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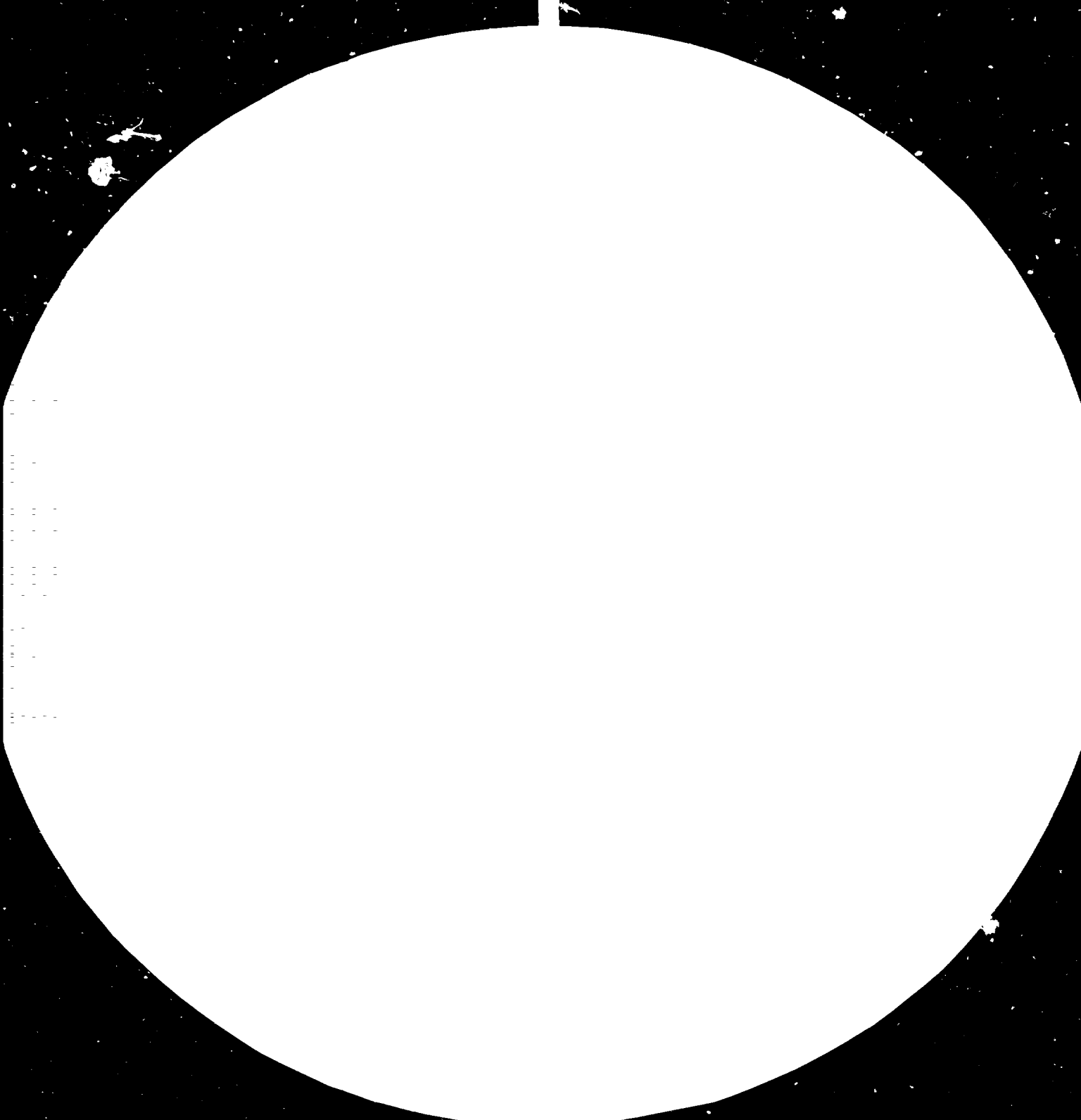

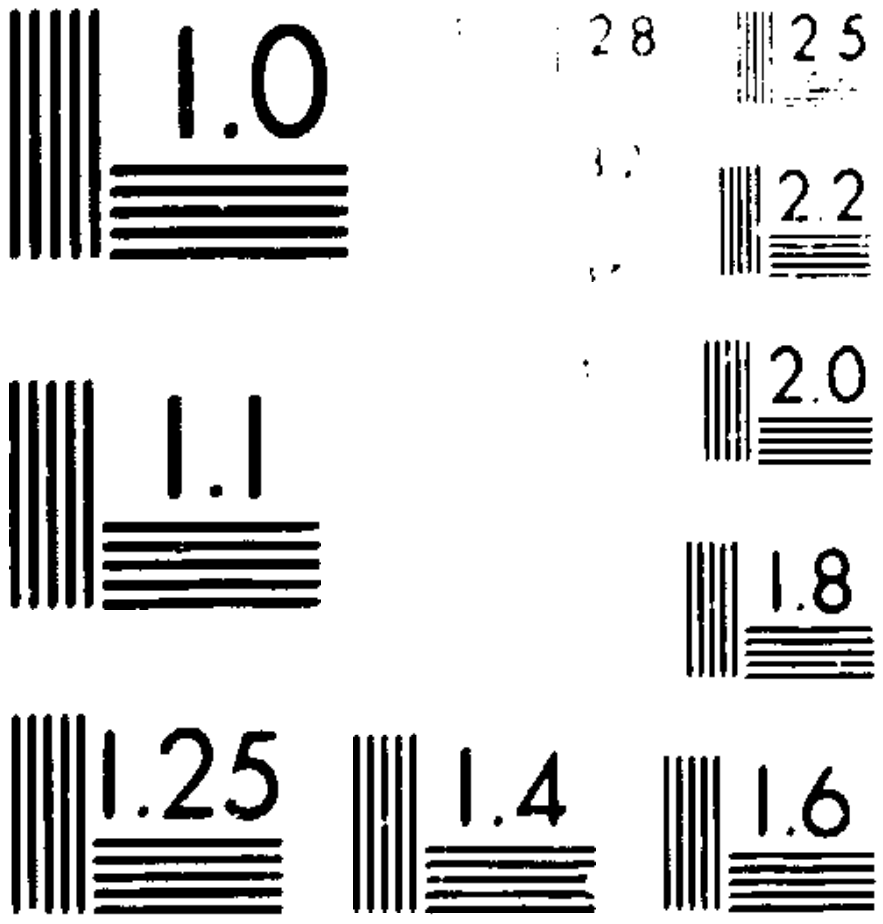
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Budapest, Hungary, 22-26 March 1982

REPORT* (Structural changes in industry, CMEA countries).

Prepared by the
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FOREWORD

In pursuance of General Assembly resolution 31/163 of December 1976, UNIDO launched a research programme on redeployment potentials and obstacles, and on prospective analyses of structural changes in developed and developing countries. Special reference was made in the New Delhi Declaration and Plan of Action to this area of research for a continuous surveillance of the industrial restructuring process (ID/CONF.4/22, Chapter VI, para. 143). The research programme attempts to: monitor and analyse changes in the international division of labour; highlight probable trends in their determinants; and identify possible future structural changes and their implications. As inputs into global analyses of the international restructuring process it is clearly necessary to conduct studies at the regional and country levels. One group of countries that seems to constitute a particular category, in terms of the international industrial restructuring process, is that of European CMEA countries.

As part of the research programme, a series of analyses where carried out and a Research Seminar was organized under the joint auspices of UNIDO and the Research Institute for Industrial Economics of the Hungarian Academy of Science in Budapest, Hungary, 22-26 March 1982. The purpose of the seminar was to shed light on issues pertaining to structural changes in the European CMEA countries, with a focus on past experience and future prospects for self-reliant growth compatible with regional interdependence.

This summary is based primarily on the documentation presented to and the exchange of views on the relative importance of the different agenda items that transpired during the seminar. It attempts to provide an overview of the many issues central to the question of structural change in the European CMEA countries.

The seminar was attended by 36 economists in their individual capacity from European centrally planned economies, developed market economies and developing countries as well as by observers from international organizations.

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I. The Present Structure of Industry and Foreign Trade

Following an introduction of the subject by Mr. E. Ivan (UNIDO Secretariat) five studies were presented (Mr. Kasalicky: ID/WG.357/1, CSSR; Ms. Bogo: IS/196, Hungary; Mr. Kukulsky: ID/WG.357/2, Poland; Mr. Volkov: ID/WG.357/3, USSR; Ms. Tuitz: ID/WG.357/5). This section attempts to summarize the presentation and discussion.

(i) The East European CMEA countries had, by the end of the 1940's, completed the major rehabilitation of industry from the effects of war and established the basis for a socialist type of development. This new system implied public ownership of the means of production in the industry - mainly state but also co-operative - and the introduction of a system of central planning. Priority was accorded to the development of the heavy industry, with the objective of establishing a substantive indigenous basis for sustained industrial growth in the region.

This policy meant the pursuance of a certain autarchy not only on a regional but also on a national basis (see IS/196), even by the smaller CMEA countries. Industries were thus established more on the basis of long-term regional and national development considerations than on strictly economic cost-benefit criteria.

The stress on heavy industry and the goal of achieving a high degree of self-sufficiency were supported by the then easy availability of energy and raw material supplies, mainly from the USSR (see ID/WG.357/3). The price system was formed so that the costs of - domestic and imported - inputs, including material inputs, were kept at a low level so as to facilitate the development of the heavy industry, including the engineering industry. Under such circumstances, these industrial branches could seemingly operate economically even on the basis of imported raw material resources. Only at a later stage attempts were made to utilize more rationally the available local raw material supplies.

(ii) Until the mid-seventies the increase of the net material product of the European CMEA countries was very fast and exceeded the growth of both the developed market economies and the developing countries (see ID/WG.357/4).

Growth rates in developed market economies declined in the early seventies, and in the second half of the 70's a slow-down occurred in the European CMEA countries.

At the outset of this rapid industrialization process in East Europe wide differences existed in the level of industrial development among the individual countries as well as among sectors within the countries. One major development objective was to reduce such internal discrepancies. To achieve a better distribution of industry it was not sufficient to pursue the development of existing industrial centres but to establish new industrial locations equipped with the necessary infrastructure. Thus, for example, in Czechoslovakia - an already industrially quite advanced country - special attention was paid to the industrialization of a relatively weak region (Slovakia), which so far had a relatively low industrial base (see ID/WG.357/1). Similar approaches were typical also for the other CMEA countries.

(iii) The current share of manufacturing industry in the economy as a whole of European CMEA countries is similar to that of the developed market economies. However, compared to these, the East European countries' service sector has been much less developed. The relatively weak position of this sector seems now to cause certain constraints for the economy.

The branch structure of the CMEA industry as a whole is characterized by the predominance of heavy manufacturing industry, with the electrical and engineering industry carrying the most weight. It is assumed that the lower share of the engineering industry in the structure of the USSR industry - relative to the other countries in the region - is not only due to the high share of primary industries in the countries but also to the specific Soviet price structure. This assumption is reinforced by the high shares of the textile and clothing industries and as well as of the food industry. The latter branch has the highest share in Bulgaria, which reflects the rapid development achieved by the country in this branch. In the Hungarian structure, on the other hand, food industry has a relatively low share in spite of its well-known achievements in agriculture. The reason may be that - besides the above mentioned special price structure which distorts the picture - the development in the food processing industry is somewhat lagging behind the increase in agricultural output.

Despite the rapid increases of the chemical branch in the region as a whole, the share of CMEA countries is relatively low in terms of world levels. In Hungary the chemical industry has the highest structural share (equal to roughly the world average) in spite of the lack of indigenous raw materials. This can be explained by the high demand for chemicals in agriculture and the importance of the pharmaceutical industry with its high value added. The differences among CMEA countries in shares of paper and wood industries may be attributed to natural endowments. However, the low share of paper industry in the whole region in comparison to developed market economy countries (DMECs) is first of all attributable to a relatively low share of the packaging industries. In Czechoslovakia, leather and glass industries have a relatively high share as a reflection of traditions.

A comparison between the relative growth of different branches in the period 1971-79 shows that light manufacturing, particularly textiles and clothing, increased in CMEA below the average industrial development pace. Its relative growth was also smaller than in the DCs or in the DMECs. The foremost significant feature in the growth in the individual CMEA countries is that both the engineering and chemical industries showed during the whole period 1961-78 a considerably higher growth coefficient than the industrial average. Though to a lesser extent, the glass industry has been growing also above, or close to, the industrial average almost continuously in all countries.

With the exception of Hungary, the CMEA had considerable growth also in the building industry. The paper industry has grown above the average during the whole period in Bulgaria and Hungary, in Czechoslovakia between 1971-78, and in Romania between 1961-70. The leather and textile industries were below average in all countries. In most cases the clothing industry showed higher growth than textiles; nevertheless, with the exception of Poland and Romania, its rate remained below the industrial average. The food industry had in almost all countries the lowest growth. It is interesting to note that deviations from the industrial average became considerably smaller in all countries during the period of 1971-78 in comparison to 1961-70 (see ID/WG.357/4 and 5).

(iv) The principle of full employment was from the outset incorporated in the national constitutions of the CMEA countries. It has been pointed out at the same time that insufficient attention was given to an increase of productivity and to the fostering of a stringent work organization. Policies and conditions did not provide for sufficient pressure on management to select the most efficient up-to-date technologies, but stimulated the use of technologies and capacities of the rapidly expanding engineering and capital goods industry available at that time within the CMEA region. Quite evidently, any required quick response to the challenges of the world economy was therefore not always forthcoming in the respective time. The inflow of manpower from agriculture into industry was abundant in the 1950's (with an average yearly increase of industrial employment of over 4 per cent). By the end of the seventies, however, with the exception of Romania and the USSR, the increase in labour supply dropped to 1 per cent and showed an absolute decrease in Hungary (see ID/WG.357/4). This development should have put even greater pressure on industry to increase productivity. Productivity increase, however, does not seem to have kept pace with requirements in the CMEA countries. According to estimations, the productivity of the region is lower than that of the DMECs. Data from Hungary indicate that productivity in this country is only about half of that the the DMECs (see ID/WG.357/4). The differences in the case of GDR, CSSR and USSR are presumably smaller, yet considerable. The annual growth of labour productivity remained within a relatively narrow range for all countries of CMEA, i.e. between 5.5 and 6.9 per cent per annum for the total period of 1951-1979; in Hungary the rate was somewhat lower than average. In the first half of the 1970's a general acceleration of the productivity increase manifested itself. Towards the end of the decade the rate slowed down again, except in Romania (see ID/WG.357/4, Table 9).

The ratio of accumulation in CMEA countries in the last two decades was relatively high in international comparison. Although a decline of the ratio has been experienced in several countries towards the end of the seventies, the average of the years 1976-78 ranged from 22.5 per cent of the national income in the GDR to 36.9 per cent in Romania. Gross investment in manufacturing industries grew in most countries at a faster rate than gross output. Thus, during the period 1966-1979, the incremental gross capital

output ratio increased significantly. However, there was an absolute decline of gross investment in many branches. While the growth rate of output diminished in almost all branches, output did not decline in absolute terms. As a result, the incremental capital output ratio improved in most branches in this latter period.

(v) For the East European CMEA countries, production for the respective national markets is clearly more important than production for exports. Export growth of the CMEA countries has been slower than that of other country groups. Within CMEA the export intensity differs from country to country and among product groups. Exports to other CMEA member countries was somewhat faster than to other areas. This trend changed in the 1970's when global export growth surpassed the increase of intra-regional trade. While the share of the intra-regional trade was somewhat declining in the 1970's, the importance of the regional market continued to grow for machinery exports. In 1960, 65.4 per cent of the machinery exports of the member countries were destined for the CMEA market. This share grew further to 73.9 per cent in 1977, while the value of this increased over nine times. The role of the intra-regional market remained predominant. The lowest importance was for non-ferrous metals where the share in 1977 was just over 50 per cent.

Intra-branch specialization is a predominant feature within CMEA countries. However, lack of detailed production data makes it difficult to analyse the intra-branch specialization in detail. Specialization is most advanced in the engineering industry and more on the product level than on the level of sub-branches. In the past, similar trends at the sub-branch level could be observed in all the countries. Thus, the machine industry, the automative industry and the instruments industry have emerged as growth industries in all countries. Country specialization emerges in terms of products. Altogether about 10,000 products of the machinery and electrical engineering industry are covered by bilateral or multilateral specialization agreements (see ID/WG.357/3). Thus, 81 per cent of the delivery of lifting devices and conveyors and 60 per cent of vehicles are subject to these agreements. Also, other branches are subject to an increasing specialization, for instance, through a product-by-product approach. Some 20 per cent of mining, metallurgy and oil industry equipment are covered by specialization agreements. In

certain cases it is attempted to have complete lines of products (in various countries this practice was discontinued in order to concentrate on production in one country only). In such cases one might assume an explicit structural policy at a micro level. Other agreements seem to be based on more ad hoc decisions, on available capacities, etc., rather than on a systematic structural policy. A major constraint is that the agreements are interwoven with the intricate system of balance of mutual trade. Thus it is difficult to change any one agreement without upsetting the balance in the other areas. Specialization evidently contributes positively to increasing productivity, but the apparent rigidity in the system might hamper and discourage necessary structural changes.

During the last decades, the shares of the developed market economies, the developing countries and the CMEA countries in industrial production showed divergent developments. The share of the developed market economies in world industrial production declined steadily whereas the shares of the developing countries and the CMEA countries increased, the latter faster than the first (see ID/WG.357/5). However, in world manufactured exports the share of the developed market economies remained unchanged (more than 4/5) and developing countries gained basically what CMEA countries had lost in their shares. Trade in manufactures between these latter groups of countries, in a longer term retrospect, grew faster than their total foreign trade flows. In the 1970's however, a different picture emerged: the share of the European CMEA countries in the exports of developing countries dropped and this was experienced also in the imports of developing countries; the role of the CMEA countries in this respect declined. It should be emphasized, however, that the mutual flows of trade between the two groups increased in absolute terms. Also, the role of developing countries in CMEA countries trade increased.

Efforts were made in the European CMEA countries to improve the foreign trade balance, by promoting exports combined with reducing import growth expansion. Intentions have been clearly stated to broaden the division of labour with developing countries through co-operation and trade. This policy is likely to yield significant results only in a longer-term perspective.

(vi) The extraordinarily rapid industrial growth achieved through extensive industrialization was characteristic in the region until the mid-seventies. In the second half of the seventies the easily available resources - manpower and investible resources - became scarce to this type of development. The present structure of industry is constrained by the fact that: no unoccupied manpower is available; prices of raw materials and fuels are close to the world price level; investment capital became a scarce resource; the crisis of the slow-down of industrial growth in developed market economies and uncertainties of the world market did indirectly also affect the European countries; in several CMEA countries the indebtedness towards developed market economies has reached unprecedented levels; and international developments are accompanied by profound technical and structural changes. CMEA countries would need to speed up innovations and carry out changes in industrial structure to avoid further lagging behind. All European CMEA countries indeed attempt to introduce various reforms in their economic operations and to change the structure of their industry. The question is at which pace and in which precise directions these changes will take place.

It was pointed out that, while the changes of the world economy have in recent years proceeded at an ever quickening pace, their impact on the CMEA countries prevailed only slower and factors and constraints of further development have only begun to be analyzed in recent years. This includes the realization that the industrialization process going on in the developing countries is, inter alia, an important factor which will undoubtedly influence the CMEA countries while adjusting their industrial structure. The issue was raised in connexion with the actual role of trade in manufacturing between European CMEA countries and developing countries. It was found that, while trade between the two groups of countries embraces only a relatively small number of developing countries, these represent nearly the half of the population of this group of countries. In the discussion the connexion between full employment and slow increase of productivity in CMEA countries, as implied in the discussion paper (ID/WG.357/6, page 4, para. 2), was contested. It was argued that unemployment would not be a solution to increase productivity more rapidly. The same paper also suggested that rigidity of the trade system constitutes a hindrance to structural changes.

Views differed about the extent of the manpower shortage in the European CMEA countries. An increase of labour productivity was generally anticipated. As far as the redeployment of industries from developed to developing countries is concerned, it was emphasized that the approach of the European CMEA countries was to strengthen the industrialization of the developing countries, putting particular emphasis on establishing capacities of primary commodities. It was pointed out that the creation of such capacities called for attention to the arising market problems. The developing countries needed more assistance from the CMEA countries in this respect.

II. Challenges to the Changing Industrial Structure

Introducing the discussion on challenges and factors influencing the industrial structure, Prof. J. de Bandt pointed out that it was necessary to take due account of the constraints with which all the economies have to cope. More specifically he argued that:

- Most of the discussions on the international division of labour refer essentially to the division of labour worked out by the market mechanisms and factor and resource endowments. Technology, state preferences and policies, and transnational corporations have been playing a significant role in changing the pattern of specialization.

- Growth models do not furnish a body of settled conclusions immediately applicable to policy in every country. Various factors affect the hypothetical postulates that govern of model and its feasibility, such as possibility of increasing the value added content of production; access to appropriate technology; changes in terms of trade; competition between different groups of countries on the markets; potentials and prospects of the productivity increase; and the extent to which the particular countries will be reduced to subcontracting functions.

- Organizational matters gained importance in recent times: The question is by which organizational adjustment capabilities it could be increased. Organizational problems are to be raised at different levels: (a) at the level of the firms - under which conditions are the enterprises to be more flexible and adaptive without putting the main burden on the workers; (b) at the level of the relations within the industrial system; and (c) at the level of the industrial system as a whole and its external relations.

- Industrialization of the developing countries seems as the most difficult challenge, particularly their access to the existing markets in developed countries. Most of the developed countries expect to find increasing outlets for their engineering products in the developing countries. But the question can be raised, how the developing countries are to pay for increasing imports - by increasing exports, or through credits? Both of these factors in turn refer to the above mentioned constraints.

- All industrial sectors are likely to be affected by new conditions and perspectives. This necessarily imposes restructuring or adaptation problems for the industrial system as a whole.

(i) The industrial structure of the CMEA, based mainly on import substitution and continuously growing capacities, seems to be challenged. Industrial growth was for a long period conceived as the extension of productive capacities and based on absorbing manpower from primary sectors and newly employed workers. It seems to be evident from the background papers that the growth in supply of industrial manpower decreased significantly. Neither unemployed females nor agricultural labour is any more available for industrial activity. The problem is aggravated by a slower growth rate of the population in the region. Resources to procure equipment of new technologies for productivity increase seem also to be limited.

(ii) Another new feature coming into the fore in the 1970's was the scarcity of cheap raw materials. The price increase of oil and other raw materials proved not to be a temporary phenomenon. Since the price system of CMEA trade is related to the world market, the soaring prices for oil and other raw materials have had a significant impact. Thus the prices of raw materials in the intra-CMEA trade were directly influenced by world market prices. The new system of yearly gliding prices, based on the average of the previous five years, is intended to exclude market speculation effects. This leads to a price level within CMEA, which adjusts to the one prevailing on the world market with a time lag.

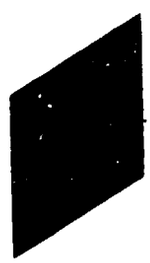
The impact of the world prices was reinforced by the diminishing supply of these raw material resources - mainly fuel, iron and metallic ores, wood, etc. from the USSR. The extraction costs are higher and usually a substantial initial investment outlay is required to open up new deposits. This necessitated the need for joint venture in investment projects in the first half of the 1970's. The new price relations called for a re-assessment of the structure of industry, which was established on the basis of high consumption of energy and raw materials. Also data in CMEA countries point to the fact that the per capita consumption of energy is higher than in countries with larger GDP's. This high energy intensity is attributed both to the industrial structure and the technology used.

(iii) Technological progress was a major source of economic and industrial growth in CMEA. All countries, particularly the USSR, have a large R + D potential. A close co-operation within CMEA in the field of science and technology is aimed at. Exchange of technological know-how and other information among member countries facilitated the growth process and the flow of trade methods.

Nevertheless, introduction of new technology is lagging behind. Innovative processes and especially the follow-up measures to apply and spread the output of research do not cope with the accelerated technical development in the world (see ID/WG.357/1).

(iv) The increased standard of living tended to increase the demand for agricultural products and services. As a result, these sectors are competing with industry to acquire labour force and investment means. Agriculture requires substantial investments and new types of inputs. An expanding service sector (including trade, health, service of durable consumer goods, etc.) is also influencing the industrial product mix. It also became evident that the consumer is exposed to changing patterns of consumption which is less predictable than the changes in the industry and therefore planning and production require increasing flexibility.

(v) Deterioration of terms of trade in the seventies also affected most of the European CMEA countries. The present structure of industry made it difficult to offset the impact of the raw material price increases. Products of CMEA countries also confronted with growing competition, particularly due to the import penetration from developing countries. The foreign trade balance of the European CMEA countries had deteriorated, leading to accumulated international indebtedness. The efforts to reduce the deficits through dynamic export growth has also met with constraints and, consequently, a re-appraisal of the import substitution policy can be expected. The problem may arise as to how to avoid under such circumstances a situation where short-term balance of payment considerations prevail over long-term structural objectives.



Discussions that transpired during the seminar drew the attention of the participants to the utilization of credits borrowed from developed market economies, since a part of these amounts were used for covering deficits. The indebtedness of some countries entails a difficult burden for the 1980's. New credit is also needed for industrialization in the developing countries, where a great number of educated people can actively participate in the industrialization process. A mutually advantageous co-operation is possible on this basis between the developing and the CMEA countries, if the financial problem can be solved.

Reflecting on the manpower situation, it was pointed out that, while unemployment is increasing in OECD countries, some CMEA countries face the problem of scarcity of labour force with specific qualifications or specialized skills. The key problem is to improve efficiency. A possible solution to the problem lies in the increase of labour productivity by: mechanization; better organization of factory management; reducing bureaucracy; and development of a reliable price system which should serve as a better basis for calculations.

The question of technology gap was also figured in the discussion. Modern technologies were mainly imported from developed market economies to bridge the technology gap partly by the products of those equipment. This strategy worked only partly, mainly because of the recession in the world economy and the slow pace of investments in CMEA countries. During the last years a declining trend could be identified in technology imports of the CMEA countries. Imports should be covered by exports and the key to this is to improve the quality of the goods manufactured. It was stated that in the case of smaller countries it is impossible to develop all kinds of technologies; the only way out is to import and adopt them, whereas in the case of the USSR - having a large scientific potential - there is great scope for better utilization of their own technological research capacities and improving links between research and production.

Attention was focussed on the utilization of the fixed assets of the USSR. It was argued that the utilization was not always efficient enough as the level

of sophistication proved to be the major determinant in the process of utilization. It was also added that, as far as industrial development was concerned, the quantity-oriented way of thinking looked obsolete, since high rate of growth did not assure the real index of growth. A slower rate of growth could generate major posititve changes, such as in quality or assortment. Since the quality of the product plays a significant role in the industrial development of the European CMEA countries, this has to be considered when aggregated statistical data are examined. In answering a specific question, it was stated that the main reason for the downturn in some sectors of the USSR economy in 1979 could be attributed to the unfavourable natural conditions in that year.

It was agreed that the bleak prospect of the world economy were dispelled by many factors and no spectacular increase could be expected in respect of trade. In all the European CMEA countries reforms in the field of planning and management are under preparation, making thereby the central planning system more flexible to meet the challenges.

The ratio of investment of the national income in the European CMEA countries was also discussed. The question was related to a certain ratio that was deemed compulsory in these countries until the mid-seventies. Arguments gravitated around this question which endorsed the view that the present significant decrease of investment ratio in several countries might cause difficulties in the 1980's.

III. Prospective Changes in the Industrial Structure in the 1980's

In his introduction, Mr. P. Wiedemann (UNIDO Secretariat) singled out four sets of factors that could influence the industrial structure of the CMEA in the 1980's:

- the inherited industrial structure;
- the general internal and external environment within which industrial restructuring takes place;
- the specific internal and external industrial environment and the resources - human capital, physical capital, financial capital - available for industrialization; and
- the economic plans of the CMEA countries for the 1980's and the assessment of them in light of the three above-mentioned influences.

As a kick-off to the discussion, it was considered useful to state at first some of the features that characterize the CMEA countries as a whole in the 1980's. The key element in the policy toward structural change in these countries over the 1980's will be a further increase in the share of industrial production in total output. The structure of intra-branch production will be altered in favour of consumer goods production, and the structure of investment within industry will be altered to give great emphasis to the service sector and infrastructure.

With regard to industrial structure, there will be an increased emphasis on the development of the energy and mining sectors and of the processing industry. In the manufacturing sector, structural change is likely to take place due to the greater emphasis placed on the production of consumer goods. In the engineering industry the intra-branch structure will be altered in favour of electronics, robots, and highly automated machinery. There will also be effects on the intra-branch structure of industries such as the chemical industry and the machine-building industry due to the increased demand for material inputs resulting from the increased emphasis on agro-industrial development. Those sectors of the construction industry employing techniques and technologies conducive to shorter gestation periods will also undergo a relatively more rapid development on account of efforts to reduce the gestation period.

It was suggested that there were four perspectives from which one could examine the question of industrial structure in th 1980's in the region: first, sector specific; second, structural change for the national economies; third, structural change for the international economy; and fourth, the implications of the international economic environment and the ongoing process of international industrial restructuring in the 1980's and vice versa.

(i) The European CMEA countries entered the 1980's with considerable deceleration in their economic and industrial growth and attained, since the second half of the 1970's, the lowest growth rate of the net material product. The reasons for this slow-down in growth were stated in the previous chapters, based on the country and regional studies. Future actual rates of growth of the East European economies will depend on how successfully these countries ameliorate the adverse factors affecting productivity, and on the extent to which they cope with the dynamic changes in the international commodity and financial markets. With the exception of the USSR, all the East European countries are relatively small and seek rapid economic development with a modest resource base (with a few exceptions). These countries face difficult choices in seeking domestic sources to substitute for costly imports, and all of them, by their size and meagre natural resource endowments, are heavily dependent on foreign trade.

(ii) The CMEA countries are endeavouring to systematically reduce the raw material an energy intensity in industrial production and, to the extent possible, to rely on indigenous rather than imported resources. This trend is clearly shown in the various country studies referred to above.

This policy can be expected to have a significant bearing on the pattern of industrial production and on the domestic production of energy. New five-year plans call for coal mining to be stepped up and nuclear power generation to gain importance in the electricity supply. Thus it is planned that by 1990 25 per cent of the electric energy requirements of the CMEA countries will be covered by nuclear power, while oil is to be utilized mainly for petrochemical and power driving purposes. Simple heating consumption would thus be reduced. To achieve this optimistic aim, investment and production in mining and the energy industry have to be substantially increased. The wide

ranging policy of seeking savings in energy consumption involves several measures, including considerable increases in the internal prices of fuel and raw materials, since it is felt that the previous low prices contributed to considerable waste. Equipment and vehicles that are inefficient in energy consumption are being written off, and all kinds of waste heat utilization and isolation work are encouraged and financially promoted.

Increasing attention is also expected to be given to various means of saving inputs in industry's consumption of raw materials. Calculations show that in the CSSR technical measures in industrial production could reduce the consumption of steel by 2 million tonnes and of non-ferrous metal products by 44-50,000 tonnes. Such savings would obviously have an impact on the planned development of production capacity in the metallurgical industry. In the USSR, savings in the range of 10 million tonnes are envisaged for steel products for the year 1985.

A reduction in the fuel and raw materials intensity could also be achieved through a lowering of the structural share of those industries which are high consumers of these resources. On the basis of available information it seems that CMEA countries are not likely to directly reduce the capacity of such industries. Instead, they seem to plan to increase the degree of processing in these branches in order to attain a higher value added. This obviously implies a planned reduction of the raw material input in relation to the net material product and also a gradual reduction of the share of the basic industries within the total industrial output. The implementation of this policy would, however, seem to be hampered by the low growth rate planned for the industrial sector as a whole. It can therefore be assumed that a temporary underutilization could occur in the existing capacities in basic industries.

(iii) Plans to increase the share of value added in total output form an important feature of the development plans in the CMEA countries and this is envisaged in almost all branches. The output of the chemical industries is to grow above the industrial average all over the region, accompanied by a considerable shift in its structure. In the engineering and electrical industry major efforts are being made to introduce greater automation and more extensive use of the electronics and computer techniques. All countries have targets for these sub-branches which greatly exceed those of the industrial average.

(iv) The quality aspect of industrial products is receiving growing attention. Attempts to produce higher quality final products will also generate an increasing impetus for using new technologies in the production of intermediate products. Advances in automation are, in all countries, seen as an essential means for substantially increasing the technical level of industrial production. New technologies are considered necessary for achieving flexibility in industrial production. Specifically, automation is in many CMEA countries seen as a means to offset the growing manpower shortage and in particular to reduce requirements for unskilled and/or hard physical labour. It is significant that the GDR - which probably has the scarcest labour supply in the CMEA - is placing the greatest emphasis on introducing industrial robots and various techniques based on micro-processors. In the USSR new technologies are also to be introduced to facilitate the exploitation of new raw material resources in areas with extreme climatic conditions.

The question arises as to the acquisition or generation of the new technologies. Since some of the new technologies are at present most readily - or exclusively - available in the most advanced market economies, it may create difficulties for the CMEA countries in acquiring access to specialized processes and equipment. It is therefore possible that delays in their application could occur, and that CMEA countries would have to attempt to initiate faster development of their own innovation processes in wider areas than is presently being foreseen if the plans are to be attained.

(v) Consumer demand is given increased attention in the new plans of the CMEA countries. In the plan of the USSR, growth of the consumer goods ("B") sector is for the first time to be allocated higher priority than the capital goods ("A") sector (see ID/WG.357/3). In this connexion it is also to be noted that two branches within sector "A", namely the engineering and chemical industries, are giving increasing importance to the production of consumer goods.

In the 1981-85 plan of Hungary, considerable importance is given to ensuring the supply of a wide range of consumer goods for meeting the increasing domestic demand. A similar trend is noticeable in the CSSR where changes of the production structure of the electric and engineering industry as well as

the food and light industry aim at meeting the needs of the consumers. In respect to the textile, clothing and leather industries, a shift is anticipated towards higher quality and technical standards of the product (see ID/WG.357/1).

(vi) It can be expected that intra-regional specialization will be pursued with great emphasis. Although it is not possible on the basis of available documentation to provide a detailed picture of the future of this process, certain lines of development seem to emerge: the national factor and resource endowment will influence the specialization process more than before; specialization will grow significantly in the production of parts and components; the domestic demand of the USSR for various categories of industrial goods will continue to play a dominant role for the establishment of specialization agreements; and increased attention will be given to a division of labour in the field of innovation and R + D, with a view to pooling resources for national efforts.

(vii) A special feature of the emerging changes in the USSSR is the geographical shift of industrial activities (see ID/WG.357/3). Despite the previous dispersion of industries, the main share of manufacturing is still in the European area. However, both manpower and raw material reserves are exhausted in that part of the country. Thus, while between 1970-79 the population of the European republics of the Union increased only by about 6-9 per cent, those in Asia mostly increased by over 20 per cent. It is therefore seen as an important task to improve the location of productive forces, and to ameloriate the territorial division of labour. This is to contribute to the development of small and medium-size towns. Besides establishing large specialized industries in these towns, there are possibilities for setting up subsidiaries of already existing plants.

The geographical concept of the industrial development involves the expansion of light and mechanical engineering industries in Central Asia, and intensification of the existing capacities in European and Ural areas. In Siberia an acceleration of the development in fuel, electric power, engineering, ferrous metallurgy, chemicals, petrochemicals, timber, pulp and paper, wood working and microbiological industries as well as that of the construction industry is planned.

(viii) Unexpected changes in the world economy seem to increase the need for flexibility in production and trade. It is more and more difficult to foresee all forces and their implications on the long-term strategies of the industrial development plans and international co-operation among interdependent countries. Measures recently taken in several CMEA countries indicate that management methods of industry become subject to changes both at national and international levels. Without diminishing the basic role and advantages of central planning, more flexibility is aimed at the enterprise level. Already now the responsibilities of the industrial managers have been increased and the separation of industry and foreign trade has been reduced or completely abolished, as a means of increasing enterprise flexibility. The structure of the industrial organizations is also likely to be subject to change. It could therefore be expected that in the long run structural changes will be facilitated both between and within industrial enterprises through new ways of industrial organization and management.

(ix) The 30th CMEA Session (1976) decided on the drafting of "Joint Special Programmes of Co-operation in the Major Branches of Material Production for a Period of 10-15 Years". Already at the 31st CMEA Session (1977) the Programme for Energy, Fuels and Raw Materials was given priority over the other programmes. The 32nd CMEA Session (1978) passed the first of the "Long-term Target Programmes of Co-operation until 1990 (LTPC)" - those in the fields of energy, raw materials and fuels, of agriculture and food industries, and of mechanical engineering - while the 33rd Session (1979) adopted the remaining two LTPC's, concerning industrial consumer goods and the development of transport systems. By concentrating on CMEA co-operation in these fields it is hoped that impediments to economic growth may be successfully overcome. In the longer run, the successful realization of target programmes could lead to structural changes in the CMEA economies - changes which in turn might increase the range of competitive goods.

In respect of medium-term plans, the targeted growth rates of the net materials products for the period 1981-85 (45 per cent) are well below the planned rates for the previous plan period 1976-1980, and are also lower than recent, actual growth rates in many of these countries.

The proceedings of the seminar made a passing reference to glimpses of plan priorities, resource allocations and plan targets embodied in the present and future plans of each country.

German Democratic Republic:

The draft outline of the plan for the 1980's envisages an annual growth rate of five per cent. This hypothetical growth rate is based on the assumption that energy and resource consuming sectors will introduce economy measures. A major goal is to maintain the present living standards. Energy production in the new 5-year plan receives 35 per cent of the investments. The national micro-electronic programme launched in 1976 would show its impact on the industry in the years to come. More importance will be accorded to the quality factor in production and to new achievements in environmental research (See ID/WG.357/9).

Czechoslovakia:

As the regards the Czechoslovakian industry (see ID/WG.357/1), a slow-down in the rate of growth is expected, due to transformation from extensive to intensive development. Changes in the planned industrial structure are now characterized by raw material and energy savings. The improvement of the foreign trade balance is one of the most important goals of the plan, with an attempt to reduce energy intensive exports rather than importing this type of goods. Broadening the international division of labour is to be continued, first of all with other CMEA countries, but further co-operation with other countries is also sought. Relations with developing countries are to be strengthened, particularly in the fields of scientific-technical co-operation.

Romania:

In respect of the Romanian plan for 1981-85, the quality factor and the efficient use of resources were emphasized (see ID/WG.357/8). The production of energy-intensive products receives less priority, whereas food industry and consumer goods will be developed more rapidly.

Poland:

In the present situation, no 5-year plan has been prepared. A programme for stabilization gives top-most priority to the agro-food industry and the production of consumer goods in the engineering industry. The scale of production in several branches is to be examined and changes in employment distribution are expected. The policies seem to be more akin to the principle of full employment (see ID/WG.357/2).

Bulgaria:

According to the plan in Bulgaria, the annual growth rate of industry is likely to decline from 7 per cent to 4 per cent. Among the branches, chemical industry augurs optimistic prospects. The plan postulates energy saving, and efficiency and quality in industrial activities to generate growth. The surplus labour from agriculture seems to be inadequate to meet the requirements of the industrial sector. Economic reforms are being formulated towards positive effects on the industry as well as on the economy as a whole.

USSR:

According to the present plans, industry in the USSR (see ID/WG.357/3) will generate a growth rate of 26-28 per cent during the next five years. A shift in plan priority is evidenced by the fact that the production of group B (consumer goods) will be higher than that of group A (means of production). This share may apply, however, only for the present 5-year plan, since further development of the whole economy is based on the engineering industry. The plan aims at quality improvement and higher efficiency. Growth of labour productivity should cover 85-90 per cent of the increase in industrial output. Territorial complexes are being built up for efficient resource utilization in the USSR. Complex programmes, based on the expected demographic increase, are also being elaborated. This would envisage a major geographical relocation of manpower within the country.

Hungary:

The Hungarian five-year plan for 1981-85 which contains only few compulsory figures aims at increasing the national income by 14-17 per cent during this period. Industrial production is expected to increase by 19-22 per cent, despite its meagre share of 17-19 per cent in the total outlay. Changes are expected in the micro- rather than in the macro-structure of the economy. The agro-food industry may be one of the engines of development. The Government feels able to keep inflation under control, and the plan presumes that the rate of inflation would be 5 per cent per year during the plan period. The growth of energy production and manufacturing may be impeded by scarcity of capital. A wider co-operation with developing countries is a definite intention of the government, but owing to the difficulties emanated from internal and external factors, progress in redeployment of industry is very slow.

Some findings of a study on economic development until 1990, being sponsored by the Economic Commission for Europe, were presented as part of an exercise in which major trends were being analysed and projected for the year 2000.

The statistical classification of Yugoslavia was contested by some participants, and the question raised as to why this country was not included among the socialist countries. It was agreed that statistical classifications are often based on conventions: Yugoslavia is not included among the socialist countries because it is not a member of the CMEA. In the UN statistics this country is sometimes included among OECD countries, and it is officially classified as a developing country.

IV. Prospects of Future Division of Labour between Developed Centrally Planned Economy Countries and Developing Countries

In his introduction, Professor D. Nayyar pointed out that from 1955 to 1970 trade between these two groups was the most dynamic component of world trade. There were two basic factors underlying this expansion: first, in a situation where scarcities of foreign exchange were a constraint, bilateralism made possible a high turnover of trade. Second, complementarities of demand between the two sets of countries were fundamental to the expansion of trade. However, both factors ran out of steam by the mid-seventies. Mutual interests were important in the first phase of the relationship, but it would be a mistake to ignore the potential sources of conflicts in the sphere of trade from the distribution of gains (which would depend, inter alia, on the terms of trade), and from the market access for manufactured exports from developing countries. The increasing international indebtedness of most of the CMEA countries would also squeeze the prospects of trade with developing countries. At the same time the European CMEA countries might compete with the newly industrializing countries on Western markets.

The composition of trade between the developing and the European CMEA countries, as far as the developing countries are concerned, is not significantly different from that of the developing - advanced market economies. Such traditional pattern could not transform the structure of production in the developing countries. Rather the future of economic interaction between the European CMEA and developing countries depends on a successful transition from a complementarity to a competitive pattern of trade, that is, inter-sectoral trade must be replaced by intra-sectoral trade and specialization. But the scope for a new international division of labour between these two groups, as it was already discussed, appears to be limited in the short run, and the situation can and has to be transformed only in the long term, to which the centrally planned system of the CMEA countries could also be well utilized. The main avenues for increasing manufactured exports from the developing countries are likely to be:

(i) processing of natural resources which would increase value added;
(ii) domestic resource based manufactures; and
(iii) labour intensive manufactured goods.

Diversification of trade in these directions would also yield gains in the European CMEA countries and would release scarce resources, particularly labour. It would also increase the range of consumer goods available in these countries.

It would be useful to distinguish between groups of developing countries: with oil exporting countries the prospects of trade are bright; with the newly industrializing countries the complementarities as a source of trade expansion are almost exhausted and an increasing competitiveness is emerging between the two groups of countries; and with the remaining developing countries the complementarities might remain an important force of trade in the years to come.

The import of the CMEA countries leads to the concentration on raw materials and fuels in trade with developing countries while manufactured goods dominate the imports of the developing countries from the CMEA (as they do the imports of the developing countries from the developed market economies), with machinery and transportation equipment being appreciably less important in the imports from the CMEA than from the West.

In the exports of the developing countries to the CMEA, raw materials and agricultural products dominate, with the share of manufactures being small and actually decreasing (from 9.5 per cent of total CMEA imports in 1965 to 8.4 per cent in 1979). Looked at from another perspective, 61.3 per cent of total CMEA imports in 1979 were manufactured imports, whereas only 8.4 per cent of CMEA imports from the developing countries were manufactures. Although structural changes in the industry of the CMEA countries, in the long run, may help in establishing a broader division of labour and, subsequently, an increasing trade between the two groups, the data suggest that one of the most difficult challenges to East-South trade relations in the 1980's will be the attempt of the developing countries to increase the share of these higher processed exports to the CMEA countries as a reflection of the developing countries (DCs) industrial development.

With the exception of Poland, the East European CMEA countries are generally poor in natural resources and, with the exception of Romania, these countries have traditionally seen the Soviet Union as their most important supplier of

raw materials, and particularly of oil. From the end of the 1970's it became clear that the supplies of oil from the Soviet Union would not be sufficient to meet fully the growing demands of the East European countries, although raw material and fuel intensity is going to be reduced. This would be a crucial factor in shaping the relationship of these countries over the 1980's.

It can be suggested that the export pattern of the USSR is expected to stabilize over the first half of the 1980's, with a decline in the share of fuel in Soviet exports. The decrease of oil and oil products in Soviet exports is planned to be offset by increased deliveries of gas and electric power. On the import side, it is planned that the trade pattern should remain steady, with the only notable fluctuations being in machinery and transport equipment (see ID/WG.357/3).

An important feature of the foreign trade of CMEA countries as related to developing countries is that trade is very highly concentrated among developing countries. The evidence from the country studies is that there is no reason to expect this pattern to change over the early 1980's.

The role of UNCTAD elicited an interesting debate that delved into specific areas of action and trade flows. It was emphasized that the recent initiative for maintaining bilateralism in payment methods was coming from developing countries, and that due to the limits of complementarity no major development could be expected in the near future. According to the opinion of several participants, the role of competition between CMEA countries and NICs was overemphasized.

It was also mentioned that those manufactured goods offered presently by many developing countries did not meet the demand of the CMEA countries. In view of the present possibilities efforts are to be focussed on medium- and long-term contracts.

The idea of going beyond the traditional trade - e.g. intra-sectoral subcontracting - was strongly supported. Notwithstanding the difficulties from both sides in shortages of capital, the possibilities of intra-sectoral co-operation are far from being fully utilized and a major difficulty to this was said to be the insufficient knowledge and experience of each other's economy.

It was emphasized that the goal of co-operation between CMEA and developing countries is to establish industries in the developing countries on a mutually advantageous basis with provision for structural adjustment. The pace of co-operation between developing and European CMEA countries received a set-back during 1975-77, but gained momentum since 1978. The idea of finding new ways for the division of labour instead of the present pattern of co-operation in industry was supported, together with the harmonization of mutual interests.

The question was raised as to what extent intra-industry trade was possible between European CMEA countries and developing countries. It was suggested that, although this would be desirable, the majority of the developing countries, and in many cases also the CMEA countries, were not yet satisfactority equipped to deal this factor. Furthermore, even in the framework of the CMEA this caused difficulties and often inter-branch specialization was favoured.

V. Concluding Remarks

As was repeatedly stated, and as the structure of the agenda reflects, the main purpose of the seminar was to analyse the confluence of challenges and changes, forcing every CMEA state to restructure its industry. During the seminar sessions and discussions, a number of voices urged the need for intensive research to analyze the factors that the European CMEA countries faced in shaping their industrial future. The problems stem from: a rapid growth in factor prices, particularly energy prices; new technologies which change factor proportions; changing industrial vulnerability; and import penetration from developing countries.

It was agreed that further research in connexion with the subject of this seminar was necessary and potentially very useful. Improved statistical data and more transparent price systems were major conditions of a more detailed analysis. The changes in the international economic and financial climate - including external borrowing, the terms of trade, and exchange rates - clearly would have an impact on future structural changes. All these factors would create major uncertainties and a befogged state of affairs, as far as industrial growth is concerned for the 1980's.

Participants of the seminar agreed that the statistical basis for a comprehensive analysis, particularly on the micro level, was not available in a comparable form and that the aggregated data do not reveal the real picture. One of the urgent tasks, therefore, was to establish a unified data collection method, based on the UN statistics, because without this detailed analysis comparison is hardly possible and sometimes misleading. Proposals were made by participants to respective UN organizations to elaborate further on this question. Also the national price system used in the CMEA countries - having also social functions - does not reflect in many cases a clear picture, especially on sectoral or product level.

Many recommendations were made in respect of further research, inter alia:

- Elaboration of a general philosophy of structural changes and restructuring of industry;
- Identification of areas of mutual interest for groups of countries in industrial restructuring;
- Penetration of developed and European CMEA country markets by developing countries;
- Analyses of existing instruments and further preconditions for the redeployment of industries from developed to developing countries;
- Attempts to identify forces which necessitate the structural changes
- in industry; and
- Identification of complementary interests between developing and European CMEA countries in co-operation within material-enery intensive sectors, etc.

Mr. Herman Muegge (UNIDO Secretariat) stressed the necessity of conceptualizing the research findings to predict, evaluate and manage the repercussions, challenges and structural adjustments, particularly in the spheres of redeployment, structural change and international restructuring.

UNIDO's mandate is to pinpoint structural patterns and related problems which emerge, and to attempt to provide a message to decision-makers in respect of the possible convergence of policies affecting the international division of labour. In order to obtain a perception of a country's future pattern of structural change of industry, many indicators - such as production, employment, weight of sectors, use of raw materials, energy, domestic consumption, investment, pre-production activities - must be analyzed. It is realized that such a task is very difficult to achieve, especially when even national data are not always available. The main goal is, however, to stimulate forward-looking structural analyses within the framework of the - changing - international trading system.

UNIDO sees itself as a clearing house for such information. It intends to continue this work with active support and co-operation of the respective national institutions. Indeed, in order to be effective, UNIDO must work very closely with research groups related to industry in various European CMEA

countries. This seminar should be seen as one of a series of joint working sessions in which recent findings of research are presented and reviewed and an attempt is made to synthesize major observations on the international restructuring process.

ANNEX I

Agenda

Research Seminar on Structural Changes in Industry in European CMEA Countries (22-26 March 1982, Budapest, Hungary)

Monday
22 March

10 - 12 a.m.	1. Opening 2. The Present Structure of Industry and Foreign Trade - General Introduction - Short Introduction by authors of papers
12^{30} p.m.	Luncheon Organizational matters
3 - 6 p.m.	Item 2 continued - General Discussion
6 p.m.	Departure for wine evening

Tuesday
23 March

9 - 12 a.m.	3. New Challenges to and Factors Influencing the Industrial Structure - General Introduction - Discussion
12^{30} p.m.	Luncheon
2 - 5 p.m.	Item 3 continued
7 p.m.	Dinner

Wednesday 24 March	
8^{30} a.m.	4. The Case of a Company in the Restructuring Process: Visit and Discussions in the Textile Company BUDAFLAX in Budakalász
	Luncheon
2 p.m.	Return to the city of Budapest
Afternoon free	
Thursday 25 March	
9 - 12 a.m.	5. Prospective Changes in the Industrial Structure in the 1980's - General Introduction - Discussion
12^{30} p.m.	Luncheon
2 - 6 p.m.	6. Prospects of Future Division of Labour between Developed Centrally Plannced Economy Countries and Developing Countries - General Introduction - Discussion
7 p.m.	Dinner
Friday 26 March	
9 - 12 a.m.	7. Concluding Observations - Brief Introduction by a panel - Discussion
12 a.m.	8. Closing

ANNEX II

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Research Seminar on Structural Changes in Industry in European CMEA Countries (22-26 March 1982, Budapest, Hungary)

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ANNEX III

List of Papers

The major inputs to this research seminar were the following studies prepared by UNIDO consultants in co-operation with the UNIDO secretariat:

- The division of labour between centrally planned economy countries in Eastern Europe and developing countries. IS/193

- Structural changes in Hungarian industry and prospects of division of labour with developing countries. IS/196

- Structural changes in the Czechoslovakian industry and prospects of division of labour with developing countries. ID/WG/357/1

- Structural changes in the Polish industry. ID/WG.357/2

- Structural changes in the USSR industry and prospects of divison of labour with developing countries. ID/WG.357/3

- Industrial specialization in CMEA countries. Selected issues. ID/WG.357/4

- Structural changes in manufacturing industries of East European CMEA area and patterns of trade in manufacture between CMEA countries and developing countries. ID/WG.357/5

- Salient features of structural changes in European CMEA countries. ID/WG.357/6

In addition, during the meeting the following short papers were also submitted:

- Some reflections on East-South trade and the division of labour. ID/WG.357/7

- Structural changes in Romanian industry and the expansion of its foreign economic re'ations. ID/WG.357/8

- Some results, problems and tasks of structural changes in the industry of the German Democratic Republic. ID/WG.357/9

- Structural approaches to economic analysis. Some aspects of recent work of the UN Economic Commission for Europe. ID/WG.357/10

ANNEX IV

Visit to the Factory BUDAFLAX on 24 March 1982

The aim of the visit to Budaflax was to discuss how a factory adjusted itself to the changing requirements of the domestic and export market and to what extent this depended on the Hungarian centrally planned system. After some general information on the factory, questions were raised by the participants of the seminar, to which the deputy commercial director replied.

The machines used in the factory, it was pointed out, were imported partly from CMEA and partly from developed market economy countries (Many of these machines are not produced within CMEA countries). Spare parts for imported machines were procured through foreign trade companies.

In connexion with the factory's activity and the central planning, it was stated that the factory always took the intitiatives and only a few main indicators were approved by the central authorities. The salary system contained an important role for incentives as a way to stimulate increases in both quantity and quality. Shortage of labour is the major problem of the factory. Labour productivity was increased by using outside expertise in organization, but it was still lower than in modern factories in developed market economies. Workers are integrated in decision making through regular meetings of the trade union, which plays an active role in leadership where they explain their opinions and recommendations. There is research and development activity in the factory, but they keep pace with the requirements also by buying licences and know-how. The factory is interested in co-operating with enterprises in developing countries, particularly with spinning mills, and they are keen on finding opportunities for establishing joint-ventures on bi- or tripartite basis.