2,1	3,7	6,7	1,7	2,9	4,8
Romania	2,7	6,0	14	2,4	4,8	10
USSR	2,7	5,3	8,3	2,2	3,9	5,7

The rates of growth of the CMEA countries in international comparison appear to be high though not unique. As a group until the mid-seventies they exceeded the growth both of the developed market economies and the developing countries. In the last three decades /1951-1979/ national income resp. GDP increased in the CMEA countries by 7,8, in the developed market economies by 3,2, in the developing economies by 4,2 per cent p.a. Per capita figures show of course lower rates in particular for the developing countries. While the growth rates in the developed market economies sharply declined in the early 70's, this happened in CMEA countries although not at the same extent in the late 70's /see Table 3/. In the CMEA-countries one attributes this slowing down first of all to the exhaustion of the extensive sources /factors/ of growth. To the problems behind this slowdown and to the prospects for the coming years we shall turn in the next part of the paper.

Table 3. Comparative growth rates p.a. 1961-1979.

	CMEA countries	Developed market economies	Developing economies
National income /NMP/-GDP			
1961-65	6,0	5,5	4,5
1966-70	7,4	4,6	5,7
1971-75	6,4	2,3	5,4
1976-79	4,4	4,0	5,3
1961-79	6,2	4,1	5,2
1971-79	5,5	3,1	5,3
National income /NMP/-GDP per capita			
1961-79	5,2	3,1	2,6
1971-79	4,6	2,2	2,7

The changes in the growth rates of the CMEA countries show some similarities /see Table 4/. From the 4 subperiods between 1961-1979 the growth rates in the second half of the sixties in 5 of the 7 countries increased, then in 4 countries of the 7 somewhat decreased, followed in the late seventies by an even marked slowdown in each country. The share of foreign trade and the significance of the gains and losses in the terms-of-trade and their impact on real national income increased in all CMEA-countries. The handling of these impacts in the national income calculations is not uniform, therefore they reflect foreign trade consequences with some delay. When assessing the growth and performance of these countries, this factor also must be taken into account.

Table 4. National income /NMP/ growth rates p.a. by countries, 1961-1979 x/

%

Country	1961-1965	1966-1970	1971-1975	1976-1979	1961-1979	1971-1979
Bulgaria	6,7	8,8	7,8	6,2	7,4	7,1
Czechoslovakia	1,9	6,9	5,5	3,8	4,6	4,7
GDR	3,4	5,2	5,4	4,0	4,6	4,7
Hungary	4,1	6,8	6,5	4,0	5,5	5,5
Poland	6,2	6,0	9,8	3,1	6,4	6,8
Romania	9,1	7,6	11,3	8,2	9,1	9,9
USSR	6,5	7,8	5,7	4,4	6,2	5,2
Total	6,0	7,4	6,4	4,4	6,2	5,5

x/ The growth rates in 1980 in order of the countries listed: 5,7; 2,9; 4,2; -0,6; -5,4; 3,0; 3,5.

2. Industrial growth

The share of agricultural earners in 1950 was 27 percentage in the GDR, 39 in Czechoslovakia, 48 in the USSR, 52-54 in Hungary and Poland, 74-80 in Romania and Bulgaria. All CMEA countries followed the policy of rapid industrialization. Their agricultural employment shares sharply declined up to 1979 into the range from 10 /GDR/ to 32 /Romania/. Further on also labour productivity increased much faster in industry than in agriculture. While the industry of the CMEA countries alltogether multiplied its /gross value of/ output between 1951 and 1979 12 times, agriculture only 2,5 times; their industrial growth rate was the double of the "world average", their agricultural growth only 15 percentage higher. The differences between industrial and agricultural growth according to the national income /NMP/ figures are even greater.

The increase of the national income originated in agriculture was also in the period 1961-1979 very modest, except Hungary and Romania. At the same time the industrial contribution to the national income grew fast, by 7,9 per cent p.a. Behind the average figures the two poles are represented by Romania /12,5/ and Czechoslovakia /5,0/. In this period the industrial growth p.a. in the developed market economies was 4,7, in the developing economies 6,8 percentages. In the years 1976-1979 industrial growth in the CMEA countries slowed down, in the developed market economies somewhat recovered and actually was approximately the same 5,3 p.a , less than in the developing countries /6,6/.

The CMEA countries are publishing index numbers of industrial production on the industry as a whole both on the basis of the national income originated /NMP/ and of the gross value of output, but on sectors only of the second type. Therefore, we turn to use these index numbers, i.e. those calculated on the basis of changes of the gross value of output at constant prices. Usually it is assumed that these show higher, sometimes significantly higher growth rates than national income data. Though this might be the general case it is not a rule. For the period 1961-1979 from the 7 CMEA countries one could observe this "rule" only in 4 countries /in brackets the rates of growth p.a. of the national income and gross value of output originated in industry/; Bulgaria /9,6 and 9,7/, Czechoslovakia /3,7 and 5,0/, GDR /5,3 and 6,0/, and Poland /8,1 and 8,3/. In the three other countries the differences are of the opposite sign: Hungary 6,8 and 6,3, Romania 12,5 and 12,3, USSR 8,1 and 7,4. Due to the relative size of the USSR the weighted

average for the total group shows differences of the same sign: 7,9 and 7,5. Owing to the lack of more detailed information an explanation of these differences cannot be attempted.

The share of persons employed in industry was in 1978 in all CMEA countries 30 percentage or more, on the top GDR with 43 and Czechoslovakia with 38 percentage /see Table 5/. To give some comparative figures on the developed market economies: this share in 1978 amounted to 38 percentage in FRG, 33 in the UK, 28 in France, 25 in the US. It has to be taken into consideration, however, that in the CMEA countries employment in the material sphare of production and in agriculture is much higher, in the tertiary sector much lower than in the market economies.

Table 5. Some data characterizing the industry's share, 1978.

Country	Share of employment /percentage/ in			Share of national income originated in industry /%/
	the material sphere of production	Industry	Agriculture	
Bulgaria	83	35	25	57
Czechoslovakia	80	38	15	61
GDR	81	43	11	65
Hungary	82	34	22	47
Poland	86	32	31	52
Romania	88	33	33	62
USSR	77	30	21	51

Value indicators, like the percentage share in national income originated, show the dominance of industry in all CMEA countries: industry's contribution calculated at national prices varies between 47 and 65 percentage. These figures, however, are too much dependent on relative prices to allow far-reaching conclusions. /For international comparisons do not forget that these are Net Material Product figures, SNA data have a wider scope./

A study of the Secretariat of the Economic Commission for Europe /Structure and Change in European Industry, 1977/ gave estimates on relative per capita industrial output of the CMEA countries for 1963 and by /as mentioned, "hazardous"/ extrapolation also for 1950 and 1970. These data /op.c.p. 157./ quoted in Table 6, supplemented by extrapolated figures for 1979, indicate that the range of difference definitely decreased. In the ranking order the first three countries kept their position, within this group the Soviet Union's position improved, that of Czechoslovakia weakened. In the group of the other 4 countries the ranking order from 1950 to 1979 became the opposite. Having in mind the relative per capita GDP figures /see Table 1/ this implies that the relative per capita agricultural output in Hungary must exceed significantly that of Bulgaria and Romania. Looking at the employment figures /see Table 5/ this implies further on that industrial labour productivity is much higher in Rumania and Bulgaria than in Hungary which perhaps can be questioned.

Looking closer at the last two decades by countries and subperiods /see Table 7/, 1976-79 was in each country the period of a substantial slowing down in the industrial

Table 6. Relative per capita industrial output in the CMEA countries

Country	Relative per capita industrial output				Ranking	
	1950 x/	1963	1970	1979 xx/	1950	1979
GDR	183	169	149	144	1.	1.
Czechoslovakia	182	153	132	114	2.	2.
USSR	90	100	105	102	3.	3.
Hungary	87	85	81	80	4.	7.
Poland	83	78	78	84	5.	6.
Bulgaria	49	67	88	98	6.	5.
Romania	31	60	68	101	7.	4.
The range of difference	5,9:1	2,8:1	2,2:1	1,8:1	-	-

Source: Structure and Change in European Industry, p. 157.

x/ In case of GDR and Bulgaria 1952.

xx/ The extrapolation based on data of per capita national income originated in industry.

growth. This trend started more or less everywhere already in the sixties except Czechoslovakia and the GDR; in these countries an upswing can be identified in the late sixties. Poland showed the highest but transitory growth in the early seventies.

This slowing down will be explained in the CMEA--countries first of all with the exhaustion of the extensive sources /factors/ of growth. They emphasize the need for intensification, for the better use of available manpower, capital and material resources. In the fifties and sixties a substantial part of the increase

in the industrial output originated from the rapid growth of industrial employment, this stopped in the seventies. All people seeking for job are employed already, in addition the increase of the population in working age is not significant, and the share of employment in the tertiary sector is growing. Also the productivity gain stemming from the structural change between industry and agriculture becomes very modest. The capital/output ratio is growing while the share of investment funds cannot be increased any more. Results of improvements aiming at better allocation, implementation and utilization of investments are felt slowly. Per unit material and energy consumption in the CMEA-countries is relatively high, improvements are needed in this respect, too.

Table 7. Percentage growth rates p.a. of industrial output, 1961-1979[x/]

Country	1961-1965	1966-1970	1971-1975	1976-1979	1961-1979	1971-1979
Bulgaria	11,7	10,9	9,1	6,6	9,7	8,0
Chechoslovakia	5,2	6,7	6,7	4,9	6,0	5,9
GDR	5,8	6,5	6,5	5,1	6,0	5,8
Hungary	7,5	6,2	6,4	4,7	6,3	
Poland	8,4	8,3	10,4	5,7	8,3	
Romania	13,8	11,9	12,9	10,3	12,3	11,8
USSR	8,6	8,5	7,4	4,7	7,4	6,2

x/ Based on gross value of output index numbers. The growth rates in 1980 in order of the countries listed: 4,2; 3,5; 4,7; -1,6; 0; 6,5; 3.6.

All CMEA-countries are making efforts to improve their system of planning and guidance of the economy as well as the system of their co-operation in order to accelerate

adaptation to this new situation and requirements. East-West trade increased significantly from the late sixties and this helped the modernization of the production capacities in the CMEA countries, at the same time this led to indeptedness and made them more sensitive to business cycles in the West, to the problemes and changes in the world economy - stagflation, recession, disturbances in the international monetary system, rapid increases of the oil and raw material prices, transformation of the international division of labour, pressure for the "new economic order". To overcome the problemes caused by the coincidence of these internal and external factors requires seemingly a number of years and, therefore, in the next five year plans for 1981-85 moderate growth targets will be fixed in · countries.

3. Employment and labour productivity

Consistent data on industrial employment and productivity of the CMEA-countries are available only on their state-owned and co-operative industry. These data do not cover the industrial activities of the small private firms /mostly craftsmen/ and that of the productive units classified into other sectors of the economy /agriculture, construction, etc/. The first item amounts only to a few percentages of the total industrial output, the second one has in particular in some branches /e.g. building materials, food industries/ greater share and importance. Further on it should be noted, that the industrial workers perform significant auxiliary activities in agriculture and construction, too. In spite of these differences the changes of employment in the state-owned and co-operative industry and the

total industry show very similar trends.

Table 8. The growth of industrial employment in the CMEA-countries /Average rates of growth p.a. in percentages/[x/]

Country	1951-1960	1961-1970	1971-1975	1976-1979	1951-1970	1960-1979
Bulgaria	8,4	4,2	3,3	0,0	6,3	2,8
Czechoslovakia	3,5	1,4	1,1	0,7	2,4	1,2
GDR	2,4	0,4	1,1	0,7	1,4	0,6
Hungary	5,3	2,7	0,3	-0,7	4,0	1,3
Poland	4,1	3,3	2,7	0,0	3,7	2,4
Romania	4,5	5,2	6,3	2,6	4,8	4,9
USSR	4,0	3,4	1,1	1,4	3,7	2,4

x/ State-owned and co-operative industry only.

Industrial employment increased fast in all CMEA--countries untill the beginning of or the mid-seventies. Of course, Bulgaria and Romania show the highest growth rates and the two countries already highly industrialized before World War Two - Czechoslovakia and the GDR - the lowest rates.

The growth of industrial employment decreased from the sixties in most countries of the group except Romania, where this change happened in the late seventies. In 1976-79 the number of employees in the industry in Hungary diminished, in Bulgaria and Poland stagnated, in Czechoslovakia and the GDR its increase dropped below 1 per cent, in Romania grew by 2,6 per cent p.a. /compared

to the previous periods with 4-6 per cent/, and in the USSR by 1,4 per cent.

Labour productivity /see Table 9/ shows less although not negligible variarce between these periods, in the range of

Bulgaria	5,2-6,9	percentages p.a.
Czechoslovakia	4,3-7,1	"
GDR	4,4-8,6	"
Hungary	4,1-6,2	"
Poland	5,1-7,6	"
Romania	6,3-7,6	"
USSR	3,3-6,7	"

In Czechoslovakia, GDR and USSR the highest growth rates were experienced in 1951-60, the lowest in 1976-79; in Hungary and Poland in 1971-75, resp. 1961-70; Bulgaria and Romania show an other pattern. In all CMEA-countries but Romania the increase of labour productivity was lower in 1976-79 than in the previous five-year period, this slowing down amounted to 0,3 /Bulgaria/-2,7 /USSR/ per cent p.a. The relative productivity growth by branches show some similarities. In the period 1961-78 all countries reported relatively high growth rates in the engineering industries and chemicals, relatively low growth rates /compared to the average growth of industrial labour productivity/ in the food industry and in most branches of the light industry /see Table A-1/. This can be explained by the higher growth of the two branches first mentioned and by their larger share in industrial investments.

Table 9. The growth of industrial labour productivity in the CMEA-countries /Average rates of grwoth p.a. in percentages/ x/

Ccuntry	1951--60	1961--70	1971--75	1976--79	1951--70	1961--79
Bulgaria	5,2	6,9	6,8	6,5	6,0	6,8
Czechoslovakia	7,1	4,6	5,6	4,3	5,8	4,8
GDR	8,6	5,6	5,4	4,4	7,1	5,3
Hungary	4,5	4,1	6,2	5,5	4,3	5,0
Poland	7,3	5,1	7,6	5,5	6,2	5,8
Romania	7,1	6,8	6,3	7,6	6,9	6,8
USSR	6,7	4,8	6,0	3,3	5,7	4,8

x/ State-owned and co-operative industry only.

The average growth rates of labour productivity of the CMEA-countries for the total period 1951-79 remain in a relatively narrow range:

Romania	6,9	per cent p.a.
GDR	6,4	"
Poland	6,3	"
Bulgaria	6,2	"
Czechoslovakia	5,6	"
USSR	5,5	
Hungary	4,8	"

In Hungary - with the lowest growth rate - the fast increase of industrial employment was associated with a relatively slower growth in labour productivity but the former phenomenon helped to ensure full employment and some losses in industrial labour productivity were compensated by the better performance of agriculture.

In the total economy /according to the NMP concept/ labour productivity in Hungary increased by 4,5, in the GDR by 4,4 per cent p.a.; in Poland by 5,1, in the USSR by 5,3 per cent. In Czechoslovakia its rate was 3,8 per cent, in Bulgaria and Romania - probably partly due to the structural shifts from agriculture to industry - by 7,4, resp. 8,7 per cent p.a.

To the term "labour productivity" used in this context it should be added, that it is measured by the gross value of output at constant prices per number of employees which means, that i/ these index numbers do not reflect the changes in the per unit use of energy and materials, ii/ they include the impact of increase in capital intensity and the qualification of labour which both were significant in all these countries. In the next part of this paper some estimates will be given on total factor productivity as well. These index numbers take into account capital-labour substitution, too; they measure the efficiency of the use of labour and capital combined and therefore, indicate less differences by countries /see Table 15/.

If we call the increase in employment an extensive, that of labour productivity an intensive factor of growth /as usual in the CMEA-countries/, in the three decades urder review the diminishing role of the extensive factor can be observed. Based on the simplified equation $Q = E \times LP$ /the output is the product of employment and labour productivity/ the changes in output can be abbributed to /and divided between/ the changes in employment and labour productivity. In Table 10 data on the contributicn of employment are presented /100 minus this contribution gives the contribution of labour productivity/. The growth of employment contributed to

the increase of industrial output in the fifties in the range of 22 and 62 per cent, in the late seventies in the range of -11 and +30 per cent, their unweighted averages are 40 resp. 10 per cent. That is the reason while the CMEA-countries emphasize the need for the better utilization of the intensive factor/s/, the need for the intensification of the production.

Table 10. The contribution of the changes in employment to the increase of industrial output /in percentages/ x/

Country	1951--60	1961--70	1971--75	1976--79	1951--70	1961--79
Bulgaria	62	38	25	0	51	29
Czechoslovakia	33	23	16	14	29	20
GDR	22	7	17	13	16	10
Hungary	54	40	5	-11	48	29
Poland	36	39	26	0	37	29
Romania	39	43	50	25	41	42
USSR	37	41	15	30	39	33

x/ State-owned and co-operative industry only.

The future growth of the industrial production in the CMEA-countries depends on the success of this intensification, on the increase of labour productivity. From the growth of industrial employment - looking at the prevailing trends, the limited prospects for growth in the total labour resources, the needs of the tertiary sectors - only a very moderate contribution can be expected if at all. The relative level of labour productivity in the CMEA-countries is lagging behind the most

advanced countries. According to Hungarian calculations and estimates industrial productivity in this country might be around 50 per cent of the level of the developed market economies. The difference in case of the GDR, Czechoslovakia, the USSR is less but still is not negligible, for the other countries it might be similar. This hints to significant reserves, their utilization, however, requires further investments in capital and R & D as well as improvements in management, organization, progress in specialization and structural adjustment.

4. Capital and investment

The share of accumulation in the CMEA-countries in the last two decades was relatively - although not exceptionally - high in international comparison. /Do not forget, that like most value indicators, these figures also are influenced by relative prices, in this case prices of investment and consumer goods/. This share /see Table 11/ moved mostly in the range of 25 and 30 per cent, in some cases with greater fluctuation. The data of the years 1976-78 do not show significant changes but in the case of lower growth rates the same share of accumulation allows for less investments. The figures on the growth of investments /see Table 12/ clearly indicate this consequence - for 1976-78 with the exception the GDR and Romania, for 1976-79 for all these countries.

The stock of the productive fixed assets increased in these last years invariably /see Table A-2/ but due to the slowdown in the increase of the national income the capital/output ratio /see Table A-3/ moved upwards.

Table 11. The share of accumulation in the national income used /in percentages/

Country	1960	1965	1970	1975	1976	1977	1978	1976-78
Bulgaria	27,4	28,4	29,2	32,5	23,6	26,0	24,0	26,2
Czechoslovakia	17,7	9,2	27,0	29,2	28,3	25,1	25,0	26,1
GDR	18,2	20,0	24,4	22,3	22,9	23,0	21,6	22,5
Hungary	23,1	19,3	24,9	27,7	27,2	28,2	32,3	29,2
Poland	24,0	25,9	25,1	34,1	34,7	31,7	30,8	32,4
Romania	.	.	.	.	.	.	.	36,9
USSR	26,8	26,3	29,5	26,6	27,0	26,8	26,3	26,7

Table 12. Growth of total investments /Average rates of growth p.a. in percentages/

Country	1961-65	1966-70	1971-75	1976-78	1976-79
Bulgaria	7,9	12,5	8,6	4,9	4,1
Czechoslovakia	2,0	7,3	8,0	3,6	3,2
GDR	5,0	10,1	4,7	5,3	4,3
Hungary	5,6	11,7	7,0	5,6	4,5
Poland	6,8	8,1	18,4	2,7	0
Romania	11,3	11,2	11,5	12,0	10,2
USSR	6,2	7,6	7,0	4,7	3,7

Looking at the total period from 1961 to 1978 the capital/ /output ratio increased in Bulgaria and the USSR by 2,1, in the GDR and Romania around 1,0 per cent p.a. and did not change /or not significantly/ in the other 3 countries.

The growth rates of the industrial investments /see Table 13/ show remarkable fluctuation; in 1976-78 compared to the previous five-years average still increased, in the GDR, in Hungary /and somewhat also in Bulgaria and Romania/ in the other 3 countries dropped. The stock of fixed assets in the industry - similarly as in the total economy - increased in these years in all countries /on Romania data are not available/ but the capital-output ratios /see Table 14/ signalized problems. The change of this ratio in the industry in the total period of 1961-78 was very different by countries, but in 1976-78 its increase was characteristic everywhere.

Table 13. Growth of industrial investment[x/]
/Average rates of growth p.a. in percentages/

Country	1961-65	1966-70	1971-75	1976-78
Bulgaria	13,7	12,7	6,0	6,6
Czechoslovakia	3,4	5,1	7,0	4,1
GDR	7,1	9,0	4,1	6,8
Hungary	4,4	8,3	6,2	11,1
Poland	8,1	7,8	21,9	0,0
Romania	13,4	10,8	12,3	13,7
USSR	6,6	6,8	6,8	4,1

x/ State-owned and co-operative industry only.

This meant that to the same growth of output more capital had been needed than previously, due to a number of different reasons: problems in the appropriate allocation of resources and the planned utilization of the new capacities, structural changes, and perhaps some imperfections in the recalculation of the statistical figures into constant prices, too.

Table 14. Changes in the capital/output ratio in the industry /Average rates of changes p.a. in percentages/ x/

Country	1961-65	1966-70	1971-75	1976-78	1961-78
Bulgaria	3,6	2,3	0,6	1,9	2,1
Czechoslovakia	0,7	-2,0	-0,2	1,4	-0,3
GDR	.	-1,0	0,5	0,6	0,0 xx/
Hungary	1,0	-0,1	1,5	2,9	1,1
Poland	-2,3	-0,8	-1,0	4,0	-0,5
USSR	2,6	0,5	1,2	1,5	1,5

x/ With the exception of the GDR state-owned and co-operative industry only. The output is measured by gross value indicators. Data on Romania are not available.

xx/ Average 1966-78.

In Table 15 approximative calculations on the growth of total factor productivity are presented /the weighted average of the growth rates of labour productivity and output/capital ratio, assuming uniform weights 2/3:1/3 for each country/. These estimates compared to the index numbers of labour productivity show definitely less dispersion by countries. According to these calculations the variance in the increase in labour productivity can be attributed to a great extent to the differences in the degree of capital-labour substitution.

Table 15. Changes in labour and total factor productivity, 1961-78 /Averages rates of growth p.a. in percentages/

Country	Labour	/Estimated/ total factor	Labour	/Estimated/ total factor
	productivity in the economy		productivity in the industry	
Bulgaria	7,5	4,3	6,7	3,8
Czechoslovakia	3,8	2,5	4,9	3,2
GDR	4,5	2,7	3,8 x/	2,5 x/
Hungary	4,6	3,0	5,1	3,0
Poland	5,2	3,5	6,0	3,8
Romania	8,8	5,6	.	.
USSR	5,5	3,0	5,2	3,0

x/ For the years 1966-1978.

The lower growth rates of total factor us labour productivity are not surprising, all calculations of this type /in the CMEA-countries called often assessment of the "efficiency of production"/ measure according to a smaller scale but the differences are relatively large. Looking from this angle labour + capital are the extensive factors of growth, the increase of total factor productivity is the intensive factor. Compared to the analysis of labour input and labour productivity only, in this more comprehensive assessment the share of growth attributed to the extensive factors appears to be higher, the need for increasing the role of the intensive factors even more pressing. The CMEA-countries are aware of this need for intensification in the use of both labour and capital, this is considered as a prerequisite of avoiding a substantial and lasting slowdown in growth.

5. Energy, technology and management

The total commercial energy consumption in the world increased in 1951-60 by 5,5 per cent p.a., in 1961-73 by 4,9 per cent, after the "price explosion" in 1974-78 by 2,5. Per capita consumption figures show similar changes: 3,5-3,0-0,7 per cent p.a. The share of liquid fuels in total primary energy production increased from 29,9 per cent in 1950 to 48,8 per cent in 1978, that of natural gas from 9,3 to 18,6 per cent - at the cost of solid fuels /59,5-29,8 per cent/. Imports related to total primary energy production were 17,6 per cent in 1950, 35,5 per cent in 1978. These figures x/ illustrate the radical changes in the energy situation in the last decodes, in particular from 1973 on.

Looking at the CMEA-countries, the increase of energy consumption in 1951-70 was 6,4 per cent p.a. while 4,3 per cent in the developed market economies. It remained in both cases below the growth of GDP but at different extent. The elasticity of energy consumption per unit of national income /NMP, resp. GDP/ was 0,72 in the CMEA--countries, 0,96 in the developed market economies. The relative growth of primary energy production /to NMP, resp. GDP/ shows another picture: 0,74 in the CMEA-countries, 0,72 in the developed market economies. The CMEA-countries as a group is net exporter of fuel, the developed market economies dependence on imported fuel had been increased untill recent years substantially. Within the CMEA-group, however, fuel export is significant only for the USSR and Poland and the changes in relative prices had an impact on all countries. More closely the developments in the seventies will be reviewed here.

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x/ Source: World Energy Supply 1970-73. UN, 1975.

Comparing the years 1971-73 and 1974-78 /see Table 16/ the growth rate of total energy consumption in the CMEA--countries slightly, in the developed market economies radically decreased. This was the consequence first of all of the slowdown in economic growth and secondly of the savings in energy consumption. The difference in the increase of the use of electricity was less but still significant: the growth rate in 1974-78 was 5,5 per cent p.a. in the CMEA-countries /data by countries see in Table 17/, 3,5 per cent in the developed and 8,2 per cent in the developing economies.

Table 16. Changes in the production and consumption of energy, 1971-78 /Rates of growth p.a. in percentages/

Group of countries, periods	GDP x/	Primary energy production	Consumption of		Per capita consumption of commercial energy
			total commercial energy	liquid fuels	
World					
1971-73	6,0	4,8	4,8	7,1	2,9
1974-78	3,0	2,1	2,5	2,0	0,7
CMEA-countries					
1971-73	6,6	4,2	4,5	1,4	3,6
1974-78	5,5	4,8	4,1	2,1	3,2
Developed market economies					
1971-73	5,1	1,4	4,1	6,3	3,1
1974-78	1,8	0,2	0,5	0,3	-0,2
Developing countries					
1971-73	6,3	8,9	8,0	9,2	5,4
1974-78	5,0	0,8	6,6	6,5	4,0

Sources: Table A-4 and A-5 /Annex/.

x/ In case of the CMEA-countries NMP.

Table 17. Changes in the production and consumption of energy 1974-78 in the CMEA-countries. /Rates of growth p.a. in percentages/

Country	Total primary energy production	Consumption of commercial energy		Consumption of electricity	
		aggregate	per capita	aggregate	per capita
Bulgaria	-0,5	3,8	3,3	5,6	5,1
Czechoslovakia	2,3	3,5	2,7	4,8	4,1
GDR	1,2	2,2	2,5	4,3	4,6
Hungary	1,4	3,2	2,7	6,3	5,8
Poland	4,0	5,2	4,2	6,8	5,8
Romania	1,9	3,9	2,7	7,4	6,5
USSR	5,5	4,2	3,2	5,4	4,3

Source: Table A-6 and A-7 /Annex/

In all CMEA-countries except the Soviet Union the consumption of commercial energy increased in 1974-78 at a higher rate than their primary energy production. In 1973 the USSR produced 76,5 per cent of the total primary energy of the CMEA-group, in 1978 78,9 per cent; the Soviet Unions' consumption increased only from 70,3 per cent to 70,7 per cent. The USSR's share in 1978 in the total solid fuel production was 56,5, in liquid fuels 97,0, in natural gas 87,4, in hydro and nuclear energy 85,8 per cent. With the exception of the USSR all CMEA-countries are very much dependent on imported fuel /see Table 18/. With the exception of the USSR and Poland they are net importers and the increase of the prices of fuels contributed the their balance of payment problems since these price changes had been validated according to special schemes within the CMEA-trade, too. Therefore, they have and started to take

measures for more accentuated savings in the consumption of energy. The Soviet Union and Poland do the same, partly for price considerations, partly facing the increasing costs of the exploitation of their deposits. The impact of these measures accompanied by the lower growth rates are now and will be felt in the next years even more. Since fuel can be imported in peace-time if one has hard currency to pay for it, energy should not be dealt with as an absolute constraint of growth but - in addition to the pressure for savings and for utilizing own production potentials - reinforces the need for export strength.

Table 18. Energy production and trade in the CMEA-group, 1978.

Country	Exports	Imports	Share of liquid fuels	Primary energy production	Energy consumption
	related to the country's total consumption /in percentages/			in the CMEA's total /in percentages/	
Bulgaria	0,2	71,9	43,6	0,6	2,2
Czechoslovakia	6,6	37,0	21,4	3,5	5,6
GDR	4,7	37,2	20,2	3,6	5,8
Hungary	5,6	54,0	38,0	0,9	1,8
Poland	23,5	16,8	11,3	9,1	9,6
Romania	12,0	22,6	26,0	3,4	4,3
USSR	21,7	2,4	35,1	78,9	70,7

Source: Table A-6 and A-7 /Annex/

Technological progress was a major source of economic and industrial growth in the CMEA-countries although it cannot be demonstrated by statistical figures. Sometimes the "residual" of the production functions and total factor productivity in "growth accounting" will be interpreted and

dealt with as measures of technological progress. According to our estimates /see Table 15/ this factors' contribution to growth in the CMEA-countries in 1961-78 was between 50 and 60 per cent in the total economy, and between 40 and 50 per cent in the industry. Actually, however, this "residual" includes a number of different factors: beside improvements in products and technology progress in management and organization, impacts of structural shifts, errors of calculations, etc.

The CMEA-countries, first of all the USSR, have a huge potential for research and development. They have a large network of academic and industrial research institutes, the share of the highly qualified manpower in the population is among the highest at international standards. These countries utilize the possibilities of central planning for launching big projects with the concentration of intellectual and material resources. They are strong in fundamental research but less efficient in the rapid application and dissemination of the research findings; their recent efforts are aiming now at strengthening these innovative activities.

Several forms and channels had been built up to co-ordinate research and development and to exchange and spread informations on technical progress between the member-countries of the CMEA. They established joint institutes, joint projects, programmes and committees and working parties and in the last decades strengthened the co-operation also with the developed market economies. The scientific contacts with these economies and the use of all forms of transfer of technology - trade of investment goods, licences and know-how, co-operation agreements, etc. - increased substantially. The Soviet Union as a huge country

can and does cover all fields of research and development, nevertheless finds this international cooperation fruitful in some areas in particular, and is ready to contribute to make further progress.

The other CMEA-countries being of small or medium size are relying much more on division of labour, specialization and co-operation in research and development, too. In order to accelerate technical progress in their economy beyond the CMEA co-operation they increased the import of investment and intermediate goods, buying licences and know-how, and co-operation agreements from/with the developed market economies. At the same time they are aware of the fact that successful application of the transferred technology requires own contribution, in a number of selected areas the must be the pioneers and that to be in able to pay for imports they have to increase their competitiveness of their exports. Vis-a-vis the developing countries the CMEA-countries are in the donor position and giving assistance to the technological progress of these countries in addition to commercial considerations they take into account the requirements of international solidarity, too.

Innovation and diffusion of new technologies require also improvements in <u>management and organization.</u> From the mid-sixties all CMEA-countries implemented many programmes and projects in this field and developed their international co-operation, too. Research on the theory of management and organization /and on the related areas as management science, system analysis etc./ made great progress and received academic support. Complete networks of management training centres, institutes and enterprises for consultancy in management and organization had been established.

Computers found wide application in enterprises, research laboratories, in design, planning and control. Also contacts with the market economies are increasing through scientific conferences, meetings of the chambers of commerce, the joint institute in Laxenburg /IIASA/ etc. At the same time it has been recognized that in order to increase the efficiency of the management of the enterprises there is a need for more autonomy of the enterprises, for a greater role of prices, markets, finances, material and moral incentives. All CMEA-countries are preparing and introducing now changes in their system of economic guidance in this direction of course with different intensity, led by many different considerations, taking into account their specific requirements and constraints.

II. Specialization and the pattern of production

Division of labour, specialization and co-operation are inherent characteristics of industrial production, sources of economies of scale and higher performance, often necessitated also by factor endowment or the existance of indivisibilities. Specialization can be observed in the activities of the individual firms and in the industry of single countries equally. The simplest way to study specialization is offered by the statistical data classified by industrial divisions and branches: this is how intersectoral /interindustry/ specialization can be analysed. Though the significance of intrasectoral /intra-industry/ specialization is increasing, the lack of adequate data basis mostly limits its analysis.

1. The pattern of the industrial output of the CMEA-group.

The pattern of output and the intersectoral specialization of the CMEA-group will be compared to the developed market economies and the developing countries by two methods; by comparing the value added weights and the relative growth rates of these groups of countries. In both cases the data used are taken from the UN aggregate index numbers of industrial production. Since these figures reflect differences and changes in both relative prices and volumes of output, they allow only tentative conclusions.

The UN value added weights by ISIC divisions and branches for 1963, 1970 and 1975 /see Table A-8, A-9, A-10/ show more or less similar changes in the CMEA--countries as in the developed market economies. The share of mining both in the centrally planned and the

developed market economies from 1963 to 1970 declined, then to 1975 due to the relative price changes increased approximately to the level of 1963. The share of mining in the developing countries between 1963 and 1970 did not change, then to 1975 increased from 23,0 to 44,5 per cent /that of oil mining from 16,8 to 40,7 per cent/, the shares of the branches of the manufacturing sector decreased, within the manufacturing sector the share of chemicals and metal products from 1963 to 1975 grew /15,7--22,0, resp. 15,1-22,0/, that of foodstuffs and textiles decreased /27,1-19,9, resp. 13,7-10,0/.

Comparing the changes in the CMEA countries and in the developed market economies, from 1963 to 1975 the most apparent differences are as follows:

growth in the share of textiles and clothing in the CMEA-countries /9,2-11,4/ its decrease in the other group /9,0-7,2/;

decrease in the share of the food and wood industries in the CMEA-countries /17,7-14,7/, no changes in the other group;

greater increase of the chemicals /7,6-9,7 vs. 12,0-12,7/, somewhat less one of the metal products /34,0-34,5 vs. 32,5-33,7/ which results in smaller differences in the absolute levels.

According to the data recalculated for 1979 /see Table 19/ the major differences in the branch pattern of the industry between the CMEA and developed market economies can be identified as

higher share of paper, printing, publishing; chemicals; wood products, furniture; and electricity, gas and water in the market economics, and

higher share of coal and oil mining; food industries; textiles; clothing; non metallic mineral products; and metal products /with significant difference in the product mix/ in the CMEA countries.

Table 19. Data on the intersectoral specialization of the three groups of countries /value added weights by ISIC divisions and branches/, 1979

Division, branch	World	CMEA-countries	Developed market economies	Developing countries
Mining	12,5	9,4	6,0	42,1
Manufacturing	81,8	87,9	86,6	53,9
Light manufacturing	27,5	29,0	28,1	22,8
Heavy manufavturing	54,3	58,9	58,5	31,1
Electricity, gas and water	5,7	2,7	7,4	4,0
Total	100,0	100,0	100,0	100,0
Coal	1,5	2,6	1,4	0,3
Crude petroleum and natural gas	8,8	4,3	3,0	38,5
Metal mining	0,9	0,7	0,7	1,9
Food, beverages, tobacco	10,1	10,7	9,9	10,5
Textiles	4,1	5,3	3,1	2,3
Wearing apperal, leather and footwear	3,5	5,4	3,5	4,7
Wood products, furniture	2,9	2,6	3,3	1,6
Paper, printing, publishing	5,0	1,5	7,0	2,4
Chemicals, petroleum, coal and rubber products	12,6	9,8	13,8	12,9
Non-metallic mineral products	4,0	5,4	3,6	2,9
Basic metals	6,0	6,7	6,4	3,6
Metal products	32,0	38,3	34,6	12,5

Source: Table A-10 /Annex/ and Monthly Bulletin of Statistics, UN, November 1980.

If we compare the relative growth rates by branches branch growth rates related to the growth of the industry as a whole for the period 1971-79 /see Table 20/ the main differences between the CMEA-countries and the developed market economies can be summarized as follows:

Table 20. Relative growth rates by ISIC divisions and branches, 1971-79

Division, branch	World	CMEA-countries	Developed market economies	Developing countries
Mining	0,85	0,79	0,90	0,82
Manufacturing	1,02	1,03	1,00	1,13
Light manufacturing	0,92	0,85	0,94	0,98
Heavy manufacturing	1,06	1,13	1,02	1,28
Electricity, gas and water	1,08	0,92	1,13	1,42
Coal	0,70	0,70	0,67	0,83
Crude petroleum and natural gas	0,93	0,90	1,13	0,65
Metal mining	0,69	0,65	0,68	0,70
Food, beverages, tobacco	0,88	0,79	0,96	1,02
Textiles	0,89	0,83	0.86	0,90
Wearing apparel, leather and footwear	0,86	0,82	0,86	0,99
Wood products, furniture	0,86	0,86	0,94	0,77
Paper, printing, publishing	1,04	0,84	0.93	1,23
Chemicals, petroleum coal and rubber products	1,09	1,08	1,14	1,24
Non-metallic mineral products	0,90	0,91	0,98	1,22
Basic metals	1,02	0,84	0,86	1,17
Metal products	1,15	1,26	1,04	1,40
Industry	1,00	1,00	1,00	1,00

Source: Monthly Bulletin of Statistics, UN, November 1980.

significantly higher relative growth of metal products in the CMEA-countries, and

significantly higher relative growth of electricity, gas and water; crude petroleum and natural gas, and food; higher relative growth of paper, printing, publishing; wood products, furniture; non-metallic mineral products; and chemicals in the developed market economies.

These differences can be attributed only to a small extent to specialization between the CMEA and the developed market economies. The data on the trade of these two groups of countries /Part III of this paper/ will support convincingly this statement. The similarities and the differences can be explained primarily by the patterns of consumption and by technological progress, and specialization within these two groups of countries separately is much more significant than specialization between them.

Compared to the developing economies the growth pattern rates of the CMEA-countries and the developed market economies shows more similarities than divergences. This proves the significance of the relative level of development on the changes in the pattern of industrial production.

Looking at relative growth data of the two sub-periods, 1961-70 and 1971-79 , interesting changes can be observed in the world industry -

a relative increase in the growth of coal; food; textiles and clothing and non-metallic mineral products, and

a relative decrease in the growth of electricity, water and gas; crude petroleum and natural gas; metal mining, basic metals and metal products.

2. The pattern of industrial output by countries

The CMEA statistical publications present a classification of the industrial output into two broad categories: Group A/ means of production, and Group B/ consumption goods. These classes are similar but not identical to those of heavy and light industries. When comparing these data /see Table 21/ over time or between countries, it must be taken into consideration, that these figures are calculated as current national prices and therefore, they are influenced by the relative prices of the different periods and countries, further on: as gross value of output data by the organizational pattern /degree of integration/ of the enterprises, too.

Table 21. Share of output of Groups A/ and B/ in the CMEA-countries

Country	Share of Group A/ means of production /in percentages/		Share of Group B/ consumption goods /in percentages/	
	1960	1978	1960	1978
Bulgaria	47,2	60,7	52,8	39,3
Czechoslovakia	61,5	67,8	38,5	32,2
GDR	60,8	66,0	39,2	34,0
Hungary	66,0	64,7	34,0	35,3
Poland	57,5	65,1	42,5	34,9
Romania	62,8	73,1	37,2	26,9
USSR	72,5	74,1	27,5	25,9

Changes over time show in all cases but Hungary the increase of the share of group A/, though in the Soviet Union only slightly. According to the figures of 1978 four countries have a share of group A/ between 65-68 percentage, while Bulgaria shows 61, Romania and the Soviet Union 73-74 percentage.

In the CMEA statistics the classification of branches differs from ISIC, first of all in the principle that mining and manufacturing activities aiming at the same final products are combined. By branches only data and index numbers of the gross value of output will be published usually covering the state-owned and co-operative industry /which produces 97-100 per cent of total industrial output registered as such/.

The figures on the shares of the industrial branches /see Table A-11, Annex/ show perhaps more similarities than divergences but they are so much dependent on relative national prices that they do not allow conclusions on specialization. We have to turn to relative growth coefficients and foreign trade data.

The relative growth coefficients of the 15 branches for 1961-78 are presented in Table 22. These figures indicate a number of common characteristics reflecting similarities in the changes of technology and in the pattern of consumption and differences as well - if not in the sign then in the value of the coefficients.

Lower than average coefficients are found in all countries in wood, textiles, leather and shoe and food; in all countries except Bulgaria in fuel and iron and steel, where Bulgaria started from a very low level. Engineering industries, chemicals and /with the exception of the GDR/ glass have higher than average coefficients

in all countries; the differences in these coefficients can be explained in most cases again more by the starting levels than by aiming at sectoral specialization. The remaining 5 branches /representing 10-13 per cent of the total gross value of output/ do not show "regularities". This leads to the conclusion that since these coefficients are influenced substantially by the starting level and the average industrial growth rate of the given country, they do not give a firm basis to formulate reliable statements about the intersectoral specialization of these countries.

Table 22. Relative growth coefficients by branches in the CMEA-countries, 1961-1978

Branches	Bulgaria	Chechoslovakia	GDR	Hungary	Poland	Romania	USSR
Electricity	1,17	1,11	0,92	1,32	1,04	1,28	1,18
Fuel	1,44	0,74	0,79	0,80	0,58	0,35	0,68
Iron and steel	3,13	0,80	0,82	0,68	0,68	0,87	0,79
Non-iron metals	.	1,00	1,01	0,99	1,13	0,77	.
Engineering industries	2,39	1,38	1,26	1,29	1,95	1,84	1,85
Chemicals	2,41	1,79	1,22	2,78	1,58	2,76	1,70
Building materials	1,39	0,91	1,02	0,66	0,77	1,15	0,93
Wood	0,44	0,88	0,85	0,94	0,84	0,51	0,56
Paper	1,28	0,84	0,80	1,26	0,60	1,13	0,94
Glass	1,51	1,10	1,00	1,69	1,32	1,04	1,48
Textiles	0,60	0,75	0,69	0,63	0,68	0,82	0,60
Clothing	0,77	0,80	0,61	0,66	1,06	1,13	0,73
Leather and shoe	0,63	0,85	0,87	0,69	0,62	0,64	0,59
Printing	0,73	1,02	0,66	1,27	0,94	0,44	.
Food	0,60	0,69	0,68	0,80	0,54	0,44	0,68
Industry	1,00	1,00	1,00	1,00	1,00	1,00	1,00
Average rates of growth p.a. /per cent/	10,0	6,1	6,1	6,6	8,8	12,6	7,7

Comparing these coefficients for the two sub-periods 1961-70 and 1971-79 /see Table A-13, Annex/ it is remarkable that their dispersion /that means: the variance of the sectoral growth rates/ in the second subperiod decreased in all countries!

3. Intra-branch specialization

Assuming that international specialization is motivated by comparative advantages and economies of scale why should these appear differentiated by branches and not by other categories? Factor endowment may favour special branches but if branches /as mostly/ are aggregates of very different products by capital, labour, R & D intensity, comparative advantages can be very different for the various groups of products within the same branches. There are several types of economies of scale, some of them are connected with plant size, with the size of the enterprise or the total domestic production of the given branch, others are product specific depending on the quantities of the given products. All these necessitate intra-branch specialization and actually this is more general and more important than the specialization by branches. Though it cannot be tested statistically, in a consistent way, also for the CMEA-countries intra-branch specialization is predominant.

The statistical yearbook of the CMEA includes output data for selected years between 1960 and 1978 on 155 products /from this 52 are metal, 34 chemical and 69 other products/. It can be attempted to look at the differences in the relative growth coefficients of these products /concerning 1961-78/ as indicators of intra-branch

specialization. Data are not available /due to lack of production or information/ on 10 /4/ products in case of Poland and the USSR, and on the other countries: Czechoslovakia 12 /5/, GDR 26 /7/, Hungary 32 /18/, Romania 48 /21/, Bulgaria 53 /25/. /In brackets the number of metal products had been quoted/.

The relative growth coefficients are in the case of

- Electricity - around 1 in all countries,
- Coal - below 1, except Poland /0,98/ and Romania /0,77/ very law.
- Oil - USSR 1,03, Romania 0,14, Hungary 0,59, not significant /or not at all/ in the other countries.
- Natural gas - USSR 2,18, Romania 0,40, Hungary 6,96, not significant /or not at all/ in the other countries.

These latter data reflect the different possibilities to increase fuel production. The coefficients are in the case of

- Iron, steel, plate - similarly below 1 in all countries but Bulgaria /which started from a very low level/,

however, these aggregate figures conceal the specialization in sortiments. The data on the 52 metal and 34 chemical products show more variance. From the metal product coefficients three quarters are below, one quarter is above 1; from those of the chemical products more than 50 per cent are above 1. The share of the products where any countrys coefficients /owing to the lack of data not necessarily of all 7 countries'/ are

equally above or below 1 is 31 per cent for metal and 42 per cent for chemical products; the rest is equally distributed between those with one or more exceptions. Below or above 1, however, still does not mean similar relative growth rates: "below" can be 0,10 and 0,90 "above" 1,10 and 11. The relative growth coefficients of the rest of the products /of the light and food industry/ are with a few exceptions below 1 and also their values are similar. Nevertheless only a product by product analysis could lead to reasonable conclusions - but hardly to comprehensive indicators on the degree of intra-branch specialization.

An other approach could be based on the comparison of the per capita output figures by products /in an other variant adjusted according to the relative level of GDP-NMP/. In many cases even the absolute figures are characteristic . Some examples may illustrate this /with data on the year 1978/:

excavator:	USSR	41139
	Poland	2430
	Romania	1701
	Bulgaria	1074
	GDR	705
	Czechoslovakia	598
	Hungary	-
electric wheel--barrow /thousand/:	Bulgaria	64,9
	Poland	20,8
	GDR	9,3
	USSR	9,0
	Czechoslovakia	3,4
	Hungary	-

passenger car /thousand/:	USSR	1312
	Poland	325
	Czechoslovakia	176
	GDR	171
	Romania	81
	Bulgaria	15
	Hungary	-
truck /thousand/:	USSR	762
	Poland	55
	Czechoslovakia	40
	GDR	37
	Romania	34
	Hungary	1
bus /thousand/:	USSR	77
	Poland	16
	Hungary	13
	Romania	4
	Czechoslovakia	3
	GDR	2
	Bulgaria	2

In great many cases multilateral long-term agreements /with thousands of items/ fix inter-country specialization in particular for metal and chemical products. These agreements first concerned mostly final products, they are step by step increasingly extended to intermediate products, parts, components. About one third of the intra-CMEA trade of metal products is based now on specialization agreements - this share by countries vary between 22 /Soviet Union/ and 51 /Bulgaria/ per cent - but parts and components still are produced in many cases in small lot sizes without rational concentration and making full use of scale economies. The CMEA-countries

will introduce further improvements in the system of their intra-branch specialization and co-operation, including long-term agreements, planning, pricing, financial arrangements, interfirm relationsships etc.

The effectiveness of these measures are limited by a number of factors which should be studied carefully and handled in a more appropriate way. The rapid changes in market conditions and relative prices valid also in the intra-CMEA-trade require a more flexible scheme and treatment of the long-term agreements in order to better harmonize lasting commitments and emerging contradictory interests. Differences in the internal system of the planning and control of production and trade often create difficulties in the needed fast adjustment to the changing conditions in particular when a whole chain of interlinked interfirm cooperation is concerned.

III. Foreign trade and specialization

1. The growth and pattern of foreign trade

There are plenty of possibilities for specialization within single enterprises and countries but international co-operation opens new, further opportunities for it. The importance of international specialization is growing in modern economies with sophisticated products and large-scale systems of production for many reasons among them first of all by helping to utilize comparative advantages and scale economies. This manifests primarily in the high growth rates of foreign trade.

According to the CMEA statisties in the last three decades /1951-79/ their exports increased by 26, their imports by 27 times while their national income /at constant prices/ by 8 times. Starting from a lower level this growth was higher than that of the market /both the developed and developing/ economies but less than that of the EEC /growth by 45 resp. 39 times/. The growth of foreign trade in the CMEA-countries was really spectacular in the first decade /1951-60/ but afterwards /1961--79/ lower than in the rest of the world. The increase of the total foreign trade turnover 'exports+imports/in 1961-79 amounted to 3 in the CMEA-countrie., ,5 in the developed market economies /EEC: 10/, 8,5 in the developing countries.

The total foreign trade turnover increased in the total period of 1951-79 /resp. in 1961-79/ in Czechoslovakia by 14 /5,5/, in Poland by 20 /9/, in Hungary by 25 /9/, in the USSR by 27 /8/, in the GDR by 30 /6/, in Romania by 34 /11/, in Bulgaria 51 /11/ times. Although these

figures are not completely comparable /since they reflect changes in volumes and in particular in the last decade that of prices, too/ they demonstrate-measured by international standards-a rapid growth of foreign trade in 1951-60 and an average or somewhat less-than-average growth in the sixties and seventies /see Table 23/.

Table 23. Growth of exports and imports by major economic groupings, 1961-79. /Average rates of growth p.a. at current prices, in percentages/

	World	CMEA-countries		Developed market economies		Developing countries
		total	of which: USSR	total	of which EEC	
Exports						
1961-65	8,0	8,4	8,0	8,7	9,0	5,9
1966-70	10,7	9,1	9,4	11,6	11,7	8,6
1971-75	17,6	15,6	15,8	15,6	16,2	25,8
1976-79	13,2	13,5	15,3	14,4	15,3	10,1
Imports						
1961-65	7,8	8,0	7,4	8,9	9,0	4,5
1966-70	10,7	8,9	7,8	11,5	11,0	8,4
1971-75	17,3	18,5	20,4	15,7	15,5	22,4
1976-79	13,8	10,1	9,2	14,9	16,0	11,9

The share of the CMEA countries in world foreign trade /see Table 24/ is considerably below their share in world production. This share increased significantly between 1950 and 1960, somewhat declined afterwards and now amounts to 9 per cent. The explanation lies partly in the fact that as a rule large countries have lower shares in exports and imports, and this is in particular valid for the Soviet Union as e.g. comparisons with the United States or with Japan indicate.

Table 24. Share of major economic groupings in world exports and imports /in percentages/

	Developed market economies	Developing countries	CMEA-countries		Socialist countries in Asia
			total	of which USSR	
Exports					
1950	61,3	30.5	6,8	0,0	1,3
1960	66,8	21,4	10,1	4,3	1,6
1970	71,9	17,0	9,9	4,1	0,8
1976	65,1	24,6	8,7	3,8	0,8
Imports					
1950	65,2	26,8	6,3	2,2	1,6
1960	65,9	22,0	10,3	4,2	1,6
1970	72,1	16,9	9,6	3,6	0,9
1976	69,2	19,9	9,3	3,7	0,8

Source: UNCTAD Supplement 1977. Handbook of International Trade and Development Statisties, UN 1978. pp.24-25.

The foreign trade turnover in the CMEA-countries in 1961-79 /see Table 25 / increased between 9 and 13 per cent p.a. /Though these data are calculated at current prices this does not exclude the comparison between countries./ While in the years 1961-70 the growth of the exports and imports were more or less the same, in 1971-75 the growth of imports exceeded that of the exports, and in 1976-79 the reverse could be observed, the higher growth of exports /see Table 24/. This reflects how indeptedness originated and measures to reduce it had undertaken. The same pattern appears in the case of 5 countries of the 7 /see Table 25/, the exceptions are Czechoslovakia and Romania.

Table 25. Intensity and growth of foreign trade in the CMEA-countries

Country	Foreign trade turnover 1979 /in percentages/			Average rates of growth p.a. 1961-79 /in percentages/ xx/	
	share in total	per capita	per unit of NMP	exports	imports
Bulgaria	6,1	127	148	13,0	12,2
Czechoslovakia	9,7	116	90	9,0	9,2
GDR	11,3	135	109	8,8	9,6
Hungary	9,7	166	177	11,7	11,6
Poland	12,4	65	69	12,0	11,9
Romania	7,3	61	84	12,4	13,6
USSR	42,5	30	30	10,4	10,8
Total /average/	100,0	100,0 x/	100,0 x/	11,0 x/	11,3 x/

x/ Unweighted average = 100. - xx/ At current prices

The variance in the growth of foreign trade in the last two decades does not explain the differences in the foreign trade intensity of the CMEA-countries, these originate basically from the patterns of previous periods. Hungary has the highest foreign trade turnover both per capita and related to national income /NMP/, 5-6 times higher than the Soviet Union /see Table 25/. The ranking of the other countries by these two indicators, according to

per capita	per unit of NMP
Hungary	Hungary
GDR	Bulgaria
Bulgaria	GDR
Czechoslovakia	Czechoslovakia
Poland	Romania
Romania	Poland
USSR	USSR

show only minor divergencies. The foreign trade intensity measured by exports and imports related to GDP /resp. NMP/ is in Hungary and Bulgaria relatively high in international comparison, too. Their per capita figures are relatively lower due to their lower level of per capita GDP compared to the developed market economies.

The matrix presented in Table 26 gives an overview of the world trade, indicating that intra-CMEA trade is 4,8 per cent, intra developed market economies trade 47,6 per cent, intra developing countries trade is 5,6 per cent of total world trade.

Table 26. World trade in 1978 by major economic groupings /in percentages/

Exports to / Exports from	World	Centrally planned economies		Developed market economies	Developing countries
		including Asia	CMEA only		
World	100,0	9,5	8,5	66,6	23,3
Centrally planned economies					
including Asia	9,6	5,2	5,0	2,6	1,8
CMEA only	8,6	5,0	4,8	2,3	1,3
Developed market economies	67,2	3,3	2,6	47,6	15,9
Developing countries	23,2	1,0	0,9	16,4	5,6

Source: Monthly Bulletin Statistics UN, July 1980. pp. XL-XLIII.

From the total CMEA foreign trade turnover in 1978 56 per cent was intra-CMEA trade and about one third of this trade with the Soviet Union /see Table 27/. From the rest as regards exports one third, as regards imports one quarter was trade with the developing countries, 2-3

percentages trade with the Asian centrally planned economies, and the bulk with the developed market economies. For the commodity composition of the CMEA--trade /see Table 28/ the higher share of machinery and transport equipment, the lower share of other manufactured goods and the export surplus of the mineral fuels are characteristic.

Table 27. The composition of the CMEA-trade by groups of countries, 1978 /in percentages/.

Destination or origin	Export		Import		Balance
CMEA	55,8		56,6		-0,8
of which: USSR		18,6		22,5	-3,9
Centrally planned economies in Asia	2,8		2,0		+0,8
Developed market economies	26,2		31,2		-5,0
of which: Europe		23,3		23,7	-0,4
EEC		14,1		15,5	-1,4
EFTA		5,2		5,4	-0,2
US		1,3		3,3	-2,0
Japan		1,2		2,9	-1,7
Developing countries	15,2		10,2		+5,0
of which: Africa		2,6		1,3	+1,3
America		3,5		4,9	+1,4
Mid-East		4,1		2,4	+1,7
Other Asia		1,3		1,6	-0,3
Total	100,0	-	100,0	-	-

Source: Table A-18 and A-19, Annex.

Table 28. The commodity composition of the world and the CMEA trade, 1978. /in percentages/

Commodity groups	World trade	CMEA trade		
		Exports	Imports	Balance
Food	11,2	6,6	13,0	-6,4
Crude materials	7,2	7,2	7,5	-0,3
Mineral fuels	17,2	20,2	11,1	+9,1
Chemicals	7,4	4,6	6,5	-1,9
Machinery and transport equipment	29,3	32,9	36,2	-3,3
Other manufactured goods	25,9	19,9	21,9	-2,0
Other items not specified	1,8	8,6	3,8	+4,8
Total	100,0	100,0	100,0	

Source: Monthly Bulletin of Statistics UN, July 1980, pp. XL-LXXXIII.

Data by countries on the commodity composition of the foreign trade are available only in another classification /see Table 29, and Table A-20, Annex/. In raw materials and semifinished products the USSR has a substantial export surplus, all other countries are heavily /Poland and Romania somewhat less than the others/ dependent on imports. This will be compensated in

Bulgaria - first of all by foodstuffs and at some extent by machinery and consumer goods,

Hungary - by foodstuffs and consumer goods,

Czechoslovakia - by machinery and consumer goods,

Poland - by consumer goods and at some extent by machinery products,

Romania - by consumer goods and foodstuffs,
GDR - by machinery and in addition by consumer goods.

According to the figures of 1978 concerning machinery and equipment USSR and Romania are net importers, Hungary is in balance, the other countries are net exporters. In foodstuffs the USSR, the GDR and at smaller extent Poland /and Czechoslovakia/ need imports. This is the general pattern, of course in these proportions some changes appear from year to year.

Table 29. The foreign trade balance of the CMEA-countries by commodity groups, 1978 /in percentages/

Country	Machinery and equipment	Raw materials and semi-finished products	Foodstuffs and raw materials for food products	Consumer goods
Bulgaria	+7,4	-33,8	+20,7	+5,7
Czechoslovakia	+12,0	-24,0	- 0,8	+12,8
GDR	+21,0	-23,2	- 7,7	+ 9,9
Hungary	+ 0,1	-26,7	+14,1	+12,5
Poland	+ 5,1	-13,2	- 1,9	+10,0
Romania	- 8,7	-12,2	+ 7,2	+13,7
USSR	-22,4	+48,1	-17,0	- 8,7
CMEA	- 6,5	+10,1	- 6,4	+ 1,8
CMEA without USSR	+ 8,2	-20,5	+ 2,0	+10,3

Source: Table A-20, Annex.

2. Intra-CMEA trade

The foreign trade figures calculated at several prices yield somewhat different ratios on the composition of this trade by countries or commodities, nevertheless they do not change the general picture given by these data. The intra--CMEA trade in 1978 e.g. represents in the total CMEA trade calculated in dollars 56, in roubles 59 per cent. Also the commodity classifications used in these two systems of data differ from each other, as mentioned before, but this does not exclude some comparisons. The share of the intra-CMEA trade is /according to the UN data, see Table A-21/, the lowest in Romania /39 per cent/, the highest in Bulgaria /76 per cent/, the ranking of the remaining countries in between is as follows: USSR /48/, Hungary /52/, Poland /54/, GDR and Czechoslovakia /69/. The shares in the exports are higher, in the imports lower in all cases, - except the Soviet Union.

The commodity composition of the intra-CMEA trade /see Table 30/ is similar to that of the developed market economies. The major differences are the higher share of fuels and the lower share of the other manufactured goods. Compared to the developing countries the share of fuels is much lower, the share of machinery and transport equipments much higher. From the total intra-CMEA trade about one third is trade with the Soviet Union and the commodity pattern of this trade is quite different from the trade among the other six countries.

Table 30. The commodity composition of the intra-trade of the major economic groupings, 1978. /in percentages/

Commodity grours	CMEA /1/	Developed market economies /2/	Developing countries /3/	Differences /1/-/2/	Differences /1/-/3/
Food	13,0	10,6	11,3	2,4	1,7
Crude materials	7,5	7,3	8,4	-0,2	-0,9
Mineral fuels	11,1	5,5	48,4	5,6	-37,3
Chemicals	6,5	9,5	3,5	-3,0	3,0
Machinery and transport equipment	36,2	34,5	9,3	1,7	26,9
Other manufactured goods	21,9	30,9	18,8	-9,0	3,1

Source: Monthly Bulletin of Statistics UN, July 1980. 190. XL-LXXXIII.

In the total CMEA trade intra-trade represents 56 per cent. According to commodity classes its share /see Table 31/ is substantially higher in the group machinery and transport equipment, and for some other commodity groups /food and mineral fuels/ assymetry is characteristic. The Soviet Unions' special role appears in the higher than average share of imports of mineral fuels and crude materials from the USSR, and the higher share of the the exports to the USSR of machinery, foods and chemicals.

Table 31. The share of intra-CMEA trade by commodity groups, 1978 /in percentages/.

Commodity groups	Total CMEA exports		Total CMEA imports	
	intra-trade	of which: to USSR	intra-trade	of which: from USSR
Food	45,6	25,5	23,7	2,2
Crude materials	45,3	3,8	44,2	35,2
Mineral fuels	43,1	2,4	79,6	67,7
Chemicals	53,3	25,3	38,9	6,7
Machinery and transport equipment	73,6	32,6	68,2	15,1
Other manufactured goods	52,2	16,8	48,3	17,9
Total	55,6	18,6	56,6	22,5

Source: Table A-18 and A-19, Annex

The similarity of the commodity groups composition of the intra-CMEA trade by countries - in particular that of the six countries without the Soviet Union - leads again to the conclusion that intra-industry trade is of utmost importance. From the total imports of machinery and transport equipment e.g. two thirds /68 per cent/ originate from intra-CMEA trade and each member-country has a significant contribution to it, including Bulgaria, Poland, Romania where the share of these products in total exports in 1960 was only 13,13, resp. 16 per cent, now it is 30 per cent or more.

In order to understand the role of the intra-CMEA trade it has to be looked at as an integral part of the

CMEA co-operation which embraces research and development, production, trade, planning and many other related activities. /These topics will be dealt with in part IV. of this paper./ Intra-CMEA trade is based at a great extent by five-year or even longer-term agreements. The Complex Programme of the further development of the co-operation and the socialist economic integration of the CMEA member-countries - adopted in Bucuresti, 1971 - stated that the system of economic and scientific-technical co-operation of the CMEA member-countries is based on the combination of the co-ordination of planning as the fundamental method of co-operation and of the broader use of commodity and financial relationships. The co-operation in planning includes inter alia the co-ordination of the national long-term and five years plans. On the basis of these negotiations and the deals on specialization and co-operation bilateral or multilateral, the ministries of foreign trade come to aggreements on mutual deliveries and from year to year they revise and fix the contingents either in quantities /as e.g. in case of fuels, raw materials, basic foodstuffs and consumer goods/ or in value terms. Then civil law contracts of the respective enterprises specify the concrete conditions of the deliveries, making use of the general regulation of these conditions /adopted in 1968 and revised in 1975/.

In this system the overwhelming part of the intra-CMEA trade is based on intergovernmental agreements, on counter--deliveries which are known and accounted for some years in advance. This permits flexibility and at the same time gives a solid ground for planning. Changes are negotiated through current trade agreements; balances will be adjusted by agreed reverse commodity flows in succeeding years or will be financed by credits. This procedure moderates but does not eliminate annual ups and downs in the mutual trade

/these are as a rule smaller in the trade with the Soviet Union and larger among the other CMEA-countries, see Table A-22/ and special schemes had been elaborated to deal with these. The problems in the implementation of the long-term agreements mentioned on p. 43. appear at greater extent when the trade balance or domestic supply tensions in the individual countries sharpen.

At the beginning the CMEA financial relationships were entirely bilateral. The so called transferable rouble as a common accounting unit had been introduced in 1964 and a Bank of International Economic Co-operation /and later on /1970/ an International Investment Bank had been established. Many measures aiming at improving and strengthening the role of the monetary and financial instruments of the CMEA co-operation had been taken and are being prepared. Bilateral contacts still have a very important role. Studies on the possibilities of convertibility of currencies are in progress. Special attention will be paid to the problems of pricing. The prices according to the guidelines adopted in 1958 /in Bucuresti/ were valid untill the end of 1965, when for 1966-70 new prices had been settled. For the period 1971-75 bilateral adjustments were foreseen. Then a decision was taken that prices in the intra-CMEA trade are to be adjusted to their world levels with a time - lag. Since the commodity composition of trade varies among countries, these adjustments effect their terms-of- trade differently /in the last years in favour of the Soviet Union and to a certain extent Poland/. Further steps are negotiated in order to increase flexibility, to stimulate efficient specialization and to harmonize trade and the other forms of co-operation.

3. CMEA - developed market economies trade

The CMEA trade with the developed market economies /East-West trade/ increased significantly in the last decades with wide fluctuations in recent years. Its share in the total trade of these two economic groupings is very different /in 1978 for the CMEA-countries about 30, for the developed market economies 3-4 per cent/ but it has importance beyond economic considerations, too. In addition, this share is quite different for the several regions and countries of the developed market economies. The percentage share in the total imports in 1978 was for the whole group 3, for Western Europe 4, for Austria 9, for Denmark, FRG, Italy, Sweden 5 /for Finland 22/; the corresponding figures on the exports are as follows: 4 and 5, and for Austria 14, for FRG, Sweden, Switzerland 5 /for Finland 20/. Neither the differences in the shares of the CMEA-countries are negligible and they show rapid changes and inbalances /see Table 32/.

Table 32. Share of the trade with the developed market economies in the CMEA-countries' total exports and imports /in percentages/.

Country	Exports		Imports	
	1977	1978	1977	1978
Bulgaria	10	9	15	15
Czechoslovakia	21	22	22	24
GDR[x/]	22	23	27	29
Hungary	30	25	41	46
Poland	28	30	42	43
Romania	30	31	34	42
USSR	33	31	32	33
Total	28	27	31	33

Source: Economic Survey of Europe in 1978 Part I. New York 1979.p.163. and Economic Bulletin for Europe Vol.31, No.1. p.105. - x/ Including trade with the FRG.

Also the commodity composition of the East-West trade is changing from year to year, nevertheless it is keeping its pattern: substantial export surplus of mineral fuels and raw materials, similar import surplus of machinery and chemicals /see Table 33/. The main difference between the trade with Europe and the rest of the developed economies, respectively in the trade of the total CMEA and the Soviet Union appears in the shares of foodstuffs and fuels and raw materials. Although intra-industry East-West trade has significance, too, this commodity groups pattern reflects signs of intersectoral specialization and might help to explain the development and also some problems of the East-West trade.

Aiming at the rapid modernization of their production potentials in the first half of the seventies the CMEA--countries' imports from the Western economies grew much faster than their exports. The year-to-year trade deficits piled up an increasing dept which they were not able to compensate in the period of the Western recession and protectionist measures. Aggravated in most CMEA-countries by a deterioriation of their terms-of-trade, government decisions had been taken to brake the growth of indeptedness by export promotion and import restrictions. They applied both strategies combined and with temporary changes in emphasis. The increase of exports often encountered difficulties of trade barriers and/or competitiveness, import restrictions proved to be constraints of growth. They had and were to find compromises.

Table 33. The commodity composition of the East-West trade, 1978 /in percentages/.

Commodity groups	Developed market economies			Of which: Europe		
	Exports	Imports	Difference	Exports	Imports	Difference
Food	8,3	12,4	-4,1	7,9	5,8	2,1
Crude materials	12,5	6,5	6,0	11,3	4,2	7,1
Mineral fuels	38,1	1,0	37,1	40,5	0,9	39,6
Chemicals	5,0	12,2	-7,2	5,0	14,4	-9,4
Machinery and transport equipment	10,7	36,8	-26,1	11,2	39,9	-28,7
Other manufactured goods	23,4	30,3	-7,1	22,1	34,1	-12,0
Other items not specified	2,0	0,8	1,2	2,0	0,7	1,3

Source: Table A-18 and A-19, Annex

According to the estimated balance of payments of the developed market economies /excluding Japan/ with CMEA the total current account amounted in the years 1965-1971 to 0,2-0,8 billion US dollars p.a., in 1972 1,5 billion, and then in the subsequent years /at current prices, of course/ 2,7 - 3,4 - 8,8 - 6,3 - 4,4 - 6,3 billion /see Table A-23/. The net position of the CMEA-countries vis-a-vis Western banks at the end of 1978 was estimated 36,9 billion US dollars, and by countries: Poland 10,9, USSR 6,9, Hungary 5,5, GDR 5,0, Bulgaria 2,7, Romania 2,3, Czechoslovakia 1,3 /undistributed residual 2,2/.[x/] The overall debt service ratio /repayment + interest related to the export/might be around 30 /for Poland about 50/ per cent but these are very rough estimates and it is difficult to judge, it depends on so much considerations where the permissible limits are.

x/ Source: Economic Bulletin for Europe Vol. 31, No. 1. p. 112.

In this situation and following the adjustment measures of the CMEA-countries, the volume of East-West trade changed at different rates in recent years, and similarly prices and values /see Table 34/. Depending on the performance of improving their external balance of payments these countries /above all Poland, Hungary and Bulgaria/ alternatively tigthened and relaxed import constraints and made efforts to increase their export deliveries as well. These measures and how successful they are have a strong impact also on the growth of these economies and induce fluctuations, except the Soviet Union. This large country namely disposes of considerable internal resources for financing foreign trade deficits and though the attach great importance to import new technology, up-to-data investment goods and from time to time they have to compensate harvest shortfalls, the development of the domestic economy is less sensitive to changes in foreign trade.

Table 34. Changes in East-West trade, 1975-1978
/percentage change over the preceding year/.

	CMEA			Of which: USSR		
	Value /US dollars/	Prices	Volume	Value /US dollars/	Prices	Volume
CMEA imports						
1975	33,0	15,2	15,4	66,4	18,4	40,6
1976	4,5	-9,1	14,9	9,0	-9,2	20,1
1977	0,7	8,1	-6,3	-0,3	9,8	-9,2
1978	18,0	9,8	7,5	16,0	9,9	5,6
CMEA exports						
1975	6,4	10,1	-3,3	6,4	10,9	-4,0
1976	16,0	-0,3	16,4	25,4	3,7	20,9
1977	10,7	7,2	3,2	14,0	9,7	3,9
1978	14,0	10,4	3,3	14,0	10,2	3,5

Source: Economic Bulletin for Europe Vol. 31. No.1. p.103.

The sensitivity to foreign trade with the developed market economies within the CMEA group depends on a number of factors: on the ratio of foreign trade to GDP-NMP, on the share of the developed market economies, on the position, pattern and convertibility of this trade, on the actual financial situation, etc. In these respects these countries differ from each other and there are differences also in their policies pursued. Some of them have to deal with balance of payments issues as constraints of growth for shorter or longer periods, not only as a financial problem but as an indicator of the need to increase competitiveness and structural adjustment. The

extent and the pressure of this need vary by countries but they all are interested to develop East-West trade on the basis of mutual benefits.

While the developed market economies are definitely interested to increase their exports to the CMEA-countries i.a. for employment considerations for the same reason they are inclined to tackle imports as endangering jobs in their domestic economy. This holds, however, only for some branches and without importing they cannot except payments for their deliveries and for the dept service. Beyond these trade considerations a freeze or substantial decline of the East-West trade would certainly leed to political tensions which conflict with the basic interests of the citizens of East and West alike. Therefore, a further increase of East-West trade can be expected but - primarily due to the slowdown of growth foreseen for both economic groupings - compared to the rapid growth untill the mid-seventies at a moderate rate. The expert team of the Wiener Institute für Internationale Wirtschaftsvergleiche projected for 1978-80 at constant prices 6-7 per cent increase p.a. of the exports to the West and 2,5-4,9 increase p.a. of the imports from the West /and at current prices: 10,2-11,3, resp. 6,6-9,1 per cent/[x/].

The CMEA-countries most probably will make further efforts to increase intra-industry trade with the developed market economies and in favour of this to develop the special schemes of production co-operation, trade of licences /and know-how/, investment projects with compensation agreements, joint ventures, tripartite co-operation with developing countries etc. The share of trade connected with these forms is now different by countries and for the total CMEA-group it is not significant yet but from the point of view of further specialization and co-operation most promising.

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x/ B.Askanas, G.Fink, F.Levcik: East-West Trade and CMEA Indebtedness in the Seventies and Eighties. WIIW Reprint-Serie Nr. 41. October 1979.

4. CMEA-developing countries trade

In the UN statistics the developing centrally planned economies in Asia and the developing market economies are dealt with separately. Since here these data will be used, first the trade of the CMEA and the centrally planned Asian economies will be reviewed briefly, then we turn to the UN "developing countries" group .

The trade between the CMEA and the Asian centrally planned economies in 1978 represented in the exports of the CMEA-countries 2,8, in their imports 2,0 per cent. Looking from the other side, this trade has greater significance, it amounted to 18,0 per cent of the total exports and 24,5 per cent of the total imports of these countries. The differences in the export and import shares hint to the credits offered by the CMEA-countries.

The commodity composition of this trade /see Table 35/ is typically assymetric: in the CMEA exports machinery products, in the CMEA imports the "other manufactured goods" predominate. In foodstuffs CMEA surplus, in fuels and raw materials negative balance can be found.

Table 35. The commodity composition of the CMEA trade with the centrally planned economies in Asia, 1978 /in percentages/.

Commodity groups	CMEA-exports	CMEA-imports	Difference
Food	7,9	24,5	-16,6
Crude materials	6,6	22,0	15,4
Mineral fuels	9,5	0,1	9,4
Chemicals	5,9	2,0	3,9
Machinery and transport equipment	49,5	1,8	47,7
Other manufactured goods	12,0	47,2	-35,2
Other items not specified	8,6	2,4	6,2

Source: Table A-18 and A-19, Annex.

The developing economies group of the UN statistics comprises countries with very different factor endowment and level of development, therefore the figures of the CMEA trade with this group without further break down can give only rough overview of these relationships.

In 1978 in the CMEA exports deliveries to the developing countries amounted to 15,2 per cent, imports from these countries to 10,2 per cent. The CMEA share of the total exports of this group was 3,8, that of the total imports 5,6 per cent - with great variance by regions and by countries. Data on the commodity composition of this trade are far from being complete: the six commodity groups cover only 64 per cent of the total CMEA exports, the rest belongs the the "other items not specified" category /see Table 36/.

Table 36. The commodity composition of CMEA-trade with the developing countries, 1978 /in percentages/.

Commodity groups	CMEA-exports	CMEA-imports	Difference
Food	7,7	53,9	-46,2
Crude materials	3,7	16,7	-13,0
Mineral fuels	8,5	19,0	-10,5
Chemicals	4,5	1,2	3,3
Machinery and transport equipment	2º 1	0,1	29,0
Other manufactured goods	10,8	9,0	1,8
Other items not specified	35,7	0,1	35,6

Source: Table A-18 and A-19, Annex.

In the CMEA exports beside this mixed group machinery products, in the CMEA imports abcve all foodstuffs predominate. The share of the Soviet Union in this trade amounts to two thirds and also its commodity pattern differs from the trade of the other CMEA-countries. The share of fuels in the total import of this countries in 1978 was 29,5, the share of crude materials 21 per cent, in their exports machinery products represented 40, other manufactured goods 21 per cent.

The trade between the CMEA and the developing countries is growing with great fluctuations. In 1972-76 CMEA exports increased by 17,6, imports by 23,0 per cent p.a., then in 1977 their rate were 30,8 resp. 20,2, in 1978 6,5 resp. 2,6 per cent. Slackenings in expansion are often followed by recoveries; outstanding growth rates are difficult to continue for many years because of problems of supply, absorption difficulties, availability of credits. The total disbursed public dept owing by developing countries to CMEA countries is estimated in 1978 to exceed 10 billion dollars which might lead to deliberate reduction of borrowings. Several factors, first of all financial considerations might influence the CMEA-imports from the developing countries from the side of both partners.

Notwithstanding, the co-operation between these two groups of countries is expanding and in great many cases it has a long-term planned character. There are good possibilities of a mutually advantageous international division of labour between these countries mostly different both in factor endowment and level of development. The Soviet Union has bilateral agreements of economic co-operation with more then 60, the other CMEA countries with about 80 developing countries. These intergovernmental agreements include the implementation of large investment projects, programmes for scientific, technical and economic co-operation, training, and other forms of assistance. More will be said about this issue in part IV. of this paper. It should be noted again, however, that the differentiation within the group "developing countries" is growing and the CMEA relationships with their various subgroups have different character . While some /the "4th world"/ countries need urgently assistance of any form and the pattern of specialization and co-operation is given for quite a number of years

ahead, others are approaching the level of "medium development" and become in many areas competitors of the CMEA-countries. In these latter cases an intra-industry specialization seems to be feasible. In addition differences in financial situation, relationships with MNCs, traditions and political attitudes have their strong impacts too. The world's trading structures have become deeply unbalanced; the CMEA-developing countries trade and co-operation is to be fitted into the whole restructuring process ahead of us.

IV. Policies

1. The CMEA policy

The CMEA celebrated its 30th anniversary in 1979. This organization kept its basic principles in these three decades but the content, the forms and methods of the co-operation of the member states went through significant changes. There are several periodizations of this progress marked by fundamental resolutions of the sessions of the member states, as in 1971 the "Complex Programme of the development of the socialist economic integration of the CMEA member states"./This document has been published and sent to all UN members./

The Complex Programme formulated the tasks for the next 15-20 years concerning the development of the co-operation in economic policy and planning in particular, in production, R & D, investment and trade, as well as concerning the improvement of the instruments, the legal, financial and organizational aspects of the mechanism of the co-operation.

The CMEAs' supreme authority is the Session. In the organizational set up the next institution is the Executive Committee. There are high-level/three/ committees for co-operation in planning, in science and technology and in material supply; more than 20 permanent commissions for special areas, and beside the Secretariat, 6 similar bodies called "conferences", international institutes, centres, bureaus, corporations as well.

When considering the CMEA policy one has to bear in mind two specific features of the CMEA as an organization. First, the lack of any supranational character in the system. In order to secure the equality among member states - also from a legal point of view - decisions can be taken with the consent of all interested states only[x/]. The rules also provide all the necessary measures to avoid the system becoming a decision-making institution independent from the wishes of the individual member countries. It is also reflected by the limited scope of power the Secretariat may exercise.

Secondly, the basically intra-looking nature of the system is also an important characteristic trait. Although much has been changed since the early days of its establishment when it was conceived primarily as a defence measure against the embargo policies of the cold war era, the main task of CMEA is still to foster co-operation among member states. This neither means a policy of regional autarchy nor advocating any discrimination against non-member states. It simply means that most of the discussions carried out in the framework of CMEA are centered around the problems of internal co-operation, specialization etc. Such features as e.g. concluding agreements with Finland, Iraq, Mexico, extending collaboration with different

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x/ To avoid situations in which the position of non-involved states could hamper the decisions of other partners which are both affected and ready to take measures, any country may decline interest in elaborating a given measure or even in discussing any subject.

international organizations, obtaining observer status with UN bodies, initiating negotiations with the EEC are relatively new, recent steps necessitated first of all by the increasing interdependence of the world economy.

Planning is considered as the fundamental instrument of promoting and improving co-operation of the member-states which are all centrally planned economies though, as mentioned before, their systems of guidance and planning are not uniform. According to the Complex Programme the sphere of co-operation in planning includes in a broad sense the following activities:

- consultations on economic policy issues,
- co-operation in drafting medium- and long term prognoses /economic, social, technological, sectoral/,
- joint planning in some selected areas /products, branches/,
- co-ordination of the national long-term and five--years plans,
- consultations on the system of planning and guidance of the economies.

Since the five-year plans have a dominant role in all CMEA countries, their bilateral and multilateral successive co-ordination is of outstanding importance of harmonizing development decisions, specialization, trade etc. An overall comprehensive plan of the CMEA-countries as one large unit will not be elaborated. Recently a plan of multilateral measures for strengthening integration and some joint long-term programmes of the co-operation in energy and raw materials, agriculture and food industries and the engineering industries had been adopted.

Specialization and co-operation in science and technology has long traditions in the CMEA. The Complex Programme fixed 18 priority areas. A large network of information-documentation services, 54 centres for co-ordination, hundreds of permanent and ad hoc working groups have to promote now joint projects and exchange of research findings.

Specialization and co-operation in the sphere of production is based partly on the orientation given by tne co-ordination in planning, partly on the hundreds of special agreements negotiated bilaterally or in the standing branch commissions. Measures have been taken to foster direct interfirm co-operation, to improve pricing and other financial arrangements, to stimulate the better use of scale economies and the advantages of special skills and experience.

Specialization is a key-word in the CMEA co-operation from the very beginning. In the seventies three further requirements came into the fore: need for better utilization of the reseorces becoming scarce /intensification/, for faster technical progress and for structural adjustment, this latter in particular in regard of the small CMEA-countries. Specialization is unvariably a basic means to meet these requirements, thus it remains a key-word for the future, too. The policy making bodies of the CMEA face the problemes i/ to set realistic goals for the co-operation, and ii/ to improve all instruments and the total mechanism of this co-operation - all these in harmony with the actual situation and the prospects of the member-countries and the international environment. The CMEA does not interfere in the internal affairs of the member-countries, how they shape the system of guidance in their national economy but seemingly improvements of this kind would facilitate development in the CMEA co-operation, too.

The CMEA policy is fully aware of the significance of the global issues of the mankind, of the growing interdependence in the world economy, of the use of and need for East-West trade, of the pressing problems of the developing countries. Division of labour, specialization and co-operation within the CMEA can and should be harmonized in the context of the world economy.

It is realized that expanding industrial co-operation with developed market economies is of considerable mutual benefit. For the western partners it extends the market not only for equipment, products, but they may obtain licencing etc. fees, they may save resources which can be used instead of the expansion of existing production for investments in a more advanced stage. For the CMEA partner it may save R+D sources and offer certain market security outside the CMEA. Since the technical absorptive capacity of the CMEA countries is usually high, problems are related rather to work organization, management and productivity; quite often it is possible to reach a level of co-operation where even joint product development efforts are feasible.

There is recognized the need to change the view on the specialization having an aim mainly on the final product. Even public opinion appreciated if not only then overemphasized the output of final products. This concept contributed to the production of an extremely wide final product range with a relatively narrow production capacity for generally applicable parts and components, a low degree of national and regional subcontracting system. Efforts and actions to modify this situation necessitate new areas and forms of international specialization and co-operation.

Such economic considerations are obviously favouring the extension of the division of labour also outside the CMEA and involving not to a small extent also developing countries. However, it is also unavoidable to take into account some constaints influencing the ability of realizing these trends.

The first and foremost obstacle might be created by reviving the policy of international tension. Obviously a division of labour based on long-term agreements and co-operation can be conceived only in an international climate favouring such relations. While the policy of confrontation would cause /speaking only in economic terms/ a considerable loss for the whole mankind, evidently the main losers would again be the weakest economies, i.e. the developing countries. Not only would it create difficulties in expanding the fast evolving relations with the centrally planned economies but it would also raise doubt in western economic circles as to the way and extent they could and should participate in the development process. As to the East-West relations, despite the disproportion of the importance of mutual trade between the two groups, the impact would probably be no less in the West than in the East. /One should bear in mind that the much weaker economy of the socialist countries could withstand the pressures of the 1950s. On the other hand the economic impetus of the western countries deriving from the reconstruction need of the post-war years and from the establishment of their economic integration is exhausted and they themselves are faced with very severe structural imbalances./

Economic constraints are also to be reckoned with. First of all the present balance of payment difficulties are counteracting actions leading to an increased import. This is to be considered, however, only as a temporary, though not very short term, obstacle. The increased indebtedness is namely due to large extent to the deteriorating terms-of-trade of especially the CMEA countries which have no substantial energy resources and to a lesser extent to the production pattern of the CMEA member countries. In addition to energy conservation and other measures of rather restrictive character the remedy to both problems lies precisely in changing the industrial structure which involves, as explained before, an extended division of labour. Thus it is not a question whether or not to increase industrial specialization but it is one as regards the rate of the expansion and the way which will ensure an increased foreign exchange income at a time when an expenditure growth is also unavoidable.

The increasing trend of protectionism in the developed market economies, in the context of the above, is therefore not only impeding trade between South and West, or East and West, respectively, but also curbing the scope of expansion in the South-East trade flow.

A satisfactory solution of the world monetary problems is also to be sought after. While the present difficulties are reflecting the changes of the world economy that took place since the inception of the Bretton-Woods system, the difficulties themselves are greatly contributing to an overall disruption of smooth economic flows. It is therefore necessary to conceive a system which would reflect the interest of all groups of the world economic community, ensure their participation in decision making and secure

a healty flow of the financial means incorporating all countries, combining stability with the necessary flexibility.

The basic approach of the CMEA policy is that of sovereign equality, non-interference, mutual respect, advantages and interest; this latter being applied in case of developing countries together with elements of assistance. The development assistance policy of the CMEA countries is not a subject of the present study. It is however to be mentioned that they consider as the practical expression of their policy of combining mutual interest and assistance the fact that more than 70 per cent of the resources allocated by them to technical and economic assistance is intended for industry and the production of energy. They have assisted more than 4000 projects, out of which 3000 are already operating. These projects are almost exclusively based upon the request of the developing countries, mainly implemented in the public sector. It is therefore rightly assumed that they correspond to the national development plans and priorities of the partner countries. In such transactions the other side of the mutual interest, i.e. that of the CMEA country, lies first of all in the export, though often this is carried out in the framework of long-term low-interest credit agreements.

The opinion is often expressed that an increase of trade between CMEA and developing countries can be achieved by simply trying to induce these countries to increase the share of the developing countries in their plans for import. Foreign trade, however, is only the final reflection of the state of division of labour between countries. A coherent set of measures may lead to deepening and expanding the co-operation.

At the 11th Special Session of the General Assembly the CMEA countries in a joint declaration on their contribution in achieving the goals and tasks of the third Development Decade have stated: they will be prepared to develop further their co-operation with developing countries supplementing the developing countries' own efforts. "The socialist countries will of course direct their efforts towards these ends only where the developing countries display willingness to engage in mutual co-operation and with due regard for their own capacity. ... the world contains ... two fundamentally different approaches to economic relations with developing countries ... accordingly international recommendations ... should not be formulated by means of or on the basis of the mechanical extension to such relations of schemes and provisions deriving from the practice of capitalistic economic relations ..." /A/S 11 /Ac. 1/4/.

As to the possible methods of extending relations they have emphasized the following:

- Broaden the practice of bilateral consultations to identify opportunities for new types of division of labour.
- Broaden the practice of long-term intergovernmental agreements for 10-15 years, which could involve production co-operation, specialization etc. Such agreements may intensify the division of labour inter alia by expanding the production capacities in developing countries for products having favourable conditions there.
- Joint efforts to solve problems of social and economic development by setting up complexes linked to the economic structures of the countries.

- Encourage import of manufactured products also by tariff preferences.
- Buyback arrangements when feasible and mutually acceptable.
- Extend co-operation among state organs also in the field of accounting, statistics etc.
- Searching, if needed, for mutually acceptable solutions to problems of assistance.
- Putting special emphasis on training national personnel.
- Expand co-operation in the transfer or technology.

Applying these methods it is hoped that a closer interlinkage with the economy of interested countries can be achieved, not impeding but rather reinforcing their endeavour to achieve economic independence.

As a consequence of the features of the CMEA as an organization, stressed at the beginning of this chapter /p. 68 / we cannot speak of a CMEA policy as such in respect of industrial co-operation with non-member states. The conclusions outlined above had been drawn by examining the joint statements issued by several member countries on the occasion of UN conferences dealing with such subjects as well as by taking into consideration practices of the individual countries.

2. National policies

In all centrally planned economies the major objectives to be pursued by economic policy, the fundamental rates of growth and proportions of the economy, the most important characteristics of the social and economic development,

the basic means and measures to be used for achieving these targets are laid down in the national economic plans. The national economic plans for different time horizons form a consistent system, the long range, medium term and annual plans should be in harmony with each other. The basis of the planified guidance of the economy is the subsequent series of medium-term, as a rule five-year plans.

The medium-term plans formulate the economic policy for the coming years, fix targets on the growth of the economy, the increase and use of national income, the guidelines for science and technical development policy, the development of the main sectors and the salient changes in their production pattern, the main directions of the international economic relations and foreign trade, as well as the basic proportions of the allocation of resources including investments and employment. The medium term plans also include the major investment projects to be implemented in the period and the guidelines for and measures of economic policy concerning finance, incomes, prices, social policy, etc.

The medium-term plans are based on long-term plans; an increasing need is felt for this. In many cases the five-year periods are too short to cover the planned processes and decisions must be taken often on problemes which have a bearing on a perspective of 10-20 years. The drafts of the long-term plans are usually broken down into five-years periods. The five-year plans are the basis of the annual plans.

Plans for different periods are the tangible outcomes of planning. This activity includes a number of specific tasks /and results into intermediery "products"/, like

- analysis of the past growth and the present situation and environment of the economy,
- forecast /prognosis/ of the objective processes, requirements, internal and external conditions of the development of the economy,
- elaborating alternatives about different growth rates and patterns of the economy, based on a set of hypotheses, development concepts and projects, and finally
- drafting the comprehensive final plan.

As far as structural changes are concerned the medium-term plans set quantitative targets for the changes concerning the proportions of industry, agriculture, construction, trade, transport, services and also for the divisions and branches of industry. Further on these plans include targets and balances also for some hundred major products. The long-term plans are less, the annual plans usually more detailed. In this latter respect there are differences among the CMEA-countries, originating first of all from the approaches how the implementation of the national economic plans could and should be better ensured. This leeds to differences in the system of economic guidance.

The CMEA-countries /including Hungary but only till the reform introduced in 1968/ see the best way to implement their national economic plans by breaking down, prescribing and assessing the aggregate figures of the plan to ministries and enterprises with a combination of a system of material and moral incentives. These incentives should stimulate the ministries, other agencies and enterprises to a creative cooperation in drafting the plans and in the allocation of the planned tasks and to efforts to fulfill the indicators of the plans. All CMEA-countries are aiming at an optimal combination of centralized direc-

tion and adequate freedom for initiatives for the enterprises, as well as of plans and other instruments inducing economic actions, as prices, demand and supply, etc. This leads them from time to time to changes, improvements and differences in their system of planning and guidance of the economy.

Structural changes - in the sense dealt with here, i.e. changes in the shares of sectors, branches, products - are either the outcomes of planning different growth rates or they can be planned directly. The major guidelines for planning are growth, equilibrium and efficiency and their requirements are to be met simultaneously. Efficiency will be analysed through calculations on labour productivity, capital/output ratio, per unit use of energy and materials and by aggregate indicators. Equilibrium will be checked - the different parts and targets of the plan harmonized - by the help of balances. There are several types of balances widely used in macroeconomic planning in the CMEA-countries, first of all

synthetic balances /those of social product, national income, manpower, etc/,

product balances,

input-output balances,

financial balances /those of incomes and expenditures of the population, international payments, credits, state budget, etc./

All these balances will be drafted in an iterative process in successive variants based on close working linkages and a permanent exchange of information between the planners.

Either started with planning growth rates or with planning structural changes directly the major objectives are in both cases to meet the needs of the consumers, the producers and the public with maximum efficiency in the use of resources. Analyses and forecasts on the factors influencing the needs of the consumers, of the public as well as of the producers /in intermediate goods and investments/ are the starting points: incomes, tastes, interdependences, technical relationships and technological progress resulting in new products, new materials, new equipments.

Possibilities of higher efficiency are offered by alternative ways of meeting the needs, primarily via substitution and foreign trade. Since the share of foreign trade in all CMEA-countries increased significantly in the last decades, the international division of labour, specialization and cooperation became of outstanding importance for all of them. Therefore, the forecasts about the changes in the world economy and in foreign trade, in products, markets, prices, the analysis of comparative advantages are an integral part of planning in the CMEA--countries.Within the CMEA-group there are permanent mutual consultations and coordination as planning goes on.

The standing commissions for the major sectors and branches are given the task to coordinate the efforts for development, modernization, technological progress, specialization and cooperation and other joint actions in their field. These commissions are forums to discuss and harmonize intrasectoral /intra-industry/ specialization and cooperation, while questions of aggregate structural changes, intersectoral specialization and cooperation are dealt with by higher instancies of the Council.

The CMEA-countries attach great importance to the cooperation and foreign trade with the developed market economies and the developing countries. They follow with close attention the trends and tendencies in the international division of labour, in the world trade when drafting their plans and harmonizing their joint actions. Looking for the common features, in the guidelines which they take into account in shaping the pattern of their production, the main directives can be summarized as follows:

/i/ identification and utilization of the comparative advantages coming of the natural endowment, of past experience and skills;

/ii/ increasing specialization within the country, the CMEA and by the world-wide international division of labour, aiming at both economies of scale on the cost side and better performance as far as the quality and the parameters of the products are concerned;

/iii/ as reaction to the increase of the energy and raw material prices, the development of the extractive industries /if justified by economic considerations/, introduction and dissemination of energy and material saving technologies, preference for products of this character, higher processing of the materials if possibly.

The planned structural changes in manufacturing seldom affect seriously the shares of the branches, they reflect mostly the increase in the intra-industry specialization. The need for improvements in the balance of foreign trade brought into the fore the possibilities of import substitution, nevertheless this does not overshadow the pressing necessity for export promotion and as its precondition: better competitiveness and structural adaptation. The planners and the enterprises are inclined as in other countries, too, to prefer branches and products with growing demand, with good market chances and high value added content but they are also aware of the fact that they face sharp competition in foreign markets in these fields.

In case of standardized products low wage countries' advantages should be compensated by higher productivity or it is better to withdraw. Sophisticated quality products require high standards of technology and management, R&D and innovation, therefore the less advanced countries like most members of the CMEA, have to concentrate their efforts and resources within the country and by help of international cooperation, otherwise they have not chance for success.

Structural changes are often accompanied by social tensions and they involve substantial risks. In the centrally planned economies emerging social tensions will be eased and eliminated as much as possible with particular attention to employment and assistance to retraining and mobility. Several methods of project evaluation, efficiency assessment, risk analysis and optimalization are used by the /state-owned/ enterprises, the planners and the ministries, working closely together.

Finally it must be stressed again that devoting more space to present the common features in the goals and instruments of the CMEA countries' national policies this should not overshadow the differences in approaches, strategies, targets and methods. All these countries consider industry as the most dynamic sector of the economy and are aiming at possibly high rates of industrial growth but they are at different level of industrial maturity and there are variations how they are going to integrate and harmonize the development of industry , agriculture and services. Industrial policy will be co-ordinated in all countries with other social objectives /cultural, regional, ecological, humanitarian etc./ but content and ranking of these objectives might differ. All countries focus on intensification in the use of resources, on the increase of efficiency, improvement of quality, faster progress in technology, management and organization. International co-operation, in particular CMEA integration are prime objectives equally - strategies, the judgement of the possibilities, priorities may vary depending on a number of circumstances.

There are great many common elements in the means of implementation, like central planning, optimal combination of state intervention and enterprise initiatives, the use of moral and material incentives, the need for better utilization of the financial instruments, improvements in industrial organization, etc. The methods, the preferences, the mix, however, how these instrument are combined how they actually operate as well as the system of decision making, the degree of centralization and delegation show ample differences.

Annex

Table A-1. Relative growth rates of labour

Branch	Bulgaria	Czecho-slovakia
Electricity	0,95	0,93
Fuel	2,13	0,95
Iron and steel	1,35	0,80
Non-iron metals	.	0,90
Engineering industries	1,59	1,20
Chemicals	1,29	1,03
Construction materials	1,13	1,05
Wood	0,79	0,93
Paper	0,89	0,94
Glass	1,14	0,98
Textiles	0,77	0,92
Clothing	1,04	0,96
Leather and shoe	0,71	0,83
Printing	0,63	1,06
Food	0,83	0,78
Industry	**1,00**	**1,00**

1/ State-owned and co-operative industry only.

roductivity by [illegible], 1961-1977[illegible]

GDR	Hungary	Poland	Romania	USSR
[illegible]	[illegible]	[illegible]	1,01	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1,10	[illegible]	1,03	0,03	.
1,07	1,14	1,09	1,20	1,01
1,02	1,06	1,00	1,05	1,03
1,06	0,96	1,07	1,05	1,05
1,03	[illegible]	[illegible]	[illegible]	[illegible]
0,93	0,93	0,75	1,01	1,02
0,99	1,02	1,09	0,94	1,43
1,16	0,77	0,98	0,90	0,93
0,87	0,57	0,97	0,93	[illegible]
0,94	0,66	0,84	0,80	0,73
0,88	1,23	0,97	0,94	.
0,70	0,72	0,59	0,54	0,81
1,00	1,00	1,00	1,00	,1,00

Table A-2. Growth of the stock of the productive fixed assets in the CMEA - countries
/Average rates of growth p.a. in percentages/

Country	1961-65	1966-70	1971-75	1976-78	1961-78
Bulgaria	9,8	11,0	8,9	8,3	9,7
Czechoslovakia	4,6	4,2	5,6	5,6	4,9
GDR	6,0	4,9	5,9	5,6	5,6
Hungary	4,9	5,7	6,6	6,3	5,3
Poland	4,6	5,9	8,1	11,1	6,7
Romania	7,9	10,8	11,8	11,1	10,3
USSR	9,6	8,1	8,7	7,4	8,6

Table A-3. Changes in the capital /output ratio in the CMEA-countries
/Average rates of growth p.a. in percentages/[x/]

Country	1961-65	1966-70	1971-75	1976-78	1961-78
Bulgaria	2,9	2,0	1,0	2,2	2,1
Czechoslovakia	2,6	- 3,5	0,0	1,4	0,2
GDR	2,5	- 0,3	0,5	1,4	1,0
Hungary	0,8	- 1,0	0,0	1,1	0,1
Poland	- 1,5	0,0	- 1,5	5,7	0,0
Romania	1,1	3,0	0,1	2,1	0,9
USSR	2,9	0,3	2,8	2,2	2,1

x/ Stock of productive fixed assets per unit of national income at constant prices.

Table A-4. Production of primary energy
/Quantities in million tons of oil equivalent/

Group of countries		Total primary energy	Solid fuels	Liquid fuels	Natural gas	Hydro and Nuclear electricity
World	1970	4966	1602	2365	893	105
	1971	5183	1607	2508	956	112
	1972	5400	1622	2650	1007	121
	1973	5713	1650	2389	1047	127
	1974	5774	1672	2899	1061	142
	1975	5729	1753	2757	1067	152
	1976	6051	1803	2980	1111	157
	1977	6295	1880	3108	1137	170
	1978	6349	1894	3100	1190	175
Developed market economies	1970	2105	736	642	650	77
	1971	2121	700	647	691	83
	1972	2180	705	663	723	89
	1973	2198	700	666	738	93
	1974	2160	695	637	723	105
	1975	2160	737	612	699	112
	1976	2180	759	604	703	113
	1977	2230	772	634	703	121
	1978	2225	727	668	708	122

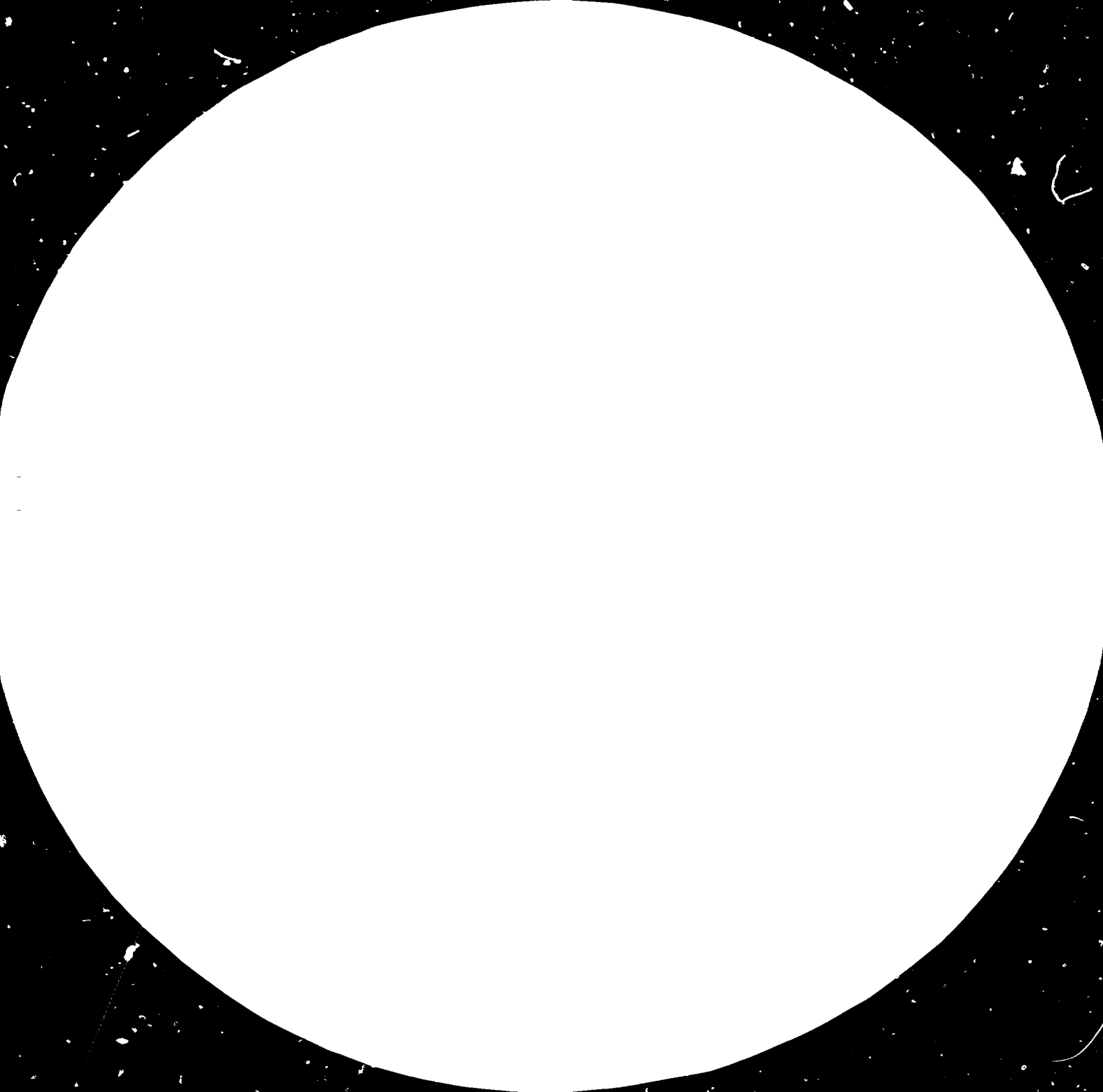
Group of countries		Total primary energy	Solid fuels	Liquid fuels	Natural gas	Hydro and Nuclear electricity
Developing economies	1970	1452	63	1321	54	13
	1971	1556	64	1420	58	14
	1972	1663	65	1514	59	15
	1973	1873	68	1711	78	17
	1974	1883	73	1705	86	19
	1975	1736	80	1545	90	20
	1976	1942	83	1736	99	23
	1977	2012	84	1797	106	24
	1978	1951	85	1717	122	27
European centrally planned economies*/	1970	1116	539	378	187	12
	1971	1170	549	404	205	12
	1972	1212	557	430	213	12
	1973	1265	564	460	228	13
	1974	1324	569	491	249	15
	1975	1402	588	525	275	14
	1976	1479	603	555	305	16
	1977	1542	617	583	324	18
	1978	1603	628	610	345	19

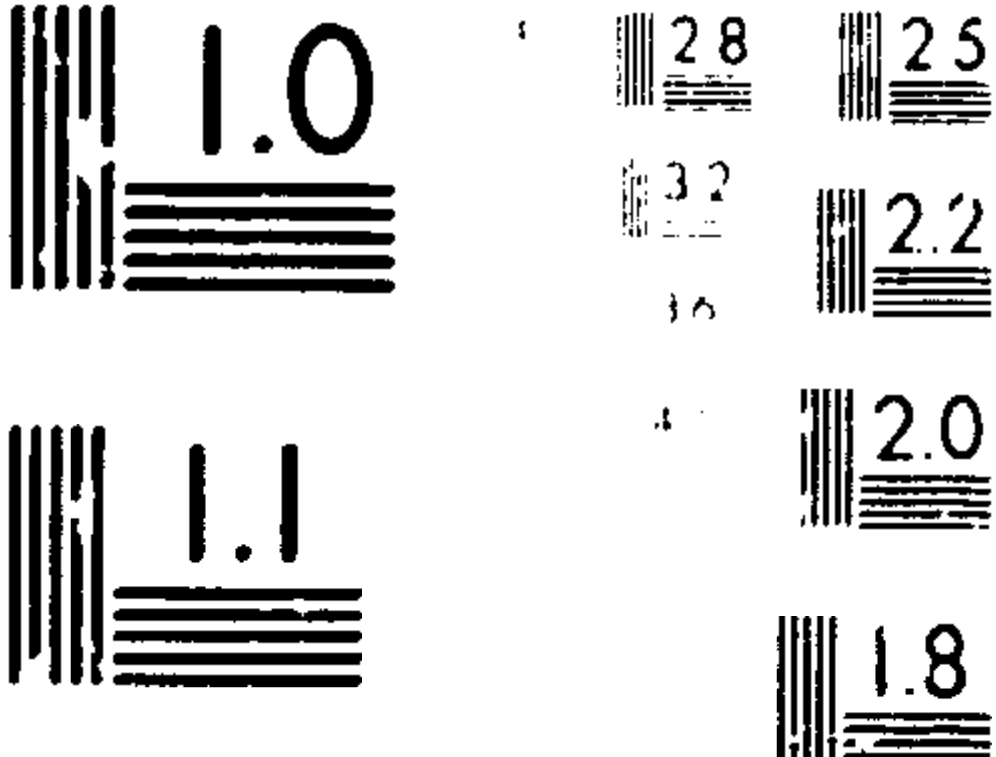
Source: World Energy Supplies 1973-1978. UN, 1979. pp. 6-9.

x/European CMEA - countries + Albania /Albanias' share in the total primary energy production in 1973 was 0,2 per cent/.

Table A-5. Trade and consumption of commercial energy
/Quantitaties in million metric tons of oil equivalent and in kilograms per capita/

Group of countries		Imports	Exports	Bunkers	Consumption of		
					Total commercial energy		Liquid fuels
					aggregate	per capita	
World	1970	1692	1706	154	4570	1251	1981
	1971	1795	1812	159	4763	1279	2105
	1972	1944	1958	168	4978	1313	2256
	1973	2198	2211	178	5261	1363	2434
	1974	2144	2178	170	5292	1346	2405
	1975	2008	2000	154	5312	1327	2397
	1976	2203	2219	154	5632	1382	2565
	1977	2289	2284	150	5810	1402	2650
	1978	2256	2232	150	5956	1411	2693
Developed market economies	1970	1312	274	91	2908	3991	1433
	1971	1384	279	94	2979	4048	1499
	1972	1501	312	98	3121	4202	1611
	1973	1691	348	105	3290	4375	1718
	1974	1651	331	100	3217	4256	1643
	1975	1532	317	98	3124	4101	1590
	1976	1679	321	97	3321	4328	1701
	1977	1750	344	97	3349	4329	1733
	1978	1699	355	96	3369	4326	1741

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Group of countries		Imports	Exports	Bunkers	Consumption of		
					Total commercial energy		Liquid fuels
					aggregate	per capita	
Developing economies	1970	289	1279	61	366	214	238
	1971	309	1372	61	394	224	264
	1972	326	1479	67	421	234	282
	1973	375	1678	69	462	251	310
	1974	368	1650	66	490	259	326
	1975	339	1464	52	514	265	341
	1976	381	1654	53	559	282	374
	1977	387	1680	48	605	297	408
	1978	401	1603	50	637	305	425
European centrally planned economies x/	1970	82	151	3	997	2867	520
	1971	95	160	3	1049	2989	529
	1972	109	166	3	1085	3066	538
	1973	125	182	4	1139	3191	542
	1974	121	191	4	1180	3279	545
	1975	132	208	4	1248	3438	564
	1976	141	234	4	1309	3576	580
	1977	149	249	4	1352	3663	592
	1978	153	262	4	1392	3726	601

Source: World Energy Supplies 1973-1978. UN, 1979 pp. 6-9.

x/ European CMEA-countries + Albania /Albanias' share in the total primary energy production in 1978 was 0,2 per cent/.

Table A-6. Production of primary energy in the CMEA-countries
/Quantities in million tons of oil equivalent/

Country		Total primary energy	Solid fuels	Liquid fuels	Natural gas	Hydro and Nuclear electricity
Bulgaria	1973	9,82	9,23	0,19	0,18	0,22
	1978	9,59	8,69	0,12	0,01	0,79
Czechoslovakia	1973	50,49	49,37	0,17	0,73	0,22
	1978	56,40	55,17	0,12	0,74	0,38
GDR	1973	53,61	51,29	0,06	2,13	0,14
	1978	56,78	53,57	0,05	2,60	0,56
Hungary	1973	13,61	7,68	2,13	3,79	0,01
	1978	14,57	6,89	2,74	4,93	0,01
Poland	1973	119,65	114,55	0,43	4,51	0,16
	1978	145,52	139,39	0,33	5,59	0,21
Romania	1973	50,04	9,85	14,75	25,81	0,63
	1978	55,00	9,40	15,13	29,72	0,75
USSR	1973	964,75	322,32	440,19	190,83	11,41
	1978	1261,38	354,56	589,05	301,41	16,36

Source: World Energy Supplies, 1973-78. UN, 1979. p. 68.

Table A-7. Trade and consumption of energy in the CMEA-countries

Country		Imports[x/]	Exports[x/]	Consumption of[x/]			Consumption of electricity[xx/]	
				Total commercial energy		Liquid fuels		
				aggregate	per capita		aggregate	per capita
Bulgaria	1973	15,64	0,01	25,01	2901	10,82	25,185	2921
	1978	21,65	0,06	30,10	3415	13,12	32,991	3743
Czechoslovakia	1973	20,96	4,99	65,45	4495	13,11	57,733	3965
	1978	28,68	5,11	77,55	5123	18,60	73,129	4931
GDR	1973	24,82	3,47	72,97	4291	12,17	78,179	4604
	1978	30,23	3,95	81,17	4844	16,42	96,301	5759
Hungary	1973	10,08	1,08	21,46	2057	7,67	22,305	2138
	1978	13,55	1,40	25,02	2340	8,51	30,244	2831
Poland	1973	15,50	28,81	103,28	3096	10,10	82,548	2474
	1978	22,43	31,32	133,23	3806	15,02	114,895	3283
Romania	1973	6,90	5,19	50,05	2403	12,50	43,231	2076
	1978	13,51	7,13	58,67	2740	15,50	61,946	2892
USSR	1973	30,73	137,77	700,42	3201	232,55	906,319	3699
	1978	53,42	218,07	908,23	3748	345,22	1173,922	4842

Suerce: World Energy Supplies, 1973-78. UN, 1979. pp. 68. and 302. [x/]Quantitis in million metric tons of oil equivalent and in kilograms per capita. [xx/]Quantities in thousand million KWh and KWh per capita.

Table A-3. Data on the intersectoral specialization of the three groups of countries /value added weights by ISIC divisions and branches/, 1963.

Division, branch	World	CMEA-countries	Developed market economies	Developing economies
Mining	3,3	3,5	6,0	22,9
Manufacturing	85,9	86,8	87,2	72,2
Light manufacturing	31,5	31,7	30,2	42,2
Heavy manufacturing	54,4	55,1	57,0	30,0
Electricity, gas and water	5,8	3,7	6,8	4,9
Total	100,0	100,0	100,0	100,0
Coal	2,2	3,4	1,9	1,1
Crude petroleum and natural gas	3,4	2,8	2,1	16,4
Metal mining	1,2	1,0	1,0	4,1
Food, beverages, tobacco	12,1	13,7	10,5	19,6
Textiles	5,2	4,7	4,8	9,3
Wearing apparel, leather and footwear	4,3	4,5	4,2	4,2
Wood products, furniture	3,4	4,0	3,3	2,7
Paper, printing, publishing	5,5	2,2	7,3	3,4
Chemicals, petroleum, coal and rubber products	10,7	7,6	12,0	11,3
Non-metallic mineral products	4,5	6,1	3,9	3,9
Basic metals	7,2	7,5	7,4	4,1
Metal products	31,2	34,0	32,5	11,1

Source: Statistical Yearbook, 1973. UN. pp. 26-29.

Table A-9. Data on the intersectoral specialization of the three groups of countries /value added weights by ISIC divisions and branches/, 1970.

Division, branch	World	CMEA-countries	Developed market economies	Developing economies
Mining	7,4	7,9	4,9	23,0
Manufacturing	86,9	89,2	88,0	71,1
Light manufacturing	29,9	29,3	29,0	37,1
Heavy manufacturing	57,0	59,9	59,0	34,0
Electricity, gas and water	5,8	2,9	7,1	5,9
Total	100,0	100,0	100,0	100,0
Coal	1,4	2,2	1,2	0,8
Crude petroleum and natural gas	3,4	2,8	1,8	16,8
Metal	1,2	1,0	0,9	4,0
Food, beverages, tobacco	11,1	12,6	9,7	16,4
Textiles	4,5	4,1	4,0	8,8
Wearing apparel, leather and footwear	3,9	4,0	3,5	4,3
Wood products, furniture	3,3	3,2	3,5	2,4
Paper, printing, publishing	5,3	1,0	7,0	3,3
Chemicals, petroleum coal and rubber products	11,6	9,5	12,2	14,1
Non-metallic mineral products	4,2	5,8	3,9	3,7
Basic metals	7,0	7,2	7,3	4,3
Metal products	34,2	38,1	35,6	12,7

Source: Monthly Bulletin of Statistics UN, August, 1973. pp. XIV-XIX.

Table A-10. Data on the intersectoral specialization of the three groups of countries /value added weights by ISIC divisions and branches/,1975.

Division, branch	World	CMEA-countries	Developed market economies	Developing economies
Mining	13,1	10,4	6,2	44,5
Manufacturing	81,1	86,3	86,2	51,9
Light manufacturing	28,8	30,9	29,3	23,4
Heavy manufacturing	52,3	56,0	56,9	28,4
Electricity, gas and water	5,8	2,7	7,6	3,7
Total	100,0	100,0	100,0	100,0
Coal	1,8	3,0	1,6	0,4
Crude petroleum and natural gas	8,9	4,5	2,7	40,7
Metal mining	1,1	0,9	0,9	2,1
Food, beverages, tobacco	10,8	11,9	10,6	10,3
Textiles	4,8	5,7	3,8	5,2
Wearing apparel, leather and footwear	3,8	5,7	3,4	2,6
Wood products,furniture	3,0	2,8	3,4	1,7
Paper, printing, publishing	5,0	1,7	7,0	2,3
Chemicals, petroleum, coal and rubber products	11,7	9,7	12,7	11,4
Non-metallic mineral products	4,0	5,7	3,6	2,7
Basic metals	6,2	7,1	6,6	3,3
Metal products	30,5	34,5	33,7	11,4

Source: Monthly Bulletin of Statistice, UN, November, 1979. pp. XIV-XIX.

Table A-11. Percentage shares of industrial branches in the CMEA-countries, 1978.

Branch	Bulgaria	Czecho-slovakia	GDR	Hungary	Poland	Romania	USSR
Electricity	2,5	3,3	5,7	5,6	2,3	1,8	3,0
Fuel	3,5	7,4	5,9	7,8	5,7	4,4	6,2
Iron and steel	4,0	8,7	5,4	6,7	6,4	7,8	.
Non-iron metals	.	2,6	2,4	3,2	3,6	3,4	.
Engineering industries	28,2	29,2	32,7	30,8	33,9	33,2	26,0
Chemicals	8,1	8,5	10,8	12,4	9,3	9,5	7,6
Building materials	4,1	3,6	2,1	2,0	2,3	3,6	4,0
Wood	3,1	4,2	3,0	2,9	3,8	4,4	3,6
Paper	1,3	1,3	1,7	0,7	1,1	1,4	0,3
Glass	0,9	1,4	1,0	1,0	1,0	0,6	0,5
Textiles	7,5	5,1	5,6	4,5	7,1	8,3	10,2
Clothing	3,1	1,7	1,3	2,3	3,3	3,5	4,2
Leather and shoe	1,4	2,5	1,6	1,9	1,3	2,1	1,7
Printing	0,5	0,6	0,6	1,0	0,4	0,2	.
Food	21,7	14,4	16,7	14,5	15,4	13,8	13,3

Table A-12. Index numbers of industrial output by branches, 1970=100.

Branch	Bulgaria		Czecho-slovakia		GDR		Hungary		Poland		Romania		USSR	
	1960	1978	1960	1978	1960	1978	1960	1978	1960	1978	1960	1978	1960	1978
Electricity	27	175	50	160	58	154	44	183	39	186	18	193	37	165
Fuel	21	167	61	131	60	137	58	147	57	151	52	155	57	146
Iron and steel	13	225	62	144	67	159	64	137	54	168	33	240	49	146
Non-iron metals	.	.	51	148	54	157	49	154	47	244	30	193	.	.
Engineering industries	21	277	47	186	46	167	43	176	29	260	22	340	32	223
Chemicals	17	227	38	197	50	177	25	220	29	210	13	301	31	199
Building materials	28	199	61	160	54	159	66	138	48	169	26	250	44	154
Wood	59	144	64	163	67	164	58	173	55	211	39	168	63	133
Paper	28	198	67	163	64	148	42	167	57	156	21	200	45	160
Glass	22	184	52	165	58	168	34	192	40	242	30	263	37	207
Textiles	50	166	68	147	73	146	67	133	50	175	36	249	61	139
Clothing	36	153	62	143	76	134	61	128	41	200	30	286	52	143
Leather and shoe	41	143	60	149	61	154	63	137	56	160	38	204	60	133
Printing	45	181	48	141	70	133	44	176	48	207	36	133	.	.
Food	45	150	71	139	72	141	57	144	70	174	48	176	53	137
Industry	34	188	56	162	55	159	51	161	44	202	30	252	44	166

Table A-13. Relative growth coefficients by branches, 1961-70 /A/ and 1971-78 /B/

Branch	Bulgaria		Czecho-slovakia		GDR		Hungary		Poland		Romania		USSR	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Electricity	1,26	0,93	1,12	0,99	0,95	0,97	1,16	1,14	1,13	0,92	1,67	0,77	1,19	0,99
Fuel	1,62	0,89	0,92	0,81	0,92	0,86	0,88	0,91	0,77	0,75	0,58	0,62	0,77	0,88
Iron and steel	2,62	1,20	0,90	0,89	0,82	1,00	0,80	0,85	0,81	0,93	0,91	0,98	0,90	0,88
Non-iron metals	.	.	1,10	0,91	1,02	0,99	1,04	0,92	0,94	1,21	1,00	0,77	.	.
Engineering industries	1,62	1,47	1,19	1,15	1,20	1,05	1,19	1,09	1,52	1,29	1,36	1,35	1,38	1,38
Chemicals	2,00	1,21	1,47	1,22	1,10	1,11	2,04	1,37	1,52	1,04	2,31	1,19	1,42	1,20
Building materials	1,21	1,06	0,92	0,99	1,02	1,00	0,77	0,86	0,92	0,84	1,15	0,99	1,00	0,93
Wood	0,58	0,77	0,88	1,01	0,82	1,03	0,88	1,07	0,80	1,04	0,77	0,67	0,70	0,80
Paper	1,21	1,05	0,84	1,01	0,86	0,93	1,21	1,04	0,77	0,77	1,43	0,79	0,98	0,96
Glass	1,55	0,98	1,08	1,02	0,95	1,06	1,50	1,13	1,10	1,20	1,00	1,04	1,19	1,25
Textiles	0,68	0,88	0,82	0,91	0,75	0,92	0,76	0,83	0,79	0,87	0,83	0,99	0,72	0,84
Clothing	0,92	0,91	0,90	0,88	0,72	0,84	0,84	0,80	1,07	0,99	1,00	1,13	0,85	0,86
Leather and shoe	0,83	0,76	0,93	0,92	0,90	0,97	0,91	0,95	0,79	0,79	0,79	0,91	0,73	0,80
Printing	0,76	0,79	1,17	0,87	0,79	0,84	1,16	1,09	0,92	1,02	0,93	0,53	.	.
Food	0,76	0,80	0,79	0,86	0,76	0,89	0,99	0,89	0,63	0,86	0,63	0,70	0,93	0,93
Industry	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

Table A-14. The CMEA exports by commodity classes and regions, 1973.
/in millions U.S. dollars/

Region	Total	Food, beverages and tobacco /SITC 0+1/	Crude materials excl.fuels /SITC 2+4/	Mineral fuels and related materials /SITC 3/	Chemicals /SITC 5/	Machinery and transport equipment /SITC 7/	Other manufactured goods /SITC 6+8/
World	112434	7457	8068	22681	5217	37046	22339
CMEA	62491	3399	3654	9772	2778	27271	11673
of which: USSR	20955	1898	303	543	1321	12087	3767
Centrally planned economies in ASIA	3138	249	207	296	184	1554	375
Developed market economies	34453	4287	2213	349	4185	12670	10446
of which: Europe	26219	2064	2954	10621	1309	2945	5796
EEC	15943	1406	1837	6240	764	1326	3983
EFTA	5836	483	568	2976	240	561	823
USA	1410	228	84	289	85	101	592
Japan	1321	109	612	243	43	19	258
Developing countries	11331	6107	1892	2150	137	14	1016
of which: Africa	2913	431	193	146	194	1134	536
America	2028	488	230	917	206	1419	559
Mid-East	4578	3[illegible]	140	112	136	1092	500
Other Asian	1482	52	69	375	210	509	171

Source: Monthly Bulletin of Statistic UN, July 1980. pp. XL-LXXXIII.

Table A-15. The CMEA imports by commodity classes and regions, 1979.
/in millions U.S. dollars/

Region	Total	Food, beverages and tobacco /SITC 0+1/	Crude materials excl.fuels /SITC 2+4/	Mineral fuels and related materials /SITC 3/	Chemicals /SITC 5/	Machinery and transport equipment /SITC 7/	Other manufactured goods /SITC 6+8/
World	110448	14327	8967	12271	7143	39093	24165
CMEA	62491	3399	3654	9772	2779	27271	11979
of which: USSR	24809	309	2308	9315	475	6029	4335
Centrally planned economies in ASIA	2172	533	476	1	43	39	1025
Developed market economies	34453	4287	2246	349	4185	12679	10948
of which: Europe	26195	1527	1091	227	3778	10432	8936
EEC	17111	788	497	186	2802	6907	5777
EFTA	5935	233	402	48	709	2473	2019
USA	3670	2206	570	67	63	585	174
Japan	3199	3	45	12	218	1545	1394
Developing countries	11331	6107	1932	2150	137	14	1019
of which: Africa	1416	632	320	155	44	0	263
America	5480	4683	491	9	42	7	225
Mid-East	2671	292	345	1898	32	2	101
Other-Asian	1764	499	730	89	19	5	417

Source: Monthly Bulletin of Statistic UN, July 1980. pp. XL-LXXXIII.

Table A-10. The composition of the CMEA exports by major commodity classes in [illegible],197[illegible].

/in percentages/

Region	Total	Food, beverages and tobacco /SITC 0+1/	Crude materials excl. fuels /SITC 2+4/	Mineral fuels, lubr. and related materials /SITC 3/	Chemicals /SITC 5/	Machinery and transport equipment /SITC 7/	Other manufactured goods /SITC 6+8/
World	100,00	6,63	7,13	20,17	[illegible],64	32,35	19,91
CMEA	100,00	5,44	5,85	15,64	4,45	43,64	18,69
of which: USSR	100,00	9,06	1,45	2,59	6,30	57,68	17,93
Centrally planned economies in ASIA	100,00	7,93	6,60	3,46	5,86	40,52	11,95
Developed market economies	100,00	8,2[illegible]	12,52	38,06	4,95	10,69	23,39
of which: Europe	100,00	7,87	11,27	40,51	4,99	11,23	22,11
EEC	100,00	8,87	11,91	39,33	4,82	8,37	25,14
EFTA	100,00	8.28	9,73	50,99	4,11	9,61	15,82
USA	100,00	16,17	5,96	20,43	6,03	7,16	41,96
Japan	100,00	8,25	96,33	18,40	2,20	1,44	10,53
Developing countries	100,00	7,72	3,69	8,47	4,67	29,11	10,79
of which: Africa	100,00	14,80	6,63	5,01	6,66	38,93	18,40
America	100,00	12,42	5,36	20,80	5,24	39,10	14,23
Mid -East	100,00	7,62	3,23	2,44	3,33	41,93	12,67
Other-Asian	100,00	3,51	4,05	25,32	14,79	34,17	11,55

Source: Monthly Bulletin of Statistic UN, July 1980. pp. XL-LXXIII.

Table A-17. The composition of the CMEA imports by commodity classes and regions,1978.
/in percentages/

Region	Total	Food, beverages and tobacco /SITC 0+1/	Crude materials excl.fuels /SITC 2+4/	Mineral fuels and related materials /SITC 3/	Chemicals /SITC 5/	Machinery and transport equipment /SITC 7/	Other manufactured goods /SITC 6+8/
World	100,00	12,97	7,48	11,11	6,47	36,21	21,38
CMEA	100,00	5,44	5,85	15,64	4,45	43,64	18,69
of which: USSR	100,00	1,24	11,72	33,52	1,91	24,30	17,47
Centrally planned economies in ASIA	100,00	24,54	22,01	0,05	1,98	1,75	47,19
Developed market economies	100,00	12,44	6,51	1,01	12,15	36,77	30,32
of which: Europe	100,00	5,83	4,16	0,87	14,42	39,35	34,11
EEC	100,00	4,61	2,90	0,85	16,38	40,37	33,76
EFTA	100,00	4,77	3,77	0,81	11,95	41,67	34,02
USA	100,00	60,11	15,53	1,83	1,72	15,94	4,74
Japan	100,00	0,09	1,41	0,56	7,78	48,39	40,45
Developing countries	100,00	53,90	16,70	13,97	1,21	0,12	8,97
of which: Africa	100,00	44,53	23,02	19,95	3,11	-	19,57
America	100,00	35,46	8,96	0,19	0,77	0,13	4,29
Mid-East	100,00	10,93	12,92	71,06	1,20	0,07	3,79
Other Asian	100,00	28,29	41,38	5,05	1,08	0,28	23,64

Source: Monthly Bulletin of Statistic UN, July 1980. pp. XL-LXXXIII.

Table A-18. The composition of the CMEA-exports by regions and commodity classes, 1979.
/in percentages/

Region	Total	Food, beverages and tobacco /SITC 0+1/	Crude materials excl.fuels /SITC 2+4/	Mineral fuels and related materials /SITC 3/	Chemicals /SITC 5/	Machinery and transport equipment /SITC 7/	Other manufactured goods /SITC 6+8/
World	100,00	100,00	100,00	100,00	100,00	100,00	100,00
CMEA	55,58	45,59	45,29	43,08	53,25	73,61	52,16
of which: USSR	18,64	25,45	3,76	2,39	25,32	32,63	16,93
Centrally planned economies in ASIA	2,79	3,34	2,57	1,31	3,53	4,13	1,67
Developed market economies	26,06	32,57	45,45	49,17	27,91	8,45	30,61
of which: Europe	23,32	27,68	36,61	46,23	25,09	7,95	25,89
EEC	14,09	18,85	23,39	27,51	14,64	3,58	17,79
EFTA	5,19	6,48	7,04	13,12	4,60	1,51	4,12
USA	1,25	3,06	1,04	1,27	1,53	0,27	2,64
Japan	1,17	1,46	7,59	1,07	0,56	0,05	1,15
Developing countries	**15,21**	**17,71**	**7,81**	**6,39**	**15,30**	**13,44**	**8,24**
of which: Africa	2,53	5,78	2,39	0,64	3,72	3,06	2,39
America	3,49	6,54	2,85	3,60	3,95	3,83	2,50
Mid-East	4,07	4,68	1,83	0,49	3,45	5,19	2,59
Other Asian	1,32	0,70	0,74	1,65	4,20	1,37	0,76

Source: Monthly Bulletin of Statistic UN, July 1980. pp. XL-LXXXIII.

Table A-19. The composition of the CMEA imports by regions and commodity classes, 1978.

/in percentages/

Region	Total	Food, beverages and tobacco /SITC 0+1/	Crude materials excl.fuels /SITC 2+4/	Mineral fuels and related materials /SITC 3/	Chemicals /SITC 5/	Machinery and transport equipment /SITC 7/	Other manufactured goods /SITC 6+8/
World	100,00	100,00	100,00	100,00	100,00	100,00	100,00
CMEA	56,58	23,72	44,20	70,63	88,00	88,10	46,93
of which: USSR	22,46	2,15	35,12	67,70	8,05	15,00	17,38
Centrally planned economies in ASIA	1,97	3,72	5,78	0,01	0,60	0,10	4,24
Developed market economies	31,19	29,92	27,13	2,94	58,59	31,68	43,23
of which: Europe	23,72	10,66	13,20	1,35	52,99	26,10	36,93
EEC	15,49	5,50	6,01	1,19	43,23	17,27	23,91
EFTA	5,37	1,93	4,86	0,30	7,93	6,19	9,36
USA	3,32	15,40	0,93	0,56	0,93	1,46	0,72
Japan	2,90	0,02	0,54	0,15	3,49	3,97	5,37
Developing countries	10,23	42,63	28,99	17,59	1,33	0,21	,83
of which: Africa	1,23	4,41	3,34	1,23	0,00	-	1,00
America	4,96	32,69	5,24	0,07	0,52	0,02	0,03
Mid-East	2,42	2,08	1,17	15,97	0,45	0,01	0,42
Other Asian	1,60	3,43	3,33	0,73	0,37	0,01	1,73

Source: Monthly Bulletin of Statistic UN, July 1980. pp. XIX-LXXVIII.

Table A-20. The commodity composition of the foreign trade of the CMEA-countries, 1978.

/in percentages/

Commodity group	Bulgaria	Czecho-slovakia	GDR	Hungary	Poland	Romania	USSR	CMEA	CMEA without USSR
Exports									
Machinery and equipment	48,3	52,9	55,0	33,3	43,2	29,4	19,6	33,7	45,4
Raw materials and semifinished products	16,7	26,5	24,8	26,0	32,4	39,8	75,1	49,4	27,8
Foodstuffs and raw materials for food products	25,2	3,7	5,2	20,2	8,1	14,3	2,2	6,9	10,9
Consumer goods	9,8	16,9	15,0	20,0	16,3	17,5	3,1	10,0	15,9
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Imports									
Machinery and equipment	40,9	40,9	34,0	33,7	38,3	37,1	42,0	39,2	37,2
Raw materials and semifinished products	50,5	50,5	48,0	52,7	45,4	52,0	27,0	39,3	48,3
Foodstuffs and raw materials for food products	4,5	4,5	12,9	6,1	10,0	7,1	13,2	13,3	9,9
Consumer goods	4,1	4,1	5,1	7,5	6,3	3,8	11,8	8,2	5,6
Total	100,0	100,0	0	100,0	100,0	100,0	100,0	100,0	100,0

Source: Economic Bulletin for Europe 31, No. 1. pp. 93-95.

Table A-21. The CMEA trade by countries and economic groupings, 1970.

/in million U.S. dollars/

	Bulgaria	Czecho-slovakia	GDR	Hungary	Poland	Romania	USSR	CMEA
Exports								
Total	7483	11747	13267	6345	14114	8237	52215	113523
Developed market economies	827	2515	.	2139	4696	2906	14357	29210
Developing countries	924	990	.	819	945	1360	11231	16270
CMEA	5540	7960	.	3446	8112	3970	24907	52960
of which: USSR	4033	4068	.	1933	4782	1447	-	21990
Imports								
Total	7657	12585	14572	7002	16080	8027	50550	116555
Developed market economies	1139	3962	.	2120	6665	2634	17615	37330
Developing countries	368	650	.	743	821	1402	7406	11790
CMEA	5991	8449	.	3942	8286	3359	24540	54932
of which: USSR	4556	4421	.	2126	4721	1410	-	22253

Source: Monthly Bulletin of Statistics UN, July 1970, pp. XXIV.-XXVIII.

Table A-22. Annual percentage change in the intra-CMEA trade

Country	Exports			Imports		
	1972-76	1977	1978	1972-76	1977	1978
Bulgaria						
Soviet Union	15,1	15,3	10,5	17,9	17,0	17,1
Other CMEA--countries	16,6	15,2	5,7	13,9	14,7	3,6
Czechoslovakia						
Soviet Union	13,2	11,1	10,3	13,3	17,4	11,4
Other CMEA--countries	13,2	7,3	8,2	16,1	8,3	10,6
GDR						
Soviet Union	9,6	11,0	13,4	13,6	13,9	8,8
Other CMEA--countries	13,3	3,1	5,6	14,5	24,3	- 4,2
Hungary						
Soviet Union	12,3	17,1	1,1	10,8	15,7	14,0
Other CMEA--countries	12,6	18,4	- 6,0	10,7	9,4	16,2
Poland						
Soviet Union	14,3	16,4	17,3	15,5	20,1	8,1
Other CMEA-- countries	22,0	6,6	2,0	13,8	16,8	10,1
Romania						
Soviet Union	10,3	20,3	- 3,2	12,8	25,4	- 1,9
Other CMEA--countries	18,2	29,0	10,2	18,3	17,0	7,4
USSR						
Other CMEA--countries	15,0	16,5	11,0	13,3	13,3	21,1

Source: Economic Bulletin for Europe Vol. 31, No.1. pp. 90-91.

Table A-23. Estimated balance of payments of the developed market economies /excluding Japan/ with CMEA /million US dollars/

Year	Current Account							Capital, multi-lateral settlements, net errors and omissions
			Net services					
	Total /1-10/	Trade blance f.o.b.--f.o.b. /1-2/	Total /3-8/	Transport and insurance /3-4/	Travel /5/	Income /6-8/	Transfers /9-10/	/11-13/
1973	2 718	2 836	231	17	-292	506	-349	- 2 718
1974	3 434	3 209	553	123	-332	762	-328	- 3 434
1975	8 807	8 255	870	25	-450	1 295	-318	- 8 807
1976	6 277	5 827	1 150	- 50	-450	1 650	-700	- 6 277
1977	4 407	3 652	1 156	- 70	-470	2 100	-805	- 4 407
1978	6 317	4 937	2 200	- 80	-520	2 800	-820	- 6 317
1973-1978	31 960	28 716	6 564	- 35	-2 514	9 113	-3 320	-31 960

Source: Economic Bulletin for Europe Vol. 31, No. 1. p. 111. Note: Numbers in parenthesis under column headings are the IMF item numbers.