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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

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9 September 1985

EAST EUROPE REPORT

ECONOMIC AND INDUSTRIAL AFFAIRS

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1984 CEMA INDUSTRIAL PRODUCTION RESULTS

Prague SVET HOSPODARSTVI in Czech No 84, 1985 p 6

[Text] Last year's industrial results for the European countries of CEMA were the best in the current 5-year plan. The increment in industrial production in the region reached 4.4 percent which was more than the plan called for (4 percent) and more than the 1983 results (4.3 percent) and was the highest since 1978 (5.1 percent). The growth rate of industrial production exceeded the level attained in 1983 in all countries with the exception of Poland; the increment in the USSR was the same for both years.

Of the factors which contributed to the dynamic growth in industrial production those which shared in removing bottlenecks in supplying the various branches should be mentioned primarily. These were especially:

- i. the growth in production in the fuels and energy industry, in metallurgy and in the chemical industry;
- ii. the favorable development of agriculture in three succeeding years in the majority of the countries, as a result of which the supply of agricultural raw materials to industry was substantially improved;
- iii. greater imports in six of the smaller countries in 1984;
- iv. the reduction in the consumption of fuels, energy and raw materials in industry.

A favorable development of industrial activity is also anticipated for this year. The cumulative rate of its growth in the region should reach a level of 4.1 percent, which attests to the fact that the European countries of CEMA are striving more for stabilization than acceleration of the dynamics of industrial development. This effort can be explained in part by a specific improvement in efficiency over the past 2 years which exhausted some more easily attainable short-term factors involved in the dynamization of production to a certain extent, as well as the persistent uncertainty regarding the developments of the external environment and as a result of sharply limited inputs. The attainment of the planned growth rate this year will, thus, depend much more on improving the efficiency of industry. Special attention is, therefore, devoted in plans to basic factors influencing growth: scientific-technical progress, improved management and planning, and the human factor.

Planned and Actual Development of Gross Industrial Production in European CEMA Countries in the Years 1981 Through 1985 (average and annual growth rate in %)

Country (Region)	1981-1985	1981	1982	1983	1984	1984	1985
	Plan				Plan		Plan
Bulgaria	5.1	4.9	4.6	3.9	5.0	4.5	5.2
Czechoslovakia	2.7-3.4	2.1	1.1	2.8	2.9	3.9	3.0
Hungary	3.5-4.0	2.4	2.5	1.4	1.5-2.0	3.0	3.0
GDR ¹	5.1	4.7	3.1	4.1	3.6	4.2	3.8
Poland	3.8-5.4 ²	-10.8	-2.1	6.4	4.5	5.3	4.0-4.5
Romania ¹	7.6	2.6	1.1	4.7	6.7	6.7	7.5
Six smaller countries, total	3.7-3.8	- 0.6	1.2	4.4	4.3	4.9	4.6
USSR	4.7	3.4	2.9	4.2	3.8	4.2	3.9
European CEMA countries, total	4.4	2.2	2.4	4.3	4.0	4.4	4.1

¹ Market production.

² Three-year plan, 1983-1985.

Remark: National statistics, statistical report on annual results, plans;
"Economic Survey of Europe in 1984-1985," ECG, Geneva, 1985.

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CEMA TRANSPORTATION PICTURE: PROJECTIONS

Warsaw ZYCIE WARSZAWY in Polish 24 Jun 85 p 7

[Article by Krzstof Koprowski]

[Text] The development of transportation within the CEMA member nations is one of the most important tasks of this economic grouping of the ten socialist nations of Europe, Asia, and Latin America. This also represents the conclusion of the 113th session of the CEMA Executive Committee, which met in January 1985 in Moscow, as well as that of the just concluded 73rd session of the Council's Standing Transportation Committee. Also, many views will undoubtedly be presented with regard to transportation matters in Warsaw during the 40th session.

The directions of development in this area are being evaluated by the appropriate documents: "The Integrated Program For Transportation Linkage," "Basic Directions and Cooperation Tasks In Transportation Among CEMA Member Nations For the Years 1976-1980 And The Future," as well as the long-term integrated program for the development of transportation lines together with the appropriate agreements, as well as the changes being accomplished in this area in recent years.

Certain changes in freight services took place throughout the 1970's and in the early 1980's. As a result, oil and natural gas pipeline shipments increased significantly. With regard to international passenger transport, motor transport moved into first place chiefly because of the development of individual transportation. The role of ocean transport also increased. River transport, however, continues to play a very small role, and its potential is not being utilized.

As is evident from the prognoses, freight transport in 1990 among the CEMA nations will only increase by 22 percent in comparison with 1980 (container shipments will increase fourfold), while passenger transport will increase by 33 percent. This results from the fact that within the socialist division of labor framework the aim is to develop material, raw material, and fuel efficient production. This in turn, should help in decreasing the freight shipments despite the increased trade. These tendencies have been reflected in the prognosis for the development of transportation until the year 2000 among the CEMA members.

Currently, one of the main problems facing the council members is the satisfactory distribution of freight among the different modes of transport available, together with the assumption that in the future the railways will also continue to ship international freight.

Unfortunately, even today together with the excessive burdens it is difficult to cope with the increased work. Much has to be done in order to improve shipment standards, decrease tieups, increase circulation of freight by not allowing it to back up in the shippers' warehouses, and to modernize the rolling stock and tracks.

In rail transport, the first priority is the modernization and technical renovation of the international rail trunk lines. Poland has an important role to play since it lies at the intersection of many important rail lines and services a substantial portion of the transit shipments. A total of approximately 14 million tons of foreign freight is transshipped through our country, and we benefit from this substantially. For our part, in order to improve transshipments, among other things, we modernized the rail line linking Terespol to Kunowice. Soviet freight is shipped through this point to East Germany and vice versa. Between 1986-90 decreased east-west transit shipments totaling 85 percent and west-east transit shipments totaling 88 percent are being anticipated. Specifically, in 1990 5 million tons less goods will be shipped than in 1985. This will be due to the initiation of the ferry line linking Soviet Klaipeda with Sassnitz-Mukran in East Germany.

As anticipated, however, shipments on the north-south line will increase substantially. Development of transit shipments in this direction (especially Czechoslovakia, Hungary, and Scandinavia) will now be aided by the completion of the general renovation and modernization of the Oder rail trunk line from the southern border of Poland through Wroclaw and Zielona Gora to Szczecin and Swinoujscie.

The Czechoslovak minister of foreign trade indicated at a press conference in Prague that Czechoslovakia was interested in increasing its transit shipments through Polish ports, at the same time participating in their expansion and modernization. This subject is currently the topic of discussions between the two nations. In accordance with 1985 plans, freight shipments between Poland and Czechoslovakia are expected to increase by 10 percent in imports and 7 percent in exports, between Poland and Hungary by 40 percent in imports and 19 percent in exports, with Bulgaria by 18 percent in both imports and exports, and with Romania by 37 percent in imports and 5 percent in exports by the year 1990.

As a result, in 1990 north-south transit shipments through Poland will increase by 11 percent in comparison with 1985.

We must consider energy and material conservation, initiation of modern technology (microprocessors and robot technology), containerization of freight, increased production and modernization of railroad rolling stock as some of the most important tasks which the CEMA countries have set before

themselves with respect to cooperation in the transportation sector. An agreement was signed concerning the modernization and reconstruction of 14 main east-west trunk lines and 4 north-south trunk lines. Preparation plans for the linking of the Danube and the Oder are to be completed by May 1990. In addition, last year Poland and Czechoslovakia undertook discussions with regard to improved efficiency of the Oder shipping trade up to Ostrava. Despite the many achievements in motor transport, it has been impossible to reach agreement on a uniform international tariff. Much attention, however, is being devoted to the construction of international highways in which agreement has already been reached. Principally, this concerns two international highways: Rostock - Berlin - Prague - Bratislava - Budapest - Konstanz and Gdansk - Warsaw - Bratislava - Bucharest with the link with the highway to Sofia.

The construction of new ferry crossings represents another of the prospective directions for transport improvement. For many years the Varna (Bulgaria) - Il'ichevsk (USSR) link, through which 4 million tons of goods pass annually, has stood the test. The Klaipeda - Mukran line which will allow for the shipment of over 5 million tons of freight annually is being established. With regard to the future development of passenger and freight transport among the CEMA nations, a 24 percent increase in rail shipments, 46 percent in ocean shipments, 62 percent in river shipments, 105 percent in motor transport, and a fivefold increase in ferry transport is being predicted by the year 2000.

The establishment and development of a uniform transportation system represents a long-term CEMA goal. With this goal in mind, they intend to begin joint construction on international transportation lines within the individual countries. It is also necessary to improve the international railroad transit tariff, to better utilize the agreement concerning the joint railroad yard, and to undertake diligent activities within the framework of the Council for Joint Container Use (SPK). Solutions also necessitate many legal and economic (tariffs) issues, joint transportation policy, as well as actions with regard to third party countries.

The demand for rolling stock as well as the most important machinery and equipment essential for efficient transport has already been developed. Requirements and technical conditions for basic machinery and equipment have already been defined. It is now necessary to better utilize the benefits which have resulted from the international division of labor and to embark upon the fulfillment of a new and immediate program of multilateral cooperation in the transportation sector. This will benefit all partners, and especially Poland.

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INTERNATIONAL AFFAIRS

CSSR TRUCK PRODUCERS IMPROVEMENT INTENTIONS DISCUSSED

Prague SVET HOSPODARSTVI in Czech No 84, 1985 p 2

[Text] Approximately 23 percent of total engineering production in CEMA member countries is accounted for by the automobile industry. Within the framework of participating nations Czechoslovakia shares in the production of passenger cars to the extent of 7.6 percent, cargo vehicles 4.8 percent and buses 2.6 percent. The automobile industry is also the strongest component of the Czechoslovak general engineering industry since it represents more than one-fourth of its total production and a third of its exports. The cargo vehicle area is the most significant sector as a result of its volume of production and exports.

Czechoslovakia is a specialized producer of trucks with a capacity of more than 12 tons. Virtually 20,000 such vehicles from the Tatra Enterprise will be delivered during the present 5-year plan to trading partners in CEMA countries. Similarly, long-distance and international highway traffic trucks from the LIAZ National Enterprise are finding application with foreign customers as a result of their capacity and reliability. In the Soviet Union, which is among the main customers for LIAZ trucks, more than 20,000 LIAZ tractors are in service in conjunction with refrigerated trailers produced by the Orlican National Enterprise.

Innovation intentions of Czechoslovak cargo vehicle producers are aimed at improving the technical parameters of the vehicles and their appointments as well as their operating economy. A number of Tatra cargo vehicles already experienced quality changes with respect to the new generation model T-815 trucks. With respect to LIAZ trucks the model 100 series is starting to come off the assembly line and includes a three-axle version which uses a cab-over engine design. Production of the M2 engine with a capacity of 240-350 kw, with a new clutch and transmission and intended for international trailer transportation and heavy operations will also be introduced. With respect to light Avia trucks it is expected that they will remain pretty much as is but will receive a new cab and a supercharged engine.

With respect to the broad assortment of automobile components the program of technical development has set a goal of attaining high technical level. A number of very good products have been introduced and, in some cases, even on the basis of licenses obtained from leading world producers. For example, brake systems, radiators, turbomixers, clutches, heaters, etc., are produced this way. A specific task, whose successful mastery would contribute to increasing the technical level of all types of motor vehicles is the more rapid electronification in this important sector of industry.

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INTERNATIONAL AFFAIRS

CSSR-GDR INDUSTRIAL BIOTECHNOLOGY COOPERATION VIEWED

Prague SVET HOSPODARSTVI in Czech No 84, 1985 p 2

[Text] The Government of the Czechoslovak Socialist Republic recently negotiated a proposal for a cooperation agreement with the GDR in selected areas of industrial biotechnology. The goal of the agreement is to speed up and render more efficient the research and development of selected technologies and products of the microbiological industry, on the basis of a division of labor and appropriate production specialization and cooperation in the form of more effective coordination of this type of cooperation.

Overall tasks involved include the area of antibiotics, lysine, technical enzymes, biochemicals, genetic manipulations and measuring and control equipment for fermentation processes. The program also specifies those organizations which are responsible for individual tasks. It is expected that the introduction of any scientific-technical developments obtained will be the subject of separate agreements.

The program of cooperation is an open document which includes overall tasks and their anticipated results in the years 1985 through 1990. It is anticipated that concrete working plans and contracts covering scientific-technical cooperation will be worked out.

The agreement is to cover the period 1985 to 1990 and is to have a termination supplement. This is an overall agreement primarily in the area of scientific-technical cooperation. It presupposes cooperation on the basis of a division of labor in the area of biochemicals, and genetic manipulation at a later date. In subsequent phases designed to specifically pin down the agreement it is necessary to ensure that its results lead to agreements regarding production specialization and cooperation and that their economic contribution be specifically substantiated.

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JOINT LABORATORY AGREEMENT TERMINATED

Prague SVET HOSPODARSTVI in Czech No 87, 1985 p 2

[Text] The Government of Czechoslovakia recently discussed a proposal for terminating the agreement on the creation of a joint laboratory for drilling and plugging fluids and agreed to abrogate this agreement.

At the same time the government empowered the minister of fuels and energy to notify the CEMA Secretariat, which fulfills the function of a depositary, of the termination and tasked him with taking care of any resulting financial questions.

The agreement on the creation of a joint laboratory for drilling and plugging fluids had been signed at the initiative of the Permanent CEMA Commission for Cooperation in the Petroleum and Gas Industry in March 1975. It was signed by representatives of Bulgaria, Hungary, the GDR, Romania, USSR and Czechoslovakia. The conclusion of the agreement was to contribute in deepening cooperation and collaboration in the execution of scientific, theoretical and experimental research among CEMA member countries. The joint laboratory was established in the Institute of Research and Technological Design for the Petroleum and Gas Industry at Campin (Romanian Socialist Republic).

During the period of its existence this laboratory did not provide the anticipated scientific and practical input in solving questions of increased efficiency with respect to scientific research work in the area of drilling and plugging fluids. Currently the program lost its topicality and the majority of questions are solved by national research organizations of the signatory states. The activity of the joint laboratory was also no contribution for the Czechoslovak petroleum industry, particularly from the standpoint of results in sinking deep and extremely deep drillings; this problem is already being solved in our country and has been tested in drillings to depths of 6,500 meters.

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RESEARCH AND DEVELOPMENT COOPERATION IN CEMA

Prague SVET HOSPODARSTVI in Czech No 87, 1985 p 4

[Text] Last week, at a press conference in Moscow, the deputy chairman of the State Committee of the USSR for Science and Technology, Dzhermen Gvishiani, stated that scientific-technical cooperation with socialist countries plays an extraordinarily important role in Soviet foreign economic relations. The meeting with members of the press was devoted to international scientific-technical cooperation of the USSR with emphasis on the realization of the conclusions of the Moscow economic CEMA summit meeting.

D. Gvishiani said that this cooperation fully reflects the principles of fraternal mutual assistance, equality and advantage by which socialist states are guided in their mutual relationships. For example, during the current 5-year plan specialists in fraternal countries are jointly working on more than 3,600 problems with 850 Soviet organizations and 1,400 enterprises and institutes from other member countries of CEMA participating. In the interest of the successful realization of plans for multilateral economic and scientific-technical cooperation some 64 coordination centers are created within CEMA, 3 international institutes, 8 international scientific-technical organizations, 10 joint scientific collectives, the International Center for Scientific and Technical Information exist, etc. Through joint efforts on the part of socialist countries some 800 new types of machines, installations and other technology, more than 600 new and improved technological processes, and about 150 new materials will be introduced into operation in the current 5-year plan alone.

The Moscow economic consultation of CEMA member countries at the highest level began a new significant era in the development of economic and scientific-technical cooperation between fraternal countries, as Dzhermen Gvishiani emphasized. The focal point of attention with respect to scientific-technical cooperation has become the solution of such serious problems as the speeding up of the modernization of the national economy on the basis of new technology which is capable of radically increasing productivity and of substantially reducing the consumption of materials, fuels and energy. In conjunction with the conclusions of the conference, greater emphasis is being placed on the intensification of the economy and the acceleration of scientific-technical progress, particularly in the area of electronics, complex automation, nuclear energy, biotechnology and new technologies and materials, the deputy chairman of the State Committee of the USSR for Science and Technology said.

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INTERNATIONAL AFFAIRS

HYDROCRACKING PLANS IN CSSR ANNOUNCED

Prague SVET HOSPODARSTVI in Czech No 84, 1985 p 2

[Text] During the current era the reduction of the consumption of heavy heating oils is one of the important tasks. From the standpoint of the overall interests of society it is necessary to create conditions for the specific valorization of petroleum distillates and this is accomplished by the fractionation method which also results in reducing the quantities of sulfur dioxide released into the atmosphere as a result of the combustion of heavy heating oils. The most effective method for solving the program of improved processing of petroleum in Czechoslovakia is the concept of the hydrocracking plant which is located in the Hydrokrak complex at the Slovnaft National Enterprise in Bratislava as well as the erection of a plant for the preparation of petrochemicals at the Czechoslovak-Soviet Friendship Chemical Enterprises at Litvinov.

The report on supporting a program of deeper processing of petroleum in Czechoslovakia during the 8th Five-Year Plan was discussed by the presidium of the government which determined that the metallurgical and heavy engineering industries and the electrotechnical industry were not capable of supporting the activation of both of the above projects within the given target dates through deliveries of domestic origin and, thus, guaranteeing the economic contributions considered in the directives for the 8th Five-Year Plan. For these reasons, it is necessary to support one fractionation unit through imports from nonsocialist countries.

The presidium of the government agreed with the development of the Hydrokrak complex as a reference unit for the Czechoslovak engineering industry with increased budgetary costs of this project and with a changed deadline for its activation for test operation. It further approved the release of foreign exchange to cover the importation of technological installations for the project. The project planned for the preparation of raw materials for petrochemistry is about to be approved by state experts and extraordinary goal rewards are about to be set within the sense of valid regulations for domestic suppliers of construction technology and technological components, for the general designer and for the investors of both cracking units.

It is essential that the state plan for 1985 and the proposals for the 8th Five-Year Plan contain provisions adopted with respect to this topic. The 8th

Five-Year Plan must also contain provisions for the overall volume of investment imports from nonsocialist countries to support both projects and, at the same time, the increased creation of hard currency sources must be anticipated in such a manner that the hard currency contribution from these projects within the framework of the entire 5-year plan is in harmony with the directives for the 8th Five-Year Plan.

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USE OF MICROCOMPUTERS IN ECONOMIC UNITS REVIEWED

Tirana PUNA in Albanian 28 Jun 85 p 2

[Article by Gjergji Shiko and Ylind Tirana: "The Advantage of Using Microcomputers"]

[Text] For several years, in the Enver Hoxha Tractor Combine, good efforts have been made to modernize the technology of production, which is serving to increase the effectiveness of production. The recent introduction of informational techniques by means of installation of a microcomputer, which serves the productive activity of the combine, primarily in finance, supply, planning and the technological preparation of production, is a step further. It has great advantages.

The first step in the recording of information about the technical and economic activity of the combine was launched in the sector of finance. The reason for this was because the sector of finance is an important monetary control organ and a large amount of information circulates through it. At the same time, the central warehouses are important networks for measuring economic indices. Similarly, these warehouses are the places where the fate of ready-made materials and products is decided; consequently, control over the condition and circulation in warehouses is important for increasing efficiency.

Experiments in the warehouse administration program were conducted in December of last year, beginning with four central warehouses, the warehouse for ready-made products and packaging in the new factory, and the raw materials and auxiliary materials warehouse. Soon, however, work to record information about the finance sector was assigned in 21 warehouses and combines. The results of this work were very satisfactory and today we can know at any moment the state of an article or group of articles in these warehouses. The computer response time is a few seconds. In several seconds we can view on the screen the account inventory of each warehouse, while the profit on paper of the accounts inventory at the readymade products warehouse in the new factory, for example, requires approximately 7 minutes. On the basis of these results, during recent months information was also stored regarding the financial relations with the bank and the activity of the central combine treasury. With these results, information regarding the activity of the center of the finance sector was stored completely. Since 1 January of this year, therefore, all financial documents are registered and processed by computer. This storing of information

on warehouse administration and financial activities also affects the increase in efficiency of the planning sector, since an immediate knowledge of entry of readymade products into warehouses permits knowledge and control of plan realization in value and assortment. At the same time, by means of the computer, the administration of the equipment warehouse has increased perceptibly in efficiency, with respect to efficiency in the technical preparation of production.

Having seen the advantage in storing information regarding financial activity, work has now begun to store information regarding activity in the supply sector, since there are close organic links between it and the warehouses. The great volume of registration and accounting work in the system of material and technical supply is well known, especially with regard to pursuing the execution of contracts. Registration work is increasing as a result of the extension of cooperative links. For this reason, in the department of information, on the basis of the method of functioning of the system of material and technical supply, information programs have been constructed which influence the pursuit of contract fulfillment. By means of these programs, it is possible to know at any time the state of fulfillment of contracts and the time involved in obtaining this information varies from several seconds to several minutes.

Timely and requisite knowledge of the state of material and technical supply of production and, as a result, the taking of necessary measures, is directly influencing the increase of production efficiency. But there is also a yield from the use of microcomputers in production planning and its pursuit. Planning is one of the most important links in the chain of the system of production. The volume of information that is collected, processed and transmitted is very great. For this reason, the storing of information on planning perceptibly increases its speed and efficiency. Through storing information on planning, detailed analysis of the yearly plan is accomplished. In this, assemblies are planned (tractors, motors), machinery shipment plans are drawn up, evidence of places with difficulties in production lines is presented, etc.

Another necessary condition for the increase of production efficiency is continual follow-up. In this area, as well, microcomputers have become a powerful instrument in the hands of management personnel for efficient administration of production.

The microcomputer that has been installed in the Enver Hoxha Tractor Combine can also be used in the technological preparation of production, in order to resolve such problems as design automation of equipment (cutting, measuring, fitting and stamping tools) and design automation of technological processes. Microcomputer work has now begun in equipment design for simpler problems. Since September of last year, a program for calculating the construction parameters of standard pinions and for the calculations of those who devise pinion work has been constructed and is found in the microcomputer program library of the combine. These are being followed by a series of special programs for the calculation of cutting tools. Practice is indicating that this brought about a significant reduction in time for their design. For example, the design of a standard pinion currently requires only several minutes (mainly for inserting the data), while for the same work done by hand, several hours would be needed. Further calculations have been guaranteed with precision on microcomputers.

As is seen, there is great advantage in using microcomputers and they yield direct results in an increase of efficiency. Consequently, our efforts are being made in the direction of extending their activity further. We are now considering how to exploit the graphic capabilities of the central microcomputer unit as well. By means of this, the forms and dimensions of parts throughout construction can be built and modified very quickly.

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CZECHOSLOVAKIA

FUEL-ENERGY COMPLEX TODAY, TOMORROW DISCUSSED

Prague PLANOVANE HOSPODARSTVI in Czech No 4, 1985 pp 1-16

[Article by Engr Roman Cizek, doctor of sciences, deputy chairman of the State Planning Commission: "The Fuel-Energy Complex in the Development of the Czechoslovak Economy and Its Tasks in the Future"]

[Excerpts] In the development of the fuel-energy complex thus far there have been periods when, as a result of the sharp rise in energy requirements, there were bottlenecks in supplying the national economy and the population with fuels and energy; on the other hand, there were also periods when the temporary sufficiency of these sources led to views regarding excessive investments and, thus, contributed to the weakening of the desirable amount of attention devoted to the fuels and energy economy. On the basis of the attached analysis, we wish to continue to draw conclusions and to identify new goals and realistic ways of attaining them.

A definite innovation in the area relating to capacities used in the production of electric energy is the development of nuclear energy. Following the experimental operation of the first Czechoslovak nuclear power plant at Jaslovske Bohunice, involving a heavy-water reactor and having an installed capacity of 150 MW, industrial construction of nuclear power plants having light-water Soviet-made VVER 440 reactors was begun with Soviet assistance at Jaslovske Bohunice and at Dukovany. Meanwhile, on the basis of Soviet documentation we have become familiar with the production of these reactors at the Skoda Works at Plzen. The result of the systematic care exercised by the state with regard to the construction of power plants is the fact that installed capacity has risen from 2,493 MW in 1945 to a current 19,200 MW.

As can be seen from the cumulative table production of electric energy underwent rapid development between 1945 and 1970 and during this entire period domestic consumption of electric energy rose more rapidly than did the national income (similar to developments in the majority of the developed nations of the world).

Development of thermal power, which is connected with the question of improving the living environment, was unprecedented. Thus, for example, during 1955-1975 the length of public heat distribution networks increased about 4.7-fold. The majority of our cities are totally or at least partially supplied with heat from centralized sources.

To facilitate the operational goals of the energy industry we invested the following volumes of capital funds and achieved the following increments in capacity in the individual 5-year plans indicated.

<u>Indicator</u>	<u>Five-Year Plan</u>						
	<u>2d</u>	<u>3d</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>
Volume of investments in the energy industry (millions of Kcs)	11,200	13,400	14,500	25,709	38,601	44,397	61,000
Increment in capacity—Federal Ministry of Fuels and Power (energy in MW)	1,493	2,244	2,692	2,804	4,270	2,854	2,400

Development From the Beginning of the 1970's to the Present

At the beginning of the 1970's the orientation in the development of our society underwent a fundamental change which was originated in 1971 by the 16th Congress of the CPCZ, which postulated the general line for creating a developed socialist society, stressed the essential nature of the transformation from an extensive to an intensive method of development of our economy and stressed the purposeful application of the principle of profitability in all its areas. These principal goals were then further elaborated on by the 15th and 16th Congress of the CPCZ. From the standpoint of this fundamental strategy it is essential to evaluate existing development in the fuels and energy economy as a whole in relationship with overall development of the economy and to compare its status with that of developed industrial nations.

By looking at the past the development of our fuels and energy balance, much like the development of the economy as a whole, can be evaluated as having been extensive. In our developmental tendencies we were not too far removed from the results attained by industrially developed nations, but in terms of absolute values and in the development of energy consumption per unit of national income we remain behind in comparison to the most developed industrial nations.

Among the characteristic features of the past development in the fuels and energy balance is the development of domestic consumption of primary energy sources and its comparison with the growth in national income.

<u>Item</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
Domestic consumption, total (millions of tons of standard fuel)*	45.2	56.9	70.4	81.2	93.2	103.2
Increase during 5-year plan (millions of tons of standard fuel)	...	11.7	13.8	10.8	12.0	10.0
Increase over 25 years (millions of tons of standard fuel)	...	...	...	...	...	58.0

Table (continued)

<u>Item</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
National income, gross, 1977 prices (billions of Kcs)	142.0	200.0	226.0	313.0	415.0	505.0
Development of national income en- ergy intensity requirements (tons of standard fuel/millions of Kcs of national income)	318.0	285.0	312.0	259.0	225.0	204.0

* In 1950, 32.5 million tons of standard fuel.

From the above-listed indicators it is clear that during the time period under examination domestic consumption of primary energy sources increased about 2.3-fold and that its average annual increment amounted to about 2.3 million tons of standard fuel. During the same period it was possible to increase national income 3.6-fold. In other words, a coefficient of elasticity amounting to 0.6 percent was attained; this means that for every percentage point of national income it was necessary to expend more than 0.5 percent of domestic consumption of primary energy sources which, in a long-term comparison, does not deviate in any way from the average worldwide development, particularly if we take the large number of energy-intensive production processes in our national economy into account.

Nevertheless, we remain behind other industrial nations in the utilization of fuels and energy in relationship to the attained economic outputs. We are currently in fourth place in the world behind the United States, Canada and the GDR in the consumption of primary energy per capita (6.8 tons of standard fuels). However, a number of industrially developed nations obtain up to double the volume of gross domestic or gross national product per unit of primary energy used. This fact can only be partially justified by the high share of coal in our fuel and energy balance which is decidedly less effective in consumption than are liquid fuels or gaseous fuels.

The incomplete composition and favorable price conditions for fuels in the world market led to a constant increase in the share of imported fuels and energy to cover the requirements of our national economy; whereas, in 1960, imports of primary energy sources amounted to 10.9 percent, by 1980 they had attained 37.8 percent, even though in the period 1976 to 1980 the rate of increase pertaining to imported fuels and energy had decisively slowed.

Crude petroleum and natural gas primarily accounted for the increases in imports. This development had an effect in the previous planning period upon the change in the structure of domestic consumption of primary energy sources in favor of these refined fuels.

Development of the structure of domestic consumption of primary energy sources in Czechoslovakia (in percentage) is shown in the following table.

<u>Item</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
Solid fuels	88.6	83.2	75.3	66.4	61.8
Liquid fuels	6.7	11.7	17.6	24.5	25.5
Natural gas	2.8	1.5	3.3	5.5	8.9
Primary electric energy (i.e., produced in nuclear or hydroelectric power plants, balance between imports and exports of electric power and other sources)	1.9	3.6	3.8	3.6	3.8

Despite the fact that in the period 1960 to 1980 the share of solid fuels in the coverage of domestic requirements for primary energy declined from 88.6 percent to 61.8 percent, Czechoslovakia, the GDR and the People's Republic of Poland continued to occupy the first three places worldwide with respect to the share of coal in the fuels and energy balance. As can be seen from previously listed data, the energy requirement component in the formation of national income, expressed in natural terms, has shown an almost constant decline. The opposite developmental tendency, however, can be noted with respect to the value expression of the energy requirement component in the formation of the national income which, as a result of external and internal acquisition costs of fuel and energy sources, continues to grow. According to orientational calculations, the value of the energy requirement component in the formation of the national income for the years 1976 through 1980 grew by 43 percent; similar increases are expected for the period 1981 through 1985, despite a very low increment in fuels and energy sources in comparison with the previous planning period.

The fuels and energy balance of the 7th Five-Year Plan (1981-1985) was designed, in harmony with the party line, to be much more demanding in comparison with the past, particularly with respect to better management of fuel and energy sources in the entire region of their utilization. The 7th Five-Year Plan stipulated an increase in domestic consumption of primary fuel and energy sources for 1985 to be about 5.5 million tons of standard fuel, which is not even one-half of the increment attained previously on average for a 5-year period. Simultaneously, tasks were assigned pertaining to lowering the consumption of liquid fuels as the most expensive forms of energy; they are to be achieved by absolute conservation and by changing to other types of fuel and energy.

The fulfillment of these tasks was specifically influenced by other developments. In contrast to the original intentions of the 7th Five-Year Plan the rate of development in the national economy declined in 1980 and 1982 as a result of measures taken by developed capitalist nations against socialist economies, which limited the possibilities of acquiring the necessary raw materials and fuel and energy sources. We also had to halt the growth in indebtedness vis-a-vis capitalist nations and, moreover, change over toward reducing it. It must be stated with satisfaction that we are succeeding in this aim.

An important goal was also the provision of time to the individual branches of our economy for the creation of conditions resulting in a more purposeful

growth of profitability, which is manifested by a higher degree of utilization of raw materials and fuel and energy outputs in relationship to production outputs.

In view of the above-listed facts it was necessary to seek ways for the further reduction of consumption requirements for energy and fuels. This aim was successfully realized so that domestic consumption of primary fuels and energy was constantly declining below the indicators of the 7th Five-Year Plan and by 1983 had actually declined below the indicator levels of 1980.

Development of domestic consumption of primary energy in the years 1980 to 1983 is shown in the following table.

<u>Item</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Millions of tons of standard fuel	103.2	102.9	102.0	102.6	103.7

In 1982 we reduced the import of crude petroleum as the most expensive fuel by more than 2 million tons, that is to say, by more than 10 percent. Overall, the consumption of heavy heating oil during the 7th Five-Year Plan will drop by roughly 1.4 million tons and that of light heating oil by approximately 500,000 tons. The decline in the consumption of low-sulfur oil is scheduled to be about 140,000 tons.

Less favorable climatic conditions during the 1984 heating season were reflected primarily in the use of fuels and energy in households and in the tertiary sphere and slowed the realization of positive structural changes in the national economy with respect to energy requirements and the renewal of the dynamics of development in the national economy. As a result the 1984 domestic consumption of primary energy sources was approximately 103.7 million tons of standard fuel. It will certainly also rise this year.

Even though the development of domestic consumption of fuels and energy in 1984, when compared to the immediately preceding planning period, was worse, its overall volume remained below the plan goals of the 7th Five-Year Plan. This plan anticipated the growth of this type of consumption in 1985, compared to 1980, by 5.5 million tons of standard fuel so that the anticipated actual consumption for 1985 will be lower by at least 3 million tons of standard fuel. Nevertheless, the worsening of development at the beginning of 1985 must mobilize all consumers to manage fuels and energy better so as to create a more favorable base for entering the 8th Five-Year Plan.

From the tables listed in the initial part of this article it is clear that after 1970 society spent extraordinarily capital sums on the development of the fuels and energy base. It was thus possible to overcome the obsolescence and undervaluation of development during the second half of the 1960's. The gas distribution network was significantly expanded, including transit gas pipelines and underground storage facilities; the changeover of consumers from using manufactured gas to natural gas was under way; the expansion of mines was undergoing an unprecedented development; deep mines were equipped with modern extraction and safety equipment, the changeover was made toward

using large-scale quarry technology in surface mining, we learned how to build and operate 200-MW and 500-MW blocks of conventional and nuclear power plants using 440-MW reactors, transmission lines were developed and international cooperation was deepened, particularly regarding joint construction of the first 750-kv transmission line connected to the MIR system. The use of modern technology was characteristic for the entire period. Because it was occasionally impossible to master it from the production standpoint or from the investment standpoint in time slippage in construction projects, failures to attain design parameters and occasional unsatisfactory reliability were some of the accompanying manifestations. Together with extraordinary climatic conditions this led to disruptions in the continuous flow of energy deliveries at the beginning of 1979.

On balance, however, in evaluating the entire period following 1970 we can unequivocally state that the fuels and energy base contributed to further progress in the creation of a developed socialist society.

Development Prospects of the Fuels and Energy Complex

We can designate the 7th Five-Year Plan as preparation and the first decisive step taken in the direction of a universal intensive development of the national economy; if we are to purposefully fulfill the conclusions voiced by the most recent congresses of the CPCZ, then the 8th Five-Year Plan must pose far greater requirements in this direction. One of the principal prerequisites for attaining this goal is the permanent and express reduction of the energy-intensive requirement component of our national economy, which will be a very difficult and complicated task.

An analysis of the development of rational consumption and the possibilities for acquiring sources of fuels and energy in the future shows that in the final years of future 5-year plans we can anticipate the following maximum possibilities for the acquisition of primary fuel and energy sources for domestic consumption:

<u>Item</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
Millions of tons of standard fuel	104.5	108.5	110-111	114-115

These are essentially only a quarter of the 5-year increments when compared to the 5-year average values attained during the period 1955 through 1980 even though at that time the permanent growth of refined fuels contributed to increasing the efficiency of fuel consumption significantly whereas, in the ensuing periods, we can at best anticipate a stagnation of fuel and energy consumption in a stationary energy industry with the proviso that a decline in liquid fuels in this area will be replaced with a corresponding increase in deliveries of natural gas.

With respect to alternatives which will seek the possibilities and prerequisites for bringing the average intrayear growth in national income in the 8th Five-Year Plan to 3.5 percent and to 4 percent in future years the coefficient of elasticity works out at 0.2 percent or even less. For the time being such

results have not been attained in the past over the long run by any country. However, in our case we must take into account the large reserves we have in reducing the energy requirement component.

Let us now turn our attention to the question as to what types of fuels and energy we will use to satisfy the above extent of domestic consumption of primary fuel and energy sources. This development will be connected with a significant change in the structure of our fuels and energy base.

i. The basic factor which is intended to cover increases in fuel and energy sources in the coming years is the development of nuclear energy. As a result of a whole series of shortcomings this development has been significantly delayed in comparison to the previously approved program. The fuels and energy balance is unfavorably influenced by the fact that even deferred deadlines in the activation of nuclear power plants are not being met which, on the one hand, limits the possibilities of making greater use of electricity in the national economy and, on the other hand, creates the necessity of maintaining the extraction of brown coal, which is required by thermal electric power plants to produce replacement electric energy, at a constantly high level.

In comparison with the 7th Five-Year Plan a shortfall of approximately 5 billion kwh of electric energy is anticipated in the production of electricity produced by nuclear power plants. If we proceed from the current status of construction and design preparation of nuclear power plants, it can be anticipated that their production should reach 25 billion kwh; in 1995, 41 billion kwh and in the year 2000, 56 billion kwh. All nuclear power plants are expected to provide heat to larger cities in their areas.

A very detrimental effect on the entire economy is recorded by the constantly growing volume of investment costs per unit of output in nuclear power plants which currently limits the possibilities to make investments in other areas, even in the fuels and energy industry itself.

Elimination of these shortcomings requires that design work involved in the construction of nuclear power plants be improved in quality and also demands the thorough mastery of management organization in preparing and actually implementing the construction projects. If we evaluate our nuclear power industry in an international comparison, we must find that we have a higher degree of labor intensity in constructing nuclear power plants and we also employ larger numbers of workers in their operation.

The development of the nuclear power industry has a primary significance not only for solving the overall fuels and energy balance but also for utilizing electricity in the national economy. In this area, we are falling behind other industrial developed nations despite the fact that the further development of a modern economy under conditions of the scientific-technical revolution, which is characterized by automation, electronification, the introduction of robotics, is unthinkable without assuring adequate deliveries of electric energy. The extent to which we are falling behind in per capita consumption of electric power is documented, for example, by the fact that, according to relatively optimistic estimates, we will not be able to attain the same per capita consumption noted in the GDR for 1985 until the year 2000.

ii. Supplies of crude petroleum and petroleum products are among the considerably complicated problems involved in the future of the fuels and energy balance. The high cost of petroleum requires its maximum utilization, that is to say, the obtaining of the maximum amount of white products in processing petroleum. This is to be achieved by the development of two fractionation units over the course of the 8th Five-Year Plan. To safeguard their operation and to assure a higher degree of utilization of petroleum as a chemical raw material it will be essential to reduce the consumption of heating oils in power-producing processes during the course of the 8th Five-Year Plan by at least 3 million tons and by another 2.4 million tons during the 9th Five-Year Plan.

The fulfillment of these tasks will be very demanding and complicated and it will be necessary to choose a number of measures in order to master these tasks: absolute conservation in consumption, replacement through other types of fuels, particularly through brown coal and, where possible, through natural gas, distribution of heat by nuclear power plants, investment participation in the distribution of heat obtained through the reconstruction of selected condensation power plants to thermal power plants, limitation or halting of unprofitable production processes which consume refined fuels, increased utilization of secondary energy sources, etc.

iii. Even despite a certain increase in domestic extraction, the principal increment regarding sources of natural gas will be covered through exports from the Soviet Union. In this connection bilateral negotiations have already begun and are designed to acquire additional Soviet natural gas during the course of the 8th Five-Year Plan. In conformance with the line of multilateral cooperation between members of CEMA negotiations are ongoing regarding the acquisition of natural gas extraction methods through joint forces from the deposits at Jamburg and its transmission to the western frontier of the USSR. Increased transmission of Soviet natural gas through our transit gas pipelines would also mean higher quantities of natural gas in our favor.

The most important function of natural gas in our long-range fuels and energy balance is generally known: the replacement of manufactured gas, the replacement of a substantial quantity of heating oils, utilization of natural gas in the tertiary sphere, particularly in regions where the environment is most polluted, which include the cities of Prague and Bratislava, replacement of graded coal and coverage of some technological requirements. The influence of natural gas upon improving the living environment is unquestioned.

According to the extent of natural gas sources which we will have at our disposal in the future, we shall be able to replace the remaining portion of manufactured gas consumption through natural gas and we shall be able to completely halt the production of manufactured gas. Such measures are expected to be in place soon after the year 2000.

iv. The extraction of brown coal will decline but, until the end of the century, it will retain its relatively high level. However, it will be necessary to precisely stipulate the concrete volume to be extracted in conjunction with the pace of development of nuclear energy. In the current phase of long-range

outlook preparations a 20-percent decline over the current level is anticipated with respect to brown coal extraction by the year 2000.

The highest levels of brown coal and lignite extraction in history were attained in the years 1983 and 1984 when a level of 100 million tons was exceeded (in 1984, 102.9 million tons).

A significant contribution to the permanent growth of labor productivity in the extraction of brown coal and lignite is the rise in the share of surface mining. Its share has increased from 46.8 percent in 1945 to 87.3 percent in 1984. However, the attained economic effects are constantly reduced by the growing volume of overburden per ton of extracted coal and the declining calorific value of that coal.

v. In the case of bituminous coal (while maintaining roughly the present levels of imports) a gradual decline in extraction at the OKR [Ostrava-Karvinna Coal Basin] and in the Kladno coal mines will take place. Maximum utilization will be decisive with respect to the forms of coal suitable for coking operations, even though these sources are showing a declining tendency. The largest quantity of bituminous coal extracted was 28.8 million tons in 1971. Since that time the 28-million-ton mark has been exceeded a number of times, the last time this occurred was in 1980 (28.2 million tons), although generally the extraction of bituminous coal continues to show a constantly declining trend and in the year 2000 will range between 22 to 24 million tons per year.

vi. In the development of the centralized distribution of heat the area of jurisdiction of the Federal Ministry of Fuels and Energy is scheduled to increase the amount of heat provided by 19.4 percent by the year 1990, in comparison to 1985 and by 79 percent by the year 2000. The energy industry will assure the attainment of this goal by transforming condensation power plants to thermal operation, by utilizing nuclear power plants to deliver heat as well and by creating new thermal power plants by substantially unifying user investment projects.

The analysis of the subsequent development of our fuels and energy balance (see table) and its relationship to the long-term development of the entire national economy indicates that the only acceptable variant in this area is an accelerated reduction of the energy-intensive factor in our long-range economic development. It is not necessary to stress that it is an extremely demanding task and a complicated one and that its fulfillment will require the intensive utilization of all factors which influence the use of energy. In the simplest form of expression the overall increase in profitability of the entire economy is the primary prerequisite for mastering this task.

One of the fundamental conditions for realizing a reduction in the energy requirement component of our economy is the preparation of State Goal-Oriented Program No 02--"Rationalization of Consumption and Utilization of Fuels and Energy for the 8th Five-Year Plan and the Long-Term Outlook." This work is based on experience gathered in the fulfillment of state plans of rationalization over the past three 5-year plans.

Selected Indicators of the Fuels and Energy Balance of Czechoslovakia for the Period 1945 Through 2000

<u>Indicator</u>	<u>Unit of Measure</u>	<u>1945</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>
Extraction of bituminous coal, total	Millions of tons	11.7	17.5	20.8	26.4
Extraction of brown coal and lignite	Millions of tons	15.4	27.5	40.4	57.9
Extraction of natural gas	Millions of m ³	--	37.0	173.0	1,460.0
Production of manufactured gas	Millions of m ³	175.0	470.0	783.0	1,129.0
Capacity of underground gas storage facilities	Millions of m ³	--	--	--	--
Production of electric energy in Czechoslovakia	Billions of kwh	4.5	9.2	15.0	24.5
Including:					
In steam electric power plants		4.0	8.5	13.4	22.2
In hydroelectric power plants		0.5	0.7	1.6	2.3
In nuclear electric power plants		--	--	--	--
Domestic consumption of electricity	Millions of kwh	...	...	...	24,187.0
Coefficient of elasticity in electric power consumption per unit of national income		...	...	...	...
Imports of coal	Millions of tons	...	...	...	3.173
Imports of petroleum	Millions of tons	...	...	...	2.334
Imports of petroleum products	Millions of tons	...	...	...	0.345
Imports of electric energy	Billions of kwh	--	--	0.125	0.186
Imports of gas	Billions of m ³	--	--	--	--
Domestic consumption of primary energy sources		...	...	45.2	56.6
Development of energy requirement component of the national income	Tons of standard fuel/million Kcs	...	...	318.0	285.0
Development of the coefficient of elasticity		...	...	...	0.620

Table (continued)

<u>Indicator</u>	<u>Unit of Measure</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
Extraction of bituminous coal, total	Millions of tons	27.8	28.2	28.1	28.2
Extraction of brown coal and lignite	Millions of tons	72.3	81.3	86.3	94.9
Extraction of natural gas	Millions of m ³	953.0	1,185.0	930.0	634.0
Production of manufactured gas	Millions of m ³	1,829.0	2,677.0	3,396.0	3,581.0
Capacity of underground gas storage facilities	Millions of m ³	--	50.0	500.0	970.0
Production of electric energy in Czechoslovakia	Billions of kwh	34.2	45.2	59.3	72.7
Including:					
In steam electric power plants		29.9	41.6	55.4	63.6
In hydroelectric power plants		4.3	3.6	3.7	4.6
In nuclear electric power plants		--	--	0.2	4.5
Domestic consumption of electricity	Millions of kwh	34,952	48,570	63,489	74,572
Coefficient of elasticity in electric power consumption per unit of national income		3.800	0.980	1.010	1.025
Imports of coal	Millions of tons	5.035	5.568	5.701	5.497
Imports of petroleum	Millions of tons	6.000	9.798	15.838	18.934
Imports of petroleum products	Millions of tons	0.614	0.889	0.814	0.733
Imports of electric energy	Billions of kwh	1.430	3.905	4.678	2.855
Imports of gas	Billions of m ³	--	1.341	3.565	7.699
Domestic consumption of primary energy sources		71.9	81.2	93.2	103.2

Table (continued)

<u>Indicator</u>	<u>Unit of Measure</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
Development of energy requirement component of the national income	Tons of standard fuel/million Kcs	312.0	259.0	225.0	204.0
Development of the coefficient of elasticity		2.450	0.360	0.380	0.500
		<u>1985 Plan</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
			<u>Preliminary Data</u>		
Extraction of bituminous coal, total	Millions of tons	26.3	25.0	23.9	...
Extraction of brown coal and lignite	Millions of tons	99.3	93.8	88.0	80.0
Extraction of natural gas	Millions of m ³	700.0	800.0	1,600.0	1,800.0
Production of manufactured gas	Millions of m ³	3,280.0	2,188.0	1,200.0- 1,500.0	300-500
Capacity of underground gas storage facilities	Millions of m ³	1,760.0	2,000.0	2,500.0	3,000.0
Production of electric energy in Czechoslovakia	Billions of kwh	78.7	85.2	94.0	...
Including:					
In steam electric power plants		64.2	45.2	36.3	...
In hydroelectric power plants		4.0	5.2	8.0	9.0
In nuclear electric power plants		10.5	25.0	41.0	56.5
Domestic consumption of electricity	Millions of kwh	82,669	91,169	99,870	...
Coefficient of elasticity in electric power consumption per unit of national income		1.005	0.570	0.450	...
Imports of coal	Millions of tons	...	...	...	...
Imports of petroleum	Millions of tons	...	...	...	...

Table (continued)

<u>Indicator</u>	<u>Unit of Measure</u>	<u>1985 Plan</u>	<u>Preliminary Data</u>		
			<u>1990</u>	<u>1995</u>	<u>2000</u>
Imports of petroleum products	Millions of tons	...	...	...	...
Imports of electric energy	Billions of kwh	...	...	...	...
Imports of gas	Billions of m ³	...	...	...	...
Domestic consumption of primary energy sources		104.5	108.3	111.5	114-116
Development of energy requirement component of the national income	Tons of standard fuel/million Kcs	187.0	163.0	138.0	113-115
Development of the coefficient of elasticity		0.110	0.200	0.150	0.10-0.18

For the 7th Five-Year Plan the State Goal-Oriented Program No 02 specifies the overall saving of 12.21 million tons of standard fuel, which represents an average annual saving of 2.35 percent of primary fuel and energy sources for the 7th Five-Year Plan (without savings attributable to structural changes). According to preliminary evaluations, the savings will be greater by 1 million tons of standard fuel. The tasks of the State Goal-Oriented Program No 02 for the 8th Five-Year Plan were expanded to cover additional central organs of the nonproductive sphere and by the program of savings covering petroleum products and their replacement through other fuels. In the 8th Five-Year Plan the savings in fuels and energy should, through the realization of technical and technical-organizational measures, amount to a minimum of 14 million tons of standard fuel and structural changes in production should account for a savings of a minimum 2 million tons of standard fuel.

The State Goal-Oriented Program No 2 will attain its economic and technical peaks during the 8th Five-Year Plan and it will not be possible to count on an increased contribution from it with regard to lowering the energy requirement component of the national economy in subsequent 5-year plans. The most effective portions are being gradually exhausted and the investment requirements of any further possible additional measures are expressly growing. In the next and subsequent 5-year plans it is expected that a contribution will be made by the utilization of new renewable and nontraditional forms of energy.

The possibilities of a more economical management involving fuels and power must remain everywhere as the permanent component of social review processes which have fully proven their justification through the results attained.

From the above analysis of more economic management involving fuels and energy it is clear that the tasks assigned to other factors which influence the energy requirement component of the national economy will be constantly increasing in subsequent planning periods.

i. A key significance is ascribed to the purposeful preparation and realization of changes in the sectoral structure of our national economy, particularly of industry. Here, it is necessary to seek methods for the maximum possible reduction of energy consumption in production with special emphasis on the production of pig iron and steel. This is an area of industry which accounts for the greatest consumption of fuels and energy and yet occupies second place in the world behind Belgium in the per capita consumption of its products. However, we are unable to adequately valorize the metal produced in the national economy, particularly with respect to the quality of engineering products.

ii. We are also slow with respect to the introduction of less-energy-demanding technology, primarily in the production of steel and in our orientation toward the production of more refined types. Also, in the production of cement it is essential to attain lowering of energy requirements either by a better utilization of energy or by changes in technology from a wet to a dry method of production. A significant contribution in this regard can also be a change in the structure of the chemical industry from an orientation involving the production of heavy chemistry products to production of "qualified" chemicals. In this area considerable possibilities are offered to us particularly by the development of cooperation with the USSR.

In close conjunction with a less energy-intensive sectoral structure the specialized and product structure also has to be purposefully innovated.

iii. Another significant factor which influences the energy-intensive requirement of the economy is the technical-economic level of the production process. In this regard great opportunities exist in practically every sector whose realization requires a more rapid application of scientific-technical progress in practice. A very negative influence in this regard is exercised by the backwardness experienced in the application of electronics in the Czechoslovak national economy in comparison with world levels. Similarly, organization of work involved in the production process and, particularly, the reduction of supplies, is a way toward lowering energy requirements.

iv. The development of energy-intensive production processes can be favorably influenced by assuring overall material savings. The very considerable possibilities in this area are attested to by the high mass of our machinery and installations in comparison with foreign products. Much energy is embodied in production facilities which are inadequately utilized, which in turn leads to low production per unit of capital fund and leads to their long-term amortization. Investment policy must also fundamentally change. It is necessary to limit the initiation of new construction projects so as to lower the number of projects under construction and to shorten the construction period even for the development of new production capacities built, so to speak, "on open land," reduce the share of construction work involved in capital construction

and to increase the share of machines and installations designed to modernize existing production bases.

v. The international exchange of products can make a significant contribution toward lowering the energy requirement and toward attaining a higher degree of economic effect. For the time being we are limping in this area behind the developed industrial nations. Our scientific-research base conducted an evaluation involving approximately 72 percent of our total exports to determine how much energy was exported in our products in 1980 and how much was imported. From this evaluation it was seen that in the composition of products under examination in 1980 we exported a total of 13.6 million tons of standard fuel whereas the structure of imported products accounted for only about 8.2 million tons of standard fuel.

vi. The energy requirement component of the national economy is also influenced by the technical level, the degree of modernization, the maintenance and operation of installations producing and consuming fuels and energy. This area also contains great possibilities for the attainment of better results.

vii. The successful realization of all listed areas is based on one fundamental condition: the accelerated increase in the level of scientific-technical development so as to reach world standards during the shortest possible time in decisive sectors and so that its realization in practice, which is reflected in a rise in quality and in technical-economic parameters of our products would be speeded up.

The application of intensification factors which are valid for the entire economy must be purposefully pursued also in the fuels and energy industry area. Even though a number of objective reasons exists which exert unfavorable influences on the development of the industry's economic indicators (mining at greater depths, worsening geological extraction conditions, growing volume of overburden per ton of coal extracted during surface mining, declining quality of coal, etc.) there are also subjective reasons whose removal must be deliberate so that a positive influence can be exerted on the development of profitability. In first place, it is necessary to list the inadequate time and capacity utilization of decisive production facilities in all sectors of the industry, even if there have been certain improvements in recent times.

It is necessary to devote far greater attention to the utilization of basic assets since the growth of their status is by far not appropriate to the rate of output. Thus, for example, in the period 1977 through 1983 the value of basic assets committed at the OKD Mines grew by 38 percent but output grows only by 25.7 percent; at the North Bohemian Brown Coal Mines basic assets increased 66.8 percent but output rose only 35.2 percent. In energy concerns a growth in the value of basic assets by 55.7 percent was recorded, although output rose only by 41.9 percent.

A specific factor influencing the economic effectivity in the areas of jurisdiction of the Federal Ministry of Fuels and Energy is the growth in manpower costs and the costs for health facilities. Realization of Government of Czechoslovakia Regulation No 41/82 calling for intensified social care for

miners alone represents expenses in the neighborhood of 1 billion korunas per year.

The area administered by the Federal Ministry of Fuels and Energy must stand in first place with respect to care for a better living environment, particularly with respect to lowering harmful emissions. The gradual increase of production in nuclear electric power plants at the expense of steam, the creation of sulfur-removal facilities in selected electric power plants, the careful maintenance of all separation facilities at power plants and the increased utilization of natural gas in the entire national economy, accompanied by declining consumption of heating oils will lead to positive results in this area. The consistent reclamation of mined areas, storage dumps and waste dumps is understood.

The picture of the long-term development of our fuels and energy economy would not be complete if we did not at least briefly mention the ever rising significance of the development of collaboration between CEMA member countries in this area and particularly the decisive role of the Soviet Union. Its significant results were the creation of the Druzba petroleum pipeline, the "Brotherhood" gas pipeline, the interconnection of the electric power nets of CEMA member countries and the creation of a central dispatching organization in Prague and, recently, the creation of the Soyuz gas transmission line.

Cooperation between member countries of CEMA has developed on a broad basis in the area of nuclear energy where primacy once again belongs to the USSR. With its assistance, we are also creating a nuclear energy industry on our territory and we have initiated production of nuclear reactors; currently, we are well able to cover our own requirements with respect to these reactors and also deliver to other CEMA member countries.

In the immediate future, we will initiate preparations for a multilateral agreement covering construction of a new gas transmission pipeline from north-western Siberia, from Yamburg, to the western frontier of the USSR. Participation in this project is supposed to assure us of deliveries of Soviet natural gas to the extent of 4 billion cubic meters per year for a period of 20 years.

A framework basis for the development of cooperation between CEMA member countries in the area of fuels and power is the "Long-Term Goal-Oriented Program of Cooperation To Assure the Economically Justified Requirements of CEMA Member Countries in Basic Types of Energy, Fuels and Raw Materials for the Period Through 1990," which was approved at the CEMA Council Session in Bucharest in June 1978. It includes tasks in the development of cooperation between member states in practically all spheres of the fuels and energy economy, both with respect to sources and consumption, including development of cooperation in appropriate research areas and currently a program for cooperation in this area has been worked out through the year 2000.

The task of the Czechoslovak fuel-energy complex is to assure the further development of the Czechoslovak national economy, to fortify and improve the quality of the level of living for the populace by the availability of the

required amount of energy. Consequently, with respect to its development national economic viewpoints rather than technological or sectoral viewpoints must be decisive. From the analyses which have been undertaken it is clear that the development of sources and consumption of energy were not developed in the previous period under such a strong economic pressure as will be the case in the next period. The analyses also indicate that the balance between the requirements (albeit minimized) and sources must be assured in the preparation of development both from the immediate standpoint as well as from the long-range standpoint. Otherwise, disproportions impact seriously upon the operation of the national economy. Consequently, the evaluation and selection of the appropriate variant of development will not be a simple matter. In future, solutions will not be possible without a national economic model of development of individual components and the whole Czechoslovak fuel-energy complex, conceived in such a way that the model would be a material and value-saving type.

As far as energy consumption is concerned, there will be a programmed lowering of energy requirements (essentially more rapid than in the past) based on structural intersector and intrasector changes connected with the transition of the entire economy to an intensive form of development. As far as sources are concerned, there will not only be changes in their structure (for example, a replacement of fossil fuels, particularly of brown coal, through electric energy and thermal energy produced in nuclear electric power plants and the substitution of crude petroleum through natural gas and other forms of fuel, etc.) but primarily there will be a solution of the problem of cost minimalization (both investment and operating costs and foreign trade costs) involved in their acquisition.

The problems which will have to be solved in the 8th Five-Year Plan and in the subsequent long-term development of the Czechoslovak fuel-energy complex can thus be formulated in harmony with the conclusions which the 17th Congress of the CPCZ will adopt.

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TEN-YEAR REVIEW OF RECENT CHANGES IN FOREIGN TRADE STRUCTURE

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A. Developments to 1984

I. Preliminary Remarks

Although the 10th symposium was the occasion for formulating the topic, "10 Years of Foreign Trade and Foreign Trade Policy," it actually deals with that decade of the GDR economy which was shaped to a sometimes dramatic extent by foreign trade necessities. The years 1975 and 1984 mark the precise turning points of this period. If 1975 can be assumed as the beginning of aggravating new conditions for two-thirds of GDR foreign trade, namely the CEMA trade, then the year 1984 in a sense can be seen as the temporary end. In 1984, the goal originally planned for 1980--adjustment of CEMA prices to world market prices gone haywire--was achieved, all in all.

For those whose task it was, and still is, to analyze this past decade of explosive foreign trade developments, the year 1975 is a landmark date for another reason. It was the first year of radical restriction in statistical reporting on foreign trade matters, and also of restriction of publications dealing with foreign trade subjects. Because since that time, no detailed commentaries on the topic of GDR foreign trade have been made without the corresponding complaint about the sparsity of GDR foreign trade statistics, this complaint should not be lacking here, either!

Despite the obligations of the CSCE Final Act of Helsinki, signed also by Erich Honecker, to comparably classify foreign trade statistics for better international information and to itemize them according to quantities and value, for 1975 and the following years the GDR did not present any import and export data classified according to regions and countries. Instead of

orienting GDR publication policy according to the 1975 Final Act of Helsinki it followed increasingly the axiom formulated by Guenther Mittag as early as 1968, namely to prevent the class enemy from penetrating GDR foreign trade activity through "strictest state discipline in preserving secrets."¹

The paucity of statistical reporting reaching its climax in 1977 when the GDR, one of the most important industrial states in the world, no longer published even data on total imports and exports. This situation was only partially ended in 1981 through the publication of a very rough regional structure.

The effects of this embargo policy on foreign trade information are quite comparable to those of embargo policies in other sectors. The initial shock and "production disturbances" were followed by the development of other sources and the substitution of lacking information through one's own "inventions." The result of these efforts is not satisfactory! Nevertheless, the level of reporting in the West on GDR foreign trade activity is better today than it was before 1975.²

II. Foreign Trade Concepts for the Seventies

Compared to the past, a total change in importance had originally been planned for foreign trade in the seventies. Only in the sixties had foreign trade in the CEMA countries undergone a theoretical reevaluation. Instead of its former function as a necessary economic evil--a stop-gap--foreign trade was discovered as a growth factor. In the GDR, this reevaluation in the course of the New Economic System reform was particularly linked to the name Gunther Kohlmeier.³ At the same time, in addition to pure goods traffic, i.e., foreign trade, the importance of other foreign trade relations was discovered. The first semi-official definition in the GDR, which took into account the changed attitude, was given in 1967: "For the GDR, increasing utilization of foreign trade is a chief prerequisite for an intensive growth of the economy."⁴

This new valuation of foreign trade was reflected in the foreign trade concept within the framework of CEMA as well as in trade with Western countries.

Within the system, the priorities are established in line with the prominent role of foreign trade with the USSR. As a rule, more than half of the intra-bloc trade, and about 35 percent of total GDR foreign trade, are carried out with the USSR. Increased socialist integration in CEMA, on the basis of the comprehensive program of 1971, was to bring about new qualitative foreign trade results.⁵ The emphasis of the comprehensive program consisted in achieving, on the basis of international production cooperation, investment cooperation and expanded financial relations, and an adjustment of the economic level of the individual member states, which in turn was to bring about structural changes in foreign trade toward greater international division of labor.⁶

In the first so-called coordinated plan of multilateral integration measures of 1975, those bilaterally coordinated planned projects were combined which were to be implemented during the planning period 1976-1980. The central items were so-called targets of joint investment activity for the development of raw material deposits, primarily in the USSR. These targets, such as the

Ust-Ilim cellulose plant, the Kyembai asbestos combine, and the Orenbur natural gas pipeline, were laid out as so-called large compensation deals. GDR participation through material assets and financial payments was estimated at Marks 8 billion. Goods deliveries were additionally included in the trade agreement. While the material asset deliveries are based on current CEMA prices, return delivery was to be made at fixed prices.⁷ This form of foreign trade commitment serves the future securing of the raw material base. Growth impulses, however, were to come from the second major point of the integration efforts, namely from specialization and cooperation in production, science and technology. The goal was to increase deliveries to the USSR of products from specialization and cooperation from 1 percent in 1970 to 35 percent in 1980.

Entirely new prospects arose during the seventies for inter-systems foreign trade relations, particularly for those with Western industrial nations. Although foreign trade had up to then dominated these relations to a much larger degree than intra-bloc relations, in the course of diplomatic recognition financial relations could also be used as a foreign trade factor. The GDR leadership's foreign trade concept, based on this factor, planned for the first half of the seventies a largely credit-financed growth of technology-intensive imports for the modernization of its own industrial potential. During the second half of the seventies, the credits were to be paid back through an export offensive produced by means of these imports.

This import-oriented foreign trade concept during the first half of the seventies must also be seen against the background of the "major task" announced at the 8th SED Party Congress of 1971, namely to improve the population's standard of living. Imports of consumer goods were to be expanded more strongly.

GDR expansion of relations with the West, and the contacts elevated to government level due to diplomatic recognition, were to be used in foreign trade policy to the detriment of inner-German trade (IDH) and were to lead to a shift in trade flow; it is known under the catchword "diversification."

World economic events in the wake of the Yom Kippur War of 1973, i.e., the price explosion for raw materials, especially oil, managed to permanently shake up the basic concepts outlined here. The second oil shock of 1979, at the latest, destroyed them completely. At first, the price explosions for raw materials became effective only in trade with Western industrial nations and particularly with developing countries; trade relations, i.e., the terms of trade, of the GDR deteriorated abruptly. The nominal share of GDR imports from these two regions rocketed in 1974 to its absolutely highest level of 41 percent.

Official and semi-official reactions in the GDR on world economic developments were a mixture of spiteful glee on inflationary developments outside the bloc and complacency about price stability within CEMA. At the 13th plenary session of the SED Central Committee in December 1974, Honecker vowed to fight all "imperialist monopolies and states" trying to pass on to the GDR the effects of the crisis.⁸

This "passing the buck," as Honecker called it, was, however, to occur immediately.

In January 1975, at the 70th meeting of the CEMA executive committee in Moscow, two serious decisions were made which invalidated a fundamental principle of CEMA trade.

1. The quasi fixed price system for the 5-year period of long-term trade agreements on the basis of average world market prices during the 5 years preceding the period of agreement, was replaced by an annual sliding price fixing on the basis of average prices of the respective 5 preceding years.

2. As an exceptional arrangement for 1975, prices were not set on the basis of the average of the preceding 5 years, but were based on the 3 preceding years.⁹

Thus, for the last year of the 5-year plan period of 1971-1975, the usual, stable price level had already been repealed for the greater part of GDR foreign trade. In effect, this meant for the GDR a price increase for Soviet oil of almost 50 percent. This was the lowest price increase rate within CEMA; for Hungary, for example, it reached almost 100 percent. However, as early as 1974, oil prices on the world market had risen two-and-a-half times. The considerably lower price increases for the GDR resulted from the fact that, because of investment participations in the sixties, it received a contingent of 5 million tons of oil at the old price.

III. The Five-Year Plan 1976-1980

In preparing the new 5-year plan 1976-1980, and in working out new, long-term trade agreements, on the one hand the changed situation could no longer be sufficiently taken into account, and on the other hand, the changed terms of trade vis-a-vis the USSR, the major supplier of oil and raw materials, was underestimated, particularly by the industrial CEMA countries concerned. Essential goals of the 5-year plans had to be adjusted downward. This concerned in particular investments, which, moreover, had to be regrouped in order to secure one's own energy base. The result was reductions, and even cancellations, of deliveries mutually agreed upon in the trade agreements of the CEMA countries.¹⁰ Also, contractually agreed upon deliveries of raw materials were channeled to the world market instead of to CEMA countries and were sold there at higher prices, and for hard currency. This occurred, for example, with the contractually agreed upon bituminous coal imports of the GDR from Poland during the years 1975-1978.

The production shortfalls caused by delivery stoppages had a direct adverse effect on significantly strengthening export power on the basis of stable export lines, as stipulated in the 5-year plan.¹¹ In 1977, i.e., at the end of the second year of the 5-year plan period, the GDR accrued a deficit of VM 8 billion, a record so far (see Table 1). Regional balances were negative not only vis-a-vis the West and developing countries, but now also with the USSR (see Table 5).

But the foreign trade difficulties, used as an alibi almost every day since 1975, were not the sole cause for missing essential goals, such as the 9 per cent drop in exports to the West which led to a further increase in the deficit despite cutting down on Western imports, but also domestic economic inefficiency.¹² Also, the maneuverability of the GDR leadership was restricted by two essential factors:

1. By the extensive social program announced on 29 May 1976, which in addition to emphasis on housing construction provided for a list of other social improvements by specific dates.
2. In contrast with other CEMA countries, the GDR leadership had committed itself several times to keeping the consumer price level stable.¹³

The large-scale reorganization of the industrial and foreign trade apparatus, and the new formation or reorganization of the combines at the turn of the year 1977/78, must be seen in close context with the unsatisfactory development of foreign trade.

As in 1977, the tendency to deficit in Western trade was once again met by the GDR with import cutbacks in 1978, whose effects on the production potential had an adverse effect in turn on export capability. Since the third year of the planning period also did not succeed in improving the balance of trade, in 1979 changes in the product mix were made with the goal of increasing substantially the production of export-profitable goods;¹⁴ emphasis was placed on further processing of crude oil for export.

In 1979, the second oil price explosion on the world market burst into the reorganization and structural changes of production.

At the 11th plenary session of the SED Central Committee in December 1979, which will probably enter the history of the Central Committee as the "foreign trade plenary," Honecker characterized this development not only as a "further aggravation of an already complicated situation," but called it a "new situation."¹⁵

Instead of a price relaxation vis-a-vis the USSR, renewed and strong price increases occurred. The starting position for the new 5-year plan for 1981-1985 had deteriorated substantially; the goals of the previous 5-year plan had failed for the most part.

1. The planned export offensive was characterized by severe declines; meanwhile, crisis-like developments in the West had lowered the sales chances of the available export supply. Instead of reducing indebtedness, with at least \$10 billion in debts it was twice as high as at the end of 1975. More than one-third of the new debts were due to grain imports from the United States. They amounted to \$500 million in 1980 alone (see Table 9).
2. In contrast to the year 1975, substantial debts were also incurred vis-a-vis the Soviet Union. The accumulated trade balance deficit amounted to rubles 2 billion. This corresponded to the additional expenditure for oil since 1975. The GDR had not succeeded in paying for the price increases through exports (see Table 5).

3. The goal of making Poland into the second strongest trade partner in the bloc had failed, among other things because of the onset of the Polish crisis.

4. Foreign trade difficulties had also had an adverse effect on integration goals. However, one major aim had been surpassed, at least on paper. The share of products from specialization and cooperation to be exported to the USSR was 38 percent instead of 35.

A further point of emphasis, joint investment projects, in part was not implemented on time, evidently also because of delivery difficulties of the CEMA countries.

A goal of the comprehensive program of importance to the foreign trade relations of the CEMA countries, i.e., the decision to introduce a uniform exchange rate for the national currencies of the CEMA countries by 1980, was no longer in the picture.

5. Only in inner-German trade was there a ray of hope. Actually, the projected "diversification" had not taken place. But for the first time since 1963, the GDR managed to achieve a delivery surplus in 1980. This was meant to create a favorable precondition for the new negotiations of the swing scheduled for 1981 (see Table 11).

IV. Starting Into the Five-Year Plan 1981-1985

In view of the debts of the seventies, the rigorous orientation of the new 5-year plan 1981-1985 toward foreign trade was pre-programmed. Even at the "foreign trade plenary session" in late 1979, cited above, Honecker had urgently demanded the concentration of all forces on solving foreign trade problems.¹⁶ "Foreign trade has become even more a fundamental question for total economic growth, for the dynamism and stability of our development."

The "economic strategy of intensification and efficiency for the eighties" presented at the 10th SED Party Congress in 1981 established the framework for it. The emphasis of economic policy was oriented toward foreign trade. The major goal was a lasting turnaround of the balance of trade in order to reduce the accumulated indebtedness in both East and West.

By the end of 1981, the import surplus in trade with the West and with the USSR was reduced through high export growth rates and import restrictions. In inner-German trade, for the second time a positive balance was achieved, amounting to 500 million accounting units (see Table 11).

V. Gravity of Situation Dramatically Increased

The concept of stabilization was abruptly destroyed at the end of 1981 through three events, which already at the beginning of the new plan period radically changed supposedly calculable standard foreign trade data, and which confronted the GDR with the most dramatic foreign trade situation since its very existence.

1. The GDR was pulled into the international crisis of confidence, caused by the insolvency of Romania and Poland. Its results were no more supplier credit of any kind, the greatest difficulties with continuation loans and termination of credit, and therefore, coercion to repay.

2. The oil deliveries of 19 billion tons annually, which had still seemed assured until 1985 at the 10th SED Party Congress in April 1981 because of the long-term trade agreement with the USSR, were cut by 2 million tons as of 1 January 1982.

3. Through a change in the mode of price formation, the price increase for Soviet oil amounted to almost 50 percent. This was equivalent to a 3-year average and no longer a 5-year average.¹⁸

In view of the threatening crisis of liquidity, all forces had to be concentrated on reducing indebtedness to the West. However, according to Soviet data, another record deficit of VM 3.7 billion [VM = valuta mark] accrued vis-a-vis the USSR (see Table 5).

However, for the first time they managed to achieve high surpluses in trade with the West (including inner-German trade). Over-all, the trade balance was positive for the first time since 1972. The surpluses, however, were not attained solely through high export growth rates (see Table 1), but primarily through rigorous import cutbacks from all areas except the USSR. According to OECD data, GDR imports from Western industrial nations dropped by 30 percent (see Table 13), excepting inner-German trade. This policy was continued in 1983, albeit in diminished form. By the end of 1983, imports were still 20 percent below the level of 1981. In inner-German trade, on the other hand, purchases from the FRG had risen by 14 percent during the same period (see Table 11).

This radical import defensive, coupled with a similarly radical export offensive, could only be carried at the expense of domestic consumption, i.e., the turnover of retail trade and investments. Increased exports noticeably lowered the domestic supply of goods in the consumer goods sector. Not only industrial consumer goods, but also foodstuffs such as meat were exported. Import restrictions further decreased the supply of goods. In addition, at the expense of future export productions, the production potential was impaired through a lack of technology imports and cuts in the import of spare parts. On the other hand, they succeeded in rapidly cutting back indebtedness. From the end of 1981 to the end of 1983, net indebtedness dropped from \$10.5 billion to \$7 billion (see Table 14). The drop in debts was achieved primarily through a rapid buildup of a favorable credit balance of \$1.4 billion. The 1-billion-credit, which was not used for Western imports as originally suspected, was evidently also used to build up a favorable credit balance.¹⁹

B. Quantitative and Qualitative Effects

I. Trend of Sales

The price development of the years 1974-1983 caused a considerably faster nominal growth of foreign trade than in preceding periods. Total sales

tripled (Table 2), while the national income (at prices of 1980) rose only by a little over 50 percent. At the price level of 1970, however, foreign trade turnover grew by only 71 percent. Due to developments in the eighties described above, exports rose by a disproportionate 222 percent. Because no indices for exports and imports have been published since 1974, no terms-of-trade calculations can be computed. It is a fact that they have deteriorated for the GDR, especially vis-a-vis the USSR and the developing countries. There is a rule of thumb in CEMA that prices for finished products tripled between 1975 and 1984, while prices for raw materials increased 900 percent.²⁰

Because of the missing relation of valuta mark vs. domestic mark in the GDR, no precise statements can be made on foreign trade linkage.²¹ It is a fact that interdependence has grown further. According to GDR data, about 30 percent of the national income come from foreign trade.²²

The very rough regional structuring of "socialist economic area" and "non-socialist economic area" indicates that sales in the bloc have risen at a disproportionately low nominal rate of 184 percent, and outside the bloc at a disproportionately high nominal rate of 234 percent. At fixed 1970 prices, they rose twice as fast outside the bloc as within. Price rises within the bloc were, therefore, considerably higher than outside. If one considers the nominal growth rates of the USSR separately from those of the other "socialist countries," then a 228-percent increase in turnover rose considerably faster than in the other "socialist countries." The strong price rises for oil effected an increase of imports from the USSR almost twice as fast as imports from the other "socialist countries." In the "non-socialist area," the situation vis-a-vis developing countries was similar to that with the USSR. Because of the greater price increases, in this case, also, turnover, exports and imports rose faster than with the Western industrial countries (including inner-German trade).

There were noticeable shifts in the regional structure. In 1973, the last year before the price explosion on the world market, the nominal share of socialist countries was 69 percent, and at fixed prices it came to 71 percent. In 1983, this share had dropped to 65 percent both at respective and fixed prices. This is contradicted, however, by statements of GDR Foreign Trade Minister Soelle, who claimed on the occasion of the 35th anniversary of the GDR that in 1983, also, the share of socialist countries amounts to 70 percent.²³

Particularly striking were the shifts in the export and import structure (see Table 4). In 1973, 73 percent of all exports were still sold within the bloc, and only 27 percent outside; the bloc export share dropped rapidly as of 1979 and was only 64 percent in 1983. The share of imports from non-socialist countries with 32 percent was only slightly lower than the share of 35 percent in 1983. The graph in Appendix 1 demonstrates this development; it shows the adjustment of export and import shares with the "socialist economic area" as well as with Western industrial countries. Vis-a-vis developing countries, however, the import and export shares are drifting apart.

II. Structural Shifts in Patterns of Goods and Countries

1) Total Goods Structure

The past 10 years had considerable effects on the goods structure of foreign trade (see Table 7). While in 1983 the share of investment goods exports of not quite 48 percent dropped back to its lowest value since 1974, the share of fuels and mineral raw materials in exports in the eighties expanded steadily to almost 18 percent.

Regarding imports, the year 1983 brought the most unfavorable development to date. The share of investment goods imports dropped to a low of less than 30 percent, while the share of fuel and mineral raw material imports of almost 40 percent climbed to its absolute highest point. In 1974, this share constituted only 27 percent.

In total, the import share of finished and semi-finished products of 43 percent faced an import share of raw materials of 57 percent. In 1974, this ratio was almost balanced. The import structure has thus reached its highest raw material preponderance ever.

2) Structural Changes in GDR Trade With the East

Regarding patterns of goods, the general statement can be made that trade with the socialist countries has become increasingly more complementary. This concerns primarily trade with the USSR.

In 1984, the share of investment goods exports from the GDR to the USSR had climbed to 67 percent vs. 62 percent in 1974, although at the expense of consumer goods exports (Table 8). In absolute terms this means a tripling. The same item, however, in imports from the USSR has dropped from 22 percent to all of 10 percent. In absolute value this corresponds to a growth of only 40 percent, but in view of the price increases in this sector, also, it means a considerable real drop. It is evidenced, for instance, in transport facilities and agricultural machinery (see Table 6).

Automobile imports from the USSR became almost completely a victim of the deficit trade balance. Compared to 57,500 automobiles in 1974, only 6,000 were delivered in 1983. The long-term trade agreement until 1985 had provided for imports of 160,000 Soviet automobiles. By the end of 1983, only about 24,000 had been delivered. A similar development has taken place in truck and tractor imports. Raw material imports from the USSR, however, stayed more or less within the framework of the agreements. The share of oil imports alone within total imports rose from 12 percent in 1974 to 40 percent in 1983 (Table 8). On the basis of value, this was an increase of 10 times over 1974, while it represented a quantitative increase of only 20 percent.

The total GDR export potential of investment goods was further restricted. In 1974, 42 percent of all investment goods went to the USSR, the figure had already climbed to 51 percent in 1983.²⁴

Over-all, the USSR share of GDR foreign trade climbed steadily from an average of not quite 35 percent in 1971-1975 to almost 38 percent in 1981-1983. Actually, in a balanced trade it should have been even higher. According to GDR data, the share of 40 percent indicated by Honecker was not reached.

In contrast with the structurally unfavorable development of trade with the USSR, specialization and cooperation continued to progress. In 1983, the share of products from specialization and cooperation of GDR exports to the Soviet Union came to almost 54 percent, while in 1970 it constituted only 1 percent. In exports to the other CEMA countries, this share, with 27 percent, was only half as much. Poland brings up the rear with 18 percent.²⁵ The share of these products in GDR imports from all CEMA countries is considerably lower, with 22 percent.²⁶

Trade with Poland was aggravated by special problems. It cannot be ascertained precisely in how far Polish shortfalls were replaced from within or from outside the bloc or, as in the case of bituminous coal, from inner-German trade. The volume growth rate of 6 percent (price base 1980) for the trade agreement period 1981-1985 was set at a particularly low rate. As a consequence of the economic crisis in Poland, the trade volume even dropped by 6 percent by 1983. In 1983, the level of 1979 had not yet been reached again. The Polish share of GDR foreign trade dropped from an average of 8 percent during 1971-1975 to 5 percent during 1981-1983.

In the past, the question of the extent of material aid for Poland surfaced time and again. The only concrete data on the subject came from Guenter Mittag at the 3d plenary session of the Central Committee in 1980,²⁷ at a time when the Polish crisis had not yet reached its climax by far. According to them, up to then the GDR had delivered to Poland foodstuffs in the amount of VM 300 million, and hard currency in the amount of VM 250 million.

A painfully clear answer to the question of GDR aid was given by Jaruzelski 3 years later, on the occasion of the Honecker visit to Warsaw in August 1983.²⁸ "Soviet economic aid is particularly valuable and irreplaceable. I also want to thank you, dear friends from the German Democratic Republic, for the well-meaning approach to our problems and difficulties."

3) Structural Changes in GDR Trade With the West

There were also structural changes in GDR trade with the West.²⁹ According to computations of the DIW, in imports there were shifts in favor of agricultural products, whose share has steadily grown since 1978 and meanwhile constitutes almost one-third of GDR imports. In 1975, the share was 11 percent. It was caused by the shift in grain and fodder imports, since 1974, from the USSR to Western trade. This shift in grain imports has contributed greatly to the high indebtedness of the GDR. Between 1973 and the end of 1981, a trade balance deficit of \$2.5 billion accrued with the United States alone. This development in particular had caused Erich Honecker, at the 3d plenary session of the SED Central Committee in November 1981, to compare the extent of the grain problem with that of the oil problem.³⁰

Investment goods imports fluctuate around the 30 percent mark. The basic material and producer goods sector was recessive; it dropped from about one-third to one-fourth.

In inner-German trade, more than half of all purchases had always been in the basic material and producer goods sector.³¹ This item has grown further during the eighties due to increased deliveries of bituminous coal, and of iron and steel in 1983. On the other hand, the share of investment goods purchased in 1983 dropped to its lowest level to date, to 18 percent.

On the sales side, during the eighties the share of basic material and producer goods deliveries has risen to over 50 percent in inner-German as well as other Western trade. One dominating production group, namely mineral oil products, crystallized first in inner-German trade, and since the eighties in other Western trade, whose share in inner-German trade now constitutes one-fourth of all deliveries from the GDR.

In other West trade, the share of mineral oil products during the seventies was below 10 percent, but by 1982 it had risen rapidly to 29 percent, and probably has increased again in 1983. The development of mineral oil product deliveries as a "foreign currency source" is revealing. Evidently the GDR has created here an equivalent to the missing investment goods potential. Export figures show that since 1979, the GDR has constantly increased its exports. Despite lower oil imports in 1982, the GDR continued to increase its exports.³² The cutback in Soviet oil deliveries hit its export production in its entirety. To maintain this production, in 1982 enormous austerity efforts were made in fuel and heating oil; according to the 1982 report on fulfillment of production targets, in heating oil alone, 1.8 million fewer tons were consumed. In 1983/84 also, proven exports of mineral oil products continued to climb.

The country structure of GDR Western trade shows a considerable shift. But because of the tiresome problems with statistics, there are different rankings. The top position of Austria is unequivocal; since 1979, it moved from seventh to first place, or second, respectively.³³ During 1982 and 1983, trade with Austria was greatly expanded. In 1983 it already passed that with the CEMA country, Romania. Intensive contacts, climaxed by the state visit of Chancellor Sinowatz in November 1984, concentrated strongly on economic relations. Relations with Austria are an expression of the foreign policy motto of GDR policy toward the West, namely preferential treatment of bloc-free states. Austria met this endeavor very obligingly in financial respects. During the years 1982/83, in contrast with its policy of import cutbacks, the GDR managed to increase its imports from Austria by 88 percent.³⁴

France continues to hold a strong position. However, French deliveries suffered like those of Great Britain, which since 1979 has lost its top position as Western trade partner of the GDR and dropped back to fourth place.

The United States dropped back among the group of four at the bottom of the scale. Until 1981 the GDR purchased the major portion of its imported grain from the United States. As of 1982, grain purchases were increasingly shifted to Canada, West European countries, and even to inner-German trade (see

Table 9). The sometimes three-digit growth rates in imports from some European countries during 1984 are based exclusively on grain imports. This shift was caused by the low sales prospects of GDR goods in the United States (no most-favored-nation clause), and by less favorable credit conditions on the part of the United States.

Trade with Japan has moved sharply forward. It is an extreme deficit trade; but because of more favorable credit conditions and primarily because of large-scale plant business, deliveries from Japan rose by 137 percent during the crisis years of 1982-1983.

While diversification within trade with Western industrial nations has taken place, inner-German trade managed to retain its share. During the critical years of 1982 and 1983, it proved to be a definite element of stabilization. For statistical reasons it is very difficult to establish its actual share in the GDR-Western trade.

According to GDR data, its share amounts to about 30 percent. This figure is too low, since the GDR equates 1 VM with 1 VE (valuta mark with 1 unit of account). According to OECD data, it is constantly above 50 percent; this is too high, since OECD data are set too low. An attempt to determine realistically the share of inner-German trade (see Table 12) comes to about 40 percent.

4) Trade With Developing Countries

Claims and reality have always been, and still are, in particularly drastic contradiction in trade with developing countries. With the exception of Bulgaria, among the European CEMA countries the GDR still brings up the rear in trade with developing countries. Its share of total foreign trade has hardly crossed the 5 percent mark and in recent years has been dominated by oil. In 1983, almost half of all trade with developing countries (43 percent) was with Iraq and Iran. Evidently, trade with the politically pampered countries of Angola, Ethiopia, and Mozambique has suffered from this one-sided concentration. The share of those three countries dropped to 8 percent in 1983. In the years since 1978, it had regularly been between 11 and 14 percent.

5) Additional Structural Effects

In addition to the structural shifts in the regional, goods and country structures described above, considerable structural shifts have occurred, and still do, due to replacement and substitution of import goods. The most serious effects took place in the energy sector, namely substituting domestic brown coal for oil. But the necessity of substitution touches all economic sectors and branches. Two examples will demonstrate the range of substitution, some of it decreed by law. Recently, in the "decree on planning, preparing the balance sheet, and use of diamond tools,"³⁵ the producers and buyers of diamond tools, in addition to the call for using these tools most sparingly, were

obligated to develop substitution solutions. Replacements of luxury food items are numerous. For a long time, for example, work was carried out to find substitutes for the imported ingredients needed for producing Christmas stollen [traditional loaf with fruit and nuts]. This concerns primarily succade, the candied green peel of cedar fruit trees. Meanwhile it has been replaced by the patented "Kandinat T," candied green tomato peels.³⁶ This surrogate is not used for stollen to be exported, however. Nonetheless, imports of succade were cut in half.

As a last effect of foreign trade developments, structural changes of foreign trade tools must be mentioned.

During the seventies, licensing agreements increasingly joined straight goods traffic. Their role increased considerably in trade with the West, but above all in trade with CEMA countries, after the principle of gratis exchange of inventions within CEMA had been abolished in 1968.³⁷

A modified form of the license business, the so-called "permission production" gained growing importance. Next to this form, classified by the GDR as cooperation, compensation plays a decisive part. The repurchase deal, propagated by Brezhnev as a new form of foreign trade relations in 1976, namely large-scale compensation,³⁸ is today considered the most important form of cooperation with the West, where it is largely acknowledged as a form of cooperation. The compensation business in the form of reciprocity business is not classified as cooperation in the West, but it is so considered in the GDR. It has gained a decisive part in the course of GDR sales difficulties. The straight barter business, which played a large role in trade with the West during the fifties and is also rejected in the GDR as a method dating from the stone age, is experiencing a comeback in CEMA. At present, the USSR barter contractually agreed-upon oil for foodstuffs, and in the case of the GDR, for grain. For this purpose, in 1983 the GDR had to import more grain than necessary for its own needs. This seems to happen to an even larger extent in 1984.³⁹

On the other hand, the much-cited third-country cooperation is still a marginal occurrence. Another true form of cooperation, joint ventures, so far is not represented on GDR soil, although it has been discussed increasingly since 1979.⁴⁰

C) Outlook

From the development described above derive the following major aspects for the coming 5-year plan:

The starting position, on the basis of the balance of trade situation and the surprisingly rapid growth of foreign currency liquidity--positive credits rose to \$4.2 billion by the end of June--is considerably more favorable than in 1980 (Table 14). The known net indebtedness (including inner-German trade) vis-a-vis Western industrial countries was only 20 percent above the delivery

volume to the West (including inner-German trade); in 1980 it was still two-and-a-half times higher than GDR deliveries (according to GDR statistics). However, the rapid buildup of positive credit poses a puzzle which cannot be solved from the data on export surpluses.⁴¹ On the other hand, the need for loans continues, as shown by the "Jumbo" credit of DM 950 million in September 1984 and by a number of smaller loans.

Foreign trade as a growth factor was put out of business. Due to the deterioration in the terms of trade and the pressure of debts, it has again assumed the function of a stopgap.

Seen from this angle, consolidation of foreign trade has only been quantitative. In qualitative terms, the starting position has deteriorated compared to 1975. In CEMA trade--particularly with the USSR--instead of a more intensive division of labor the already existing, strongly complementary structure has further increased. In trade with the West, the delivery structure, already called "deformed" by GDR authors in 1976,⁴² has become even more so. Dangerous, above all, is the high percentage of one single group of goods, i.e., mineral oil products, the price of which is highly unstable.

The decisive factor in foreign trade and foreign trade policy in the upcoming 5-year plan, and to an even larger extent than up to now, will be economic relations with the USSR.⁴³ For several reasons, the GDR will be rigorously taken to task in the coming years:

1. The USSR had to accept considerable sales losses through the sliding price mechanism in CEMA;
2. In addition, the USSR had to make its deliveries on credit, and with the exception of Poland, the highest credit went to the GDR;
3. Furthermore, the quantitatively insufficient GDR deliveries also had qualitative defects;
4. The repayment of loans, planned by 1985, became a victim of the reduction of debts owed to the West.

The framework for tying the GDR, and also the other CEMA countries, even more closely to the USSR was set up at the CEMA summit in June 1984,⁴⁴ and was put into concrete form in the "Program of Cooperation to the Year 2000 Between the GDR and the USSR in Science, Technology and Production" of October 1984.⁴⁵ For the future securing of raw material imports from the Soviet Union, the program demands a restructuring of investments and modernization of industry in order to increase exports of industrial consumer goods, chemical products and investment goods both quantitatively and qualitatively so that old debts can be paid off and annual imports can be financed. The demands by the USSR can only be fulfilled, however, if the GDR carries out modernization with the aid of Western technology imports. Although a clearly positive attitude was taken at the CEMA summit with regard to further expansion of trade with the West, under the conditions described above, there is only room for maneuver through renewed GDR indebtedness in the West.⁴⁶

FOOTNOTES

1. "Mastery of the Economy Is Class Struggle for Us" in: NEUES DEUTSCHLAND of 27/10/1968.
2. For reasons of space, a bibliography of writings on GDR foreign trade during the past 10 years cannot be listed here. Therefore, only the most important and comprehensive titles that appeared on economic development in selected East European countries will be listed here, excluding the continuous reporting in the FS-analyses, the DIW weekly reports, and the annual reports of the HWWA: Alfred Schueller and Ulrich Wagner (editors): "Aussenwirtschaftspolitik und Stabilisierung von Wirtschaftssystemen." [Foreign Trade Policy and Stabilization of Economic Systems] SCHRIFTEN ZUM VERGLEICH VON WIRTSCHAFTSORDNUNGEN, Nr 28, Stuttgart, New York 1980. Gernot Gutmann and Maria Haendcke-Hoppe (editors): Die Aussenbeziehungen der DDR. [GDR Foreign Relations] JAHRBUCH 1980 DER GESELLSCHAFT FUER DEUTSCHLAND-FORSCHUNG, Heidelberg, 1981. Hans Dieter Jacobsen: "Strategie und Schwerpunkte der Aussenwirtschaftsbeziehungen" [Strategy and Emphases of Foreign Trade Relations] in: H. A. Jacobsen, G. Leptin, U. Schuener, E. Schulz (editors): "Dreijahrzehnte Aussenpolitik der DDR" [Three Decades of GDR Foreign Policy], Munich-Vienna 1979, pp 293-311. Same author: "Die Aussenwirtschaftspolitik der DDR gegenueber dem Westen zu Beginn der achtziger Jahre" [GDR Foreign Trade Policy vis-a-vis the West at the Beginning of the Eighties] in: "Die DDR vor den Herausforderungen der achtziger Jahre" [The GDR Confronted by the Challenges of the Eighties], EDITION DEUTSCHLAND ARCHIV, Cologne 1983, pp 66-78; DIW-Berlin, "Handbuch DDR-Wirtschaft" [Handbook GDR Economy]; RORORO TASCHENBUCH Hamburg, February 1985, chapters 6 and 7; Gernot Gutmann, Gottfried Zieger (editors): "Aussenwirtschaft der DDR und inner-deutsche Wirtschaftsbeziehungen-rechtliche und oekonomische Probleme" [GDR Foreign Trade and Inner-German Trade Relations-Legal and Economic Problems]. SCHRIFTENREIHE DER GESELLSCHAFT FUER DEUTSCHLANDFORSCHUNG, Berlin, spring of 1985.
3. Compare Gunther Kohlmeier: "Nationale Produktivitaet - dynamische Produktion - internationale Arbeitsteilung" [National Productivity - Dynamic Production - International Division of Labor], East Berlin 1965, p 74; same author (ed.): "Aussenwirtschaft und Wachstum" [Foreign Trade and Growth], Berlin (East) 1968, p 19 ff.
4. OEKONOMISCHES LEXIKON A - K, Berlin (East) 1967, Stichwort "Aussenwirtschaft" [heading, "Foreign Trade"].
5. DIE WIRTSCHAFT No 32/1971, supplement Nr. 10.

6. See Karl C. Thalheim: "Die DDR im RGW - wirtschaftliche Fragen" [The GDR in CEMA - Economic Questions], in: Gernot Gutmann, Maria Haendke-Hoppe (editors): Die Aussenbeziehungen der DDR [GDR Foreign Relations] Heidelberg 1981, pp 121-139; Jochen Bethkenhagen, Horst Lambrecht: "Wachstumsfoerdernde und wachstumshemmende Effekte der Integration der DDR im RGW" [Growth-promoting and Growth-hindering Effects of GDR Integration in CEMA] in: VIERTELJAHRESHEFTE FUER WIRTSCHAFTSFORSCHUNG 1979, pp 261-272. Werner Klein: "Der Rat fuer Gegenseitige Wirtschaftshilfe (RGW) - Ein Block handelspolitischer Stabilitaet" [CEMA - Council for Economic Mutual Assistance - A Bloc of Trade Policy Stability] in: Alfred Schueller and Ulrich Wagner, (editors), op. cit. pp 215-231.
7. Helmut Winter: "Die aussenwirtschaftliche Aktivitaet der DDR im RGW zur Sicherung der Rohstoffversorgung" [GDR Foreign Trade Activity in CEMA To Secure Raw Material Supplies] in: Gernot Gutmann (ed.): Das Wirtschaftssystem der DDR [The Economic System of the GDR]. Stuttgart, New York 1983, pp 383-404.
8. NEUES DEUTSCHLAND of 13/12/1979.
9. Interview with Gerhard Weiss in ND of 18/2/1975. Information on the three-year average could at first only be gleaned from Hungarian sources (NEPSZABADSAG of 23/2/1975). Compare Heinrich Machowski and Maria Elisabeth Ruban: "Auswirkungen der neuen Aussenhandelspreise im RGW" [Effects of the New Foreign Trade Prices in CEMA] in: DIW - WOCHENBERICHT 17/1975, pp 136-138.
10. These connections were for the first time presented by a high GDR official in the Hungarian newspaper VILLAGAZDAZG of 15/6/1978 and were confirmed by Honecker at the 11th Plenary Session of the SED Central Committee in 1979. ND of 4/12/1979.
11. GNI I 1976, p 256.
12. Also compare Doris Cornelsen: "Die Wirtschaft der DDR an der Jahreswende 1977/78" [The GDR Economy at the Turn of the Year 1977/78] in: DIW-WOCHENBERICHT 6/1978, p 9 ff.
13. As of January 1976, numerous industrial price increases became effective, which necessitated subsidies growing annually to maintain the price level of consumer goods.
14. NEUES DEUTSCHLAND, 25/5/1978.
15. NEUES DEUTSCHLAND, 14/12/1979.
16. Ibid.
17. Honecker at the 10th Party Congress, Report to the SED Central Committee, East Berlin 1981, p 82.

18. Compare Maria Haendcke-Hoppe: "DDR-Aussenhandel im Zeichen schrumpfender Westimporte" [GDR Foreign Trade Under the Impact of Shrinking Imports From the West] in: DEUTSCHLAND ARCHIV Heft 10/1983, p 1069 f., and Jochen Bethkenhagen: "Erdoel und Erdgas im RGW-Intrablockhandel" [Oil and Natural Gas in the CEMA Intra-Bloc Trade] in: DIW-WOCHENBERICHT 51 and 52/1983. p 630 f.
19. Also see Doris Cornelsen: "Die Wirtschaft der DDR unter dem Einfluss weltwirtschaftlicher Veraenderungen" [The GDR Economy Under the Influence of Changes in the World Economy] in: Doris Cornelsen, Konrad Merkel: Wirtschaft und Wirtschaftspolitik der DDR unter Unsicherheiten und Risiken II [Economy and Economic Policy of the GDR Under Uncertainties and Risks II], FS-ANALYSEN No 6/1983, p 21.
20. Lajos Faluvegi, president of the Hungarian State Planning Bureau. Quoted from MTI, English GMT, 12/9/1984.
21. Also compare Jochen Bethkenhagen and Horst Lambrecht: "Die Aussenwirtschaftsbeziehungen der DDR vor dem Hintergrund von Produktion and Verbrauch" [GDR Foreign Trade Relations Against the Background of Production and Consumption]. Reports of the Federal Institute for Eastern and International Studies, Cologne, Nr 19/1979, p 5.
22. See Kurt Fenske: "Exportrentabilitaet - ein Faktor zur Erhoehung der Effektivitaet der Volkswirtschaft" [Export Profitability - a Factor for Increasing Economic Effectiveness] in: Fragen der weiteren Staerkung der materiell-technischen Basis [Problems of further strengthening the material-technical base]. Treatises of the Academy of Sciences of the GDR, East Berlin 1982, Vol 3, p 85 ff.
23. Horst Soelle: "35 Jahre erfolgreiche Aussenhandelspolitik der DDR" [35 Years of Successful GDR Foreign Trade Policy] in: AUSSENHANDEL USSR, No 10/1984, p 2.
24. Computed on the basis of the Soviet Yearbook of Foreign Trade and of the Statistical Yearbook of the GDR.
25. RGW in Zahlen und Fakten [CEMA in Figures and Facts]. In: EINHEIT No 7/1984, p 605.
26. Compare Horst Tschanter: "Alle Moeglichkeiten der Zusammenarbeit im RGW noch intensiver nutzen" [All Possibilities of Cooperation in CEMA To Be Utilized Even More Intensively]. In: DIE WIRTSCHAFT Nr 1/1982, p 605.
27. NEUES DEUTSCHLAND, 12/12/1980.
28. NEUES DEUTSCHLAND, 17/8/1983.

29. Compare Doris Cornelsen, Horst Lambrecht, Heinrich Machowski, Manfred Melzer, Cord Schwartau: "Stand und Entwicklung der DDR-Wirtschaft in den 80er Jahren unter Beruecksichtigung der RGW-Integration und der Auswirkungen auf den Innerdeutschen Handel" [Situation and Development of the GDR Economy in the Eighties, Taking Into Account CEMA Integration and Its Effects on Inner-German Trade]. Unpublished expert opinion of the DIW, Berlin 1983, p 239 ff., and Horst Lambrecht, "DDR-Aussenhandel: Importrestriktionen bei unzureichendeom Export-vermoegen" [GDR Foreign Trade: Import Restrictions and Insufficient Export Capability] in: DIW WOCHENBERICHT 47/1979, and author's evaluation on the basis of OECD foreign trade statistics.
30. NEUES DEUTSCHLAND, 20/11/1981.
31. See Fachserie F, Reihe 6 of the Federal Office of Statistics, several years.
32. STATISTISCHES JAHRBUCH DER RGW-LAENDER, p 341.
33. Compare Maria Haendcke-Hoppe: "Konsolidierung in der DDR-Aussenwirtschaft" [Consolidation in GDR Foreign Trade] in: DEUTSCHLAND ARCHIV No 10/1984, p 1069, Table 5.
34. Ibid., Table 6.
35. BGI I 1984, p 294 ff.
36. LEBENSMITTELINDUSTRIE East Berlin, No 2/1984, p 93.
37. Compare Maria Haendcke-Hoppe: "Sorgenkind Lizenzhandel" [Problem Child License Trade]. FS-ANALYSEN No 3/1979.
38. NEUES DEUTSCHLAND, 19/5/1976.
39. Compare Heinrich Machowski: "Aktuelle Probleme der Waehrungspolitik der RGW-Staaten" [Present Problems of Currency Policy of CEMA States] in: Waehrungspolitik auf dem Pruefstand. Zum 10. Todestag von Edgar Salin [Currency Policy Being Tested. On the 10th Anniversary of the Death of Edgar Salin], Baden-Baden 1984, p 150. Also, Business Eastern Europe, 20/10/1984, p 339.
40. Compare Juergen Nitz, Paul Freiberg: "Probleme und Perspektiven der Ost-West-Wirtschaftsbeziehungen" [Problems and Prospekts of East-West Trade Relations]. IPW FORSCHUNGSHEFTE 3/1984, p 105.
41. The cause for this lies primarily in OECD statistics, where during the seventies the growing GDR indebtedness also could not be confirmed on the basis of proven import surpluses. OECD statistics do not contain transit deliveries, and for this reason, transit grain deliveries from

the United States via the FRG in the amount of billions did not appear in OECD statistics. Compare Maria Haendcke-Hoppe: "Extreme Anstrengungen in der Aussenwirtschaft" [Extreme Efforts in Foreign Trade] in: "Die DDR-Wirtschaft unter dem Zwang von Engpaessen und Instabilitaeten" [GDR Economy Under the Pressure of Shortages and Instabilities], FS-ANALYSEN No 7/1982, p 83; Hannsjoerg Buck: "Die Devisenverschuldung der DDR" [GDR Foreign Currency Debts] in: Gernot Gutmann, Gottfried Zieger (editors), op. cit.

42. Autorenkollektiv. SOZIALISTISCHE AUSSENWIRTSCHAFT, East Berlin 1986, p 134.
43. Compare also the article by Leonid Kastandov, suddenly deceased member of the CPSU Central Committee, deputy chairman of the USSR Council of Ministers, and director of the party government commission USSR-GDR, in NEUES DEUTSCHLAND, 5/9/1984.
44. Compare Heinrich Machowski: "RGW-Gipfeltreffen. Interessenausgleich" [CEMA Summit Meeting. Balance of Interests] in: DIW-WOCHENBERICHT 29/1984, p 343 ff., and Siegfried Kupper: "Muehsamer Aufstieg - truebe Aussicht. Zum Moskauer Wirtschaftsgipfel" [Strenuous Climb - Dim Prospects. On the Moscow Economic Summit] in: DEUTSCHLAND ARCHIV No 8/1984, p 843 ff.
45. NEUES DEUTSCHLAND, 8/10/1984.
46. On 23 November 1984, granting of a third "Jumbo" credit in the amount of DML.2 billion became known. This financial credit, again not tied to any particular use, is being given as free Euro-credit by the Deutsche Bank together with 37 other banks. FAZ, 22/11/1984, p 1.

Table 1. Development of GDR Foreign Trade 1970-1983
Absolute and Annual Growth in Percent
(Current Prices)

Entwicklung des DDR-Außenhandels 1970 - 1983 absolut und jährlicher Zuwachs in VM (jeweilige Preise)									
(1) Jahr	(2) 1) Umsatz insgesamt Mrd. VM ²⁾	(3) Zuwachs		(4) Export Mrd. VM	(5) Zuwachs		(6) Import Mrd. VM	(7) Zuwachs	
		Jeweil. Preise (8)	Preisba- sis (1970)		Jeweil. Preise (8)	Preisba- sis (1970)		Jeweil. Preise (8)	Preisba- sis (1970)
1970	39,60	13,9	.	19,24	10,3	.	20,36	17,5	.
1971	42,24	6,7	6,0	21,32	10,8	10,2	20,92	2,8	2,1
1972	46,78	10,8	9,9	23,93	12,2	11,9	22,85	9,2	7,9
1973	53,50	14,4	10,0	26,17	9,4	7,5	27,33	19,6	12,6
1974	64,01	19,6	8,6	30,44	16,3	8,4	33,57	22,8	8,7
1975	74,39	16,2	6,4	35,10	15,3	7,8	39,29	17,0	5,0
1976	85,46	14,9	8,5	39,54	12,6	5,8	45,92	16,9	11,1
1977	91,73	7,3	4,4	41,84	5,8	.	49,88	8,6	.
1978	96,88	5,6	3,6	46,17	10,3	.	50,71	1,7	.
1979	108,84	12,3	7,7	52,42	13,5	.	56,42	11,3	.
1980	120,10	10,3	4,3	57,13	9,0	.	62,97	11,6	.
1981	132,93	10,7	3,6	65,93	15,4	.	67,00	6,4	.
1982	145,11	9,2	0,5	75,23	14,1	.	69,88	4,3	.
1983	160,42	10,6	8,4	84,23	12,0	.	76,20	9,0	.

1) Gesamteinfuhr und -ausfuhr ohne Dienstleistungen, einschl. Innerdeutscher Handel (IDH). Einschl. techni-
sche Dienstleistungen, Projektierungs-, Bau-, Montage- und Reparaturleistungen. Sowie Lieferungen und Lei-
stungen im Rahmen der WTZ.
2) VM (Valutamark ist die statistische Recheneinheit im DDR-Außenhandel, die Relation zum tr. Rubl. ist
1 tr. Rubl. = 4,67 VM. Die Relation zur Binnenmark der DDR ist nicht bekannt).
Quellen: Statistische Jahrbücher der DDR 1977 und 1984.
Export- und Importdaten für 1977 - 1979: Statistische Jahrbücher der Mitgliedsländer des RGW,
Moskau (russisch).

Key:

1. Year
2. Total turnover, in billion VM
3. Growth
4. Export, in billion VM
5. Growth
6. Import
7. Growth
8. Current prices
8. Price base 1970

- 1) Total imports and exports without services, including inner-German trade. Including technical services, project planning, construction, assembly and repair services. Also deliveries and performances within the framework of scientific-technical cooperation.
- 2) VM (Valutamark is the statistical unit of account in GDR foreign trade; the relationship to the tr. ruble is 1 tr. ruble = 4.67 VM. The ratio to the GDR domestic Mark is not known).

Sources: GDR Statistical Yearbooks 1977 and 1984. Export and import data for 1977-1979: Statistical Yearbooks of CEMA member states, Moscow (in Russian).

Table 2

Increase of GDR Foreign Trade Turnover in 1983 vs. 1973, in Percent Zunahme des DDR-Außenhandelsumsatzes 1983 gegenüber 1973 in vH.				
	Umsatz (1)		(2) Ausfuhren	(3) Einfuhren
	Jeweilige Preise (4)	Preisbasis 1970 (5)	Jeweilige Preise (4)	Jeweilige Preise (5)
Insgesamt Total	200	71	222	179
(6) Sozialistische Länder	184	55	182	187
(7) UdSSR	228	.	211	248
(8) Übrige sozia- listische Län- der	136	.	150	129
Nichtsozialistische Länder (9) *)	234	108	403	160
Westliche Industrie- länder (10)	217	.	318	147
(11) IDH	ca. 197	.	.	.
(12) Übrige west- liche Indu- strieländer	ca. 231	.	.	.
(13) Entwicklungsländer	375	.	411	333

*)Einschließlich IDH
Quellen: Statistisches Jahrbuch der DDR 1984 und 1975, Statistisches Jahrbuch der
RGW-Länder 1984, Moskau russisch

Key:

- | | |
|------------------------|--|
| 1. Turnover | 8. Other socialist countries |
| 2. Exports | 9. Non-socialist countries |
| 3. Imports | 10. Western industrial countries |
| 4. Current Prices | 11. Inner-German trade |
| 5. Price base 1970 | 12. Other Western industrial countries |
| 6. Socialist countries | 13. Developing countries |
| 7. USSR | |

*) Including inner-German trade

Sources: GDR Statistical Yearbooks 1984 and 1975, Statistical Yearbook of
CEMA Countries 1984, Moscow, in Russian.

Table 3

Export and Imports According to Economic Areas 1974-1983 in billion VM (current prices) Ausfuhren und Einfuhren nach Wirtschaftsgebieten 1974 - 1983 in Mrd. VM (jeweilige Preise)									
(1) Jahr	(2) Sozialistische Länder			(3) westl. Industrieländer*)			(4) Entwicklungsländer		
	Einfuhr	Ausfuhr	Saldo	Einfuhr	Ausfuhr	Saldo	Einfuhr	Ausfuhr	Saldo
	(5)	(6)	(7)	(5)	(6)	(7)	(5)	(6)	(7)
1974	20,22	20,83	+ 0,61	11,46	8,33	- 3,13	1,89	1,28	- 0,61
1975	26,16	25,68	- 0,48	11,39	7,86	- 3,53	1,73	1,54	- 0,19
1976	29,28	28,26	- 1,02	14,47	9,44	- 5,03	2,17	1,74	- 0,43
1977	34,11	31,25	- 3,16	13,16	8,60	- 4,56	2,52	1,99	- 0,53
1978	35,45	32,58	- 2,87	12,90	9,10	- 3,80	2,36	2,67	+ 0,31
1979	36,35	38,54	+ 2,19	17,37	10,81	- 6,56	2,71	2,96	+ 0,25
1980	40,09	39,72	- 0,27	19,19	13,77	- 5,42	3,68	3,64	- 0,04
1981	44,91	43,64	- 1,27	19,76	18,08	- 0,17	2,33	4,21	+ 1,88
1982	47,85	47,98	+ 0,13	19,06	21,79	+ 2,73	2,97	5,46	+ 2,46
1983	50,64	53,98	+ 3,34	22,00	25,14	+ 3,13	3,55	5,11	+ 1,56
	365,16	360,75	- 3,25	160,76	132,92	-27,85	25,91	30,60	+ 4,69

*) einschließlich IDH

Quellen: Statistische Jahrbücher der DDR 1975, 1984;
Statistische Jahrbücher der RGW-Länder (russisch) 1976 - 1984.
Die ab 1981 abweichende Abgrenzung zwischen Entwicklungsländern und sozialistischen Ländern wurde mit der DDR-Statistik kompatibel gemacht.

Key:

1. Year
2. Socialist countries
3. Western industrial countries
4. Developing countries
5. Imports
6. Exports
7. Balance

*) Including inner-German trade

Sources: GDR Statistical Yearbooks 1975, 1984; Statistical Yearbooks of CEMA countries (in Russian), 1976-1984. The demarcation between developing countries and socialist states, divergent as of 1981, was made compatible with GDR statistics.

Table 4

Regional Structure of GDR Foreign Trade 1970-1983 Regionsstruktur des DDR-Außenhandels 1970 - 1983 (Anteile in vH., Jeweilige Preise) (Shares in percent, current prices)											
(3) Regionen	(1) Export										
	1970	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
"Sozialistische" Länder (4) darunter RGW	74	68	73	71	75	74	73	69	66	64	64
Westliche Industrieländer*) (5)	22	27	22	24	21	20	21	24	27	29	30
Entwicklungsländer (6)	4	4	4	4	5	6	6	7	6	7	6
(2) Import											
"Sozialistische" Länder (4) darunter RGW	69	60	67	63	69	70	64	63	67	68	66
Westliche Industrieländer*) (5)	27	34	29	32	26	25	31	30	29	27	29
Entwicklungsländer (6)	4	7	4	5	5	5	5	6	3	4	5
*) Einschließlich IDH Quellen: Statistisches Jahrbuch der DDR 1975, Statistisches Jahrbuch 1984 sowie Statistische Jahrbücher der RGW-Länder 1976 - 1984, Moskau (russisch)											

Key:

1. Export
2. Import
3. Regions
4. "Socialist countries," incl. CEMA
5. Western industrial countries
6. Developing countries

*) Including inner-German trade

Sources: GDR Statistical Yearbook 1975, Statistical Yearbook 1984, and Statistical Yearbooks of CEMA countries 1976-1984, Moscow (in Russian)

Table 5

Oil Imports from the USSR and Development of Balance of Trade Net Erdöleinfuhren aus der UdSSR und Entwicklung der Handelsbilanzsalden						
(1) Jahr	(2) Menge ¹⁾ in Mill. t	(3) Wert in Mrd. tr. Rbl.	(4) DDR-Preis tr. Rbl. je t	(5) Weltmarkt- preis tr. Rbl. je t ²⁾	(6) jährlicher Mehrpreis in Mrd.tr. Rbl.	(7) Handels- bilanzsal- den in Mrd. tr. Rbl.
1974	14,1	0,27	19	64	0,07	- 0,01
1975	15,1	0,42	28	61	0,13	- 0,34
1976	16,0	0,54	34	63	0,10	- 0,44
1977	17,0	0,70	41	68	0,13	- 0,59
1978	17,8	0,89	50	61	0,16	- 0,27
1979	18,5	1,04	56	83	0,11	- 0,30
1980	18,9	1,42	75	139	0,36	- 0,54
1981	19,0	1,74	92	173	0,31	- 0,38
1982	17,7	2,41	136	182	0,79	- 0,64
1983	17,0	2,75	161	162	0,43	- 0,20
74 - 83	Σ 171	Σ 12,18	\ominus 0,71	\ominus 1,05	Σ 2,59	Σ - 3,71 ³⁾

1) Die Mengen wurden dem Statistischen Jahrbuch der DDR entnommen. Sie weichen mit Ausnahme von 1976 von den bis 1976 in der sowjetischen Statistik ausgewiesenen Mengen geringfügig ab. Der Durchschnittspreis ist damit nicht ganz zuverlässig.
2) Arabisch-leicht, umgerechnet zum amtlichen Rubel-Dollarkurs der sowjetischen Staatsbank.
3) Abzüglich der Aktivsalden aus den Jahren 1971 - 1973 verringert sich der kumulierte Passivsaldo bis 1983 auf 3,24 Mrd. VM.
Quellen: Statistische Jahrbücher der DDR, Statistische Außenhandelsjahrbücher der UdSSR (russisch)

Key:

- | | |
|---|--|
| 1. Year | 6. Annual price increase in billions of tr. rubles |
| 2. Amount in million tons | 7. Balance of trade nets in billions of tr. rubles |
| 3. Value in billion tr. rubles | |
| 4. GDR price, tr. rubles per ton | |
| 5. World market price, tr. rubles per ton | |

- 1) The amounts were taken from the GDR Statistical Yearbook, with the exception of 1976, they vary slightly from the amounts shown in Soviet statistics up to 1976. Average prices are, therefore, not quite reliable.
2) Arab light oil, converted to the official ruble-dollar exchange rate of the Soviet State Bank.
3) Subtracting the positive balances of the years 1971-1973, the accumulated negative balance up to 1983 drops to VM 3.24 billion.

Sources: GDR Statistical Yearbooks, Statistical Yearbooks of USSR Foreign Trade (in Russian)

Table 6

USSR Deliveries under Long-Term Trade Agreement 1981-1985 Lieferungen der UdSSR laut langfristigem Handelsabkommen 1981 - 1985						
Position Item	Abkommen 1981-1985 (1)	1981	1982	1983	Ist 1981-1983 (2)	Anteil an der verein- barten Gesamt- menge in % (3)
Erdöl (4) Mill. t	95 korr.87	19	17,7	17,0	53,7	57 62
Erdgas (5) Mrd. m ³	32,5	6,3	6,4	6,4	19,1	59
Steinkohle Mill. t (6)	21	3,9	3,9	4,0	11,8	56
Schnittholz 1000 m ³ (7)	7,7	1,4	1,4	1,3	4,1	53
Zellstoff 1000 t (8)	457	77,2	90,4	89,4	257	56
Baumwolle 1000 t (9)	440	76,6	90,8	77,9	245	56
PKW (10)	10 000	6 585	11 455	6 003	24 043	15
LKW (11)	12 000	1 384	875	350	2 609	22
Traktoren (12)	16 000	2 644	1 661	1 441	5 746	36

Quellen: Statistisches Jahrbuch der DDR 1984
Statistische Außenhandelsjahrbücher der UdSSR (russisch)
1981 - 1983

Key:

- | | |
|--|----------------------------------|
| 1. Agreement 1981-1985 | 6. Bituminous coal, in million t |
| 2. Actual figures 1981-1983 | 7. Sawn timber, in 1,000 cubic m |
| 3. Share of the agreed-upon total amount, in percent | 8. Cellulose, in 1,000 t |
| 4. Oil, in million tons | 9. Cotton, in 1,000 t |
| 5. Natural gas, in billion cubic meters | 10. Passenger cars |
| | 11. Trucks |
| | 12. Tractors |

Source: GDR Statistical Yearbook 1984; Statistical Yearbooks of USSR Foreign Trade 1981-1983 (in Russian)

Table 7

Pattern of Goods of Exports and Imports 1974-1983, in percent Warenstruktur der Ausfuhren und Einfuhren 1974 - 1983 in vH (jeweilige Preise) (prices current at the time)						
Erzeugnisgruppe (3)	1974	1975	1980	1981	1982	1983
<u>Ausfuhr</u> (1)						
Maschinen, Ausrüstungen und Transportmittel (4)	48,2	50,7	51,3	48,9	48,5	47,8
Brennstoffe, mineralische Rohstoffe, Metalle (5)	14,2	12,1	14,8	16,8	18,5	17,7
Andere Rohstoffe und Halbfabrikate für Industriezwecke, Rohstoffe und Produkte der Nahrungsmittelindustrie (6)	9,4	9,1	6,4	7,5	6,9	7,9
Industrielle Konsumgüter (7)	16,2	15,6	14,8	14,1	14,2	14,1
Chemische Erzeugnisse, Düngemittel, Kautschuk, Baumaterialien u.a. Waren (8)	12,1	12,5	12,7	12,7	11,9	12,5
<u>Einfuhr</u> (2)						
Maschinen, Ausrüstungen und Transportmittel (4)	30,3	30,8	30,8	32,0	32,3	29,9
Brennstoffe, mineralische Rohstoffe, Metalle (5)	26,8	30,5	36,7	36,8	39,9	39,6
Andere Rohstoffe und Halbfabrikate für Industriezwecke, Rohstoffe und Produkte der Nahrungsmittelindustrie (6)	24,7	22,6	18,9	17,8	16,3	17,8
Industrielle Konsumgüter (7)	6,6	5,6	5,0	4,9	4,1	4,4
Chemische Erzeugnisse, Düngemittel, Kautschuk, Baumaterialien u.a. Waren (8)	11,6	10,5	8,6	8,5	7,4	8,3
Quellen: Statistische Jahrbücher der DDR 1978 und 1984						

Key:

- | | |
|---|--|
| 1. Exports | 6. Other raw materials and semi-finished products for industrial purposes, raw materials and products of the foodstuffs industry |
| 2. Imports | |
| 3. Product group | |
| 4. Machines, equipment and transport facilities | |
| 5. Fuels, mineral raw materials, metals | 7. Industrial consumer goods |
| | 8. Chemical products, fertilizers, rubber, construction materials and other goods |

Source: GDR Statistical Yearbooks 1978 and 1984

Table 8

Structural Changes in Selected Groups of Goods in Trade with Strukturveränderungen bei ausgewählten Warengruppen im Handel mit der UdSSR 1974 - 1983 - Anteile in vH. - the USSR 1974-1983 Shares in Percent						
Ausfuhr (1)	1974	1975	1980	1981	1982	1983
Investitions- güter (2)	62	63	64	64	66	67
Konsumgüter(3)	36	35	34	34	32	31
Einfuhr (4)	1974	1975	1980	1981	1982	1983
Brennstoffe darunter Erd- öl (5)	16 12	22 14	40 29	43 31	50 38	53 40
Investitions- güter (6)	22	19	16	15	13	10
Walzstahl (7)	13	15	12	12	10	10
Quellen: Statistische Außenhandelsjahrbücher der UdSSR 1975, 1981, 1983 (russisch)						

Key:

1. Exports
2. Investment goods
3. Consumer goods
4. Imports
5. Fuels, including oil
6. Investment goods
7. Rolled steel

Sources: Statistical Yearbooks on USSR Foreign Trade 1975, 1981, 1983
(in Russian)

Table 9

Grain Imports from the United States 1976-1980 Getreideimporte aus den USA 1976 - 1980			
Jahr (1)	Menge in Mill. t (2)	(3) Anteil an den Gesamt- getreideim- porten in %	(4) Passivsaldo im US-Han- del in Mill US \$
1976-1980	10,37	59	1 687
1981	1,80	56	333
1982	1,50	61	183
1983	0,89	26	90
1976-1983	17,70	51	2 293
Sources: Quellen: Eastern Europe, Outlook and Situation Report, Hrsg. US Department of Agricul- ture, May 1980 and June 1984 sowie OECD: Monthly Statistics of Foreign Trade, July 1984			

Key:

1. Year
2. Amount in million t
3. Share of total grain imports,
in percent
4. Negative balance in trade with
the United States, in US\$ millions

Sources: Eastern Europe, Outlook and Situation Report, published by U.S. Department of Agriculture, May 1980 and June 1984; and OECD: Monthly Statistics of Foreign Trade, Jul 1984

Table 10

Anteile der RGW-Länder (6) am Außenhandelsumsatz der DDR 1971 - 1983 in vH. Share of CEMA Countries (6) in GDR Foreign Trade Sales 1971-1983, in percent			
	1971-1975	1976-1980	1981-1983
UdSSR (1)	34,8	35,2	37,8
CSSR (2)	9,2	8,6	7,4
Polen (3)	8,0	7,8	5,1
Ungarn (4)	5,4	5,9	5,6
Bulgarien (5)	3,5	3,3	3,1
Rumänien (6)	2,9	3,6	2,9
Quellen: Statistische Jahrbücher der DDR 1976, 1980 und 1984			

Key:

1. USSR
2. CSSR
3. Poland
4. Hungary
5. Bulgaria
6. Romania

Sources: GDR Statistical Yearbooks 1976, 1980 and 1984

Table 11

Inner-German Trade 1974-1984 Absolute, and Changes Compared to Previous Year Innerdeutscher Handel 1974 - 1984 absolut und Veränderungen zum Vorjahr (jeweilige Preise) (Prices current at the time)						
(1) Jahr	Umsatz (2) Mrd.DM/VE	Verände- rungen in vH (3)	Bezüge der DDR (4) Mrd.DM/VE	Verände- rungen in vH (5)	Lieferun- gen der DDR Mrd.DM/VE (6)	Verände- rungen in vH (7)
1974	6,92	27,2	3,67	22,4	3,25	22,3
1975	7,26	4,9	3,92	6,8	3,34	2,8
1976	8,15	12,1	4,27	8,9	3,88	16,0
1977	8,30	1,8	4,40	3,3	3,96	2,2
1978	8,42	1,6	4,57	3,8	3,90	- 1,5
1979	9,29	10,3	4,72	3,2	4,59	17,7
1980	10,87	17,0	5,29	12,1	5,58	21,6
1981	11,63	7,0	5,57	5,3	6,05	8,4
1982	13,02	12,0	6,38	14,5	6,64	9,7
1983	13,82	6,1	6,95	8,8	6,88	3,6
1984 *)	10,34	- 1,0	4,67	- 14,5	5,67	+ 14,0

*) Januar bis September
 Quelle: Warenverkehr mit der Deutschen Demokratischen Republik und Berlin (Ost),
 Statistisches Bundesamt, Fachserie 6, September 1984

Key:

1. Year
2. Turnover
3. Changes in percent
4. Purchases by GDR in billion DM/VE
5. Changes in percent
6. Sales by GDR in billion DM/VE
7. Changes in percent

*) January to September

Source: Trade Traffic With the GDR and East Berlin, Statistisches Bundesamt, Fachserie 6, September 1984

Table 12

Tabelle 12 Share of Inner-German Trade in GDR Foreign Trade with Anteil des IDH am DDR-Handel mit westlichen Industrieländern Western Industrial Countries			
Jahr (1)	OECD-Daten ^{a)} (2)	DDR-Daten I ^{b)} (3)	(4) DDR-Daten II ^{c)}
1973	58	33	43
1974	55	30	41
1976 - 1980	57	32	(51)
1981	52	29	42
1982	56	31	44
1983	55	29	40

a) Quelle: OECD-Daten, Statistics of Foreign Trade. Korrigiert um US-Transitlieferungen, die in den OECD-Daten nicht enthalten sind, aber in US-Daten. Vgl. Quelle Tabelle 9. Da auch in den Ausweisen für andere Länder Transitdaten nicht enthalten sind, ist der OECD-Ausweis regelmäßig zu niedrig. Der IDH-Anteil infolgedessen überhöht.

b) Quelle: Statistisches Jahrbuch der DDR. IDH-Ausweis zu Gesamtausweis westliche Industrieländer. Der IDH-Anteil ist aus zwei Gründen viel zu niedrig. Die Länderausweise sind überhöht, da sie u. a. auch Dienstleistungszahlen enthalten, außerdem wird der IDH nicht umgerechnet, sondern VE/DM: VM im Verhältnis 1 : 1 in die Länderstatistik aufgenommen.

c) Quelle: Statistisches Jahrbuch der DDR, für 1981-1983 zusätzlich die Jahresberichte der Deutschen Außenhandelsbank (DABA) Berlin (Ost). Für 1983 ergibt sich folgendes Berechnungsbeispiel, das auch für die vorangegangenen Jahre angewendet wurde, allerdings in den Jahren 1976-1980 keine befriedigenden Ergebnisse zeitigt.

	Umsatz (5) Mrd. US \$	Umsatz (6) Mrd. VM	Umrechnungs- faktor \$/VM (7)
NSW (8)	15,76 ¹⁾	55,80 ²⁾	3,54
Entwicklungs- länder (9)	2,44 ³⁾	8,64 ²⁾	3,54
KIL (10)	13,32 ⁴⁾	47,16 ²⁾	3,54
IDH (11)	5,32 ⁵⁾	13,56 ²⁾	2,55 ⁶⁾
übrige KIL (12)	8,00 ⁷⁾	28,32 ⁸⁾	3,54
KIL + IDH (13)	13,32	41,88 ⁹⁾	"

1) DABA-Angabe 2) Statistisches Jahrbuch 1984
 3) Rückrechnung des VM-Ausweises im Statistischen Jahrbuch mit dem Umrechnungsfaktor 3,54 4) Differenz NSW ./.
 Entwicklungsländer 5) Umrechnung des IDH-Ausweises in VM zum DM/\$-Kurs 6) DM/\$-Durchschnittskurs 1984
 7) Differenz KIL ./ IDH 8) Umrechnung mit VM/\$-Faktor in VM, entspricht der Σ des Einzelländerausweises zuzüglich nicht zuzuordnender Umsätze in Höhe von reichlich 2 Mrd. VM 9) IDH + KIL. Die Differenz zum Gruppenausweis KIL = 47,16 Mrd. VM beträgt 5,28 Mrd. VM, die dem IDH zugeordnet werden müssen. Der korrekte VM-Ausweis des IDH muß danach 18,84 Mrd. VM betragen. Das entspricht einem Anteil von 40 vH.

[Key on following page]

Key:

1. Year
 2. OECD
 3. GDR data I
 4. GDR data II
- a) Sources: OECD data, Statistics of Foreign Trade. Corrected with regard to U.S. transit shipments which are not contained in OECD data, but appear in U.S. data. Compared source of Table 9. Since the data for other countries also do not include transit data, the OECD figures are generally too low. Consequently, the share of inner-German trade is too high.
- b) Source: GDR Statistical Yearbook. Inner-German trade figures and total figures shown for Western industrial countries. The inner-German trade share is much too low, for two reasons. The country figures are too high since, among other things, they also contain figures for services rendered, and in addition, inner-German trade is not converted but included in the country statistics at a ratio of 1 : 1 of VE/DM: VM.
- c) Source: GDR Statistical Yearbook, for 1981-1983 also the annual reports of the Deutsche Aussenhandelsbank (DABA) East Berlin. For 1983, there is the following computation example which was also used for preceding years, but did not show satisfactory results for the years 1976-1980.
- | | |
|--------------------------------|---|
| 5. Turnover, in billion US\$ | 10. Capitalist industrial countries |
| 6. Turnover, in billion VM | 11. Inner-German Trade |
| 7. Conversion factor, \$/VM | 12. Other capitalist industrial countries |
| 8. Non-socialist monetary area | 13. Capitalist industrial countries plus inner-German trade |
| 9. Developing countries | |
- 1) DABA data, 2) Statistical Yearbook 1984, 3) Recalculation of VM figures in the Statistical Yearbook with the conversion factor 3.54, 4) Difference between non-socialist monetary area and developing countries, 5) Conversion of inner-German trade figures in VM to DM/\$ exchange rate; 6) Average DM/\$ exchange rate 1984, 7) Difference between capitalist industrial countries and inner-German trade, 8) Conversion with VM/\$ factor in VM, corresponds to sales of over 2 billion VM which cannot be classified under listings of individual countries, 9) Inner-German trade and capitalist industrial countries. The difference with the group showing of capitalist industrial countries, i.e., 47.16 billion VM, amounts to 5.28 billion VM, which must be attributed to inner-German trade. Therefore, the correct VM figure of inner-German trade must be 18.84 billion VM, which corresponds to a share of 40 percent.

Table 13

Tabelle 13 Table 13 Handel der DDR mit den OECD-Ländern 1974 - 1983 ¹⁾ GDR Trade with OECD Countries 1974-1983						
(1) Jahr	OECD-Daten (2)			(3) korrigierte OECD ²⁾ - Daten		
	Export Mill.US\$ (4)	Import Mill.US\$ (5)	kumulier- ter Pas- sivsaldo seit 1970 Mill.US \$ (6)	Export Mill.US\$ (4)	Import Mill.US\$ (5)	korri- gierter kumu- lierter Passiv- saldo Mill.US\$ 7)
1974	956	1 001	370	956	1 199	716
1975	1 039	1 130	461	1 039	1 482	1 159
1976	1 078	1 308	691	1 078	1 715	1 806
1977	1 142	1 196	745	1 142	1 422	2 086
1978	1 404	1 488	829	1 404	1 537	2 219
1979	1 632	2 412	1 609	1 632	2 455	3 042
1980	2 100	2 496	2 005	2 100	2 577	3 519
1981	2 184	2 484	2 305	2 184	2 562	3 897
1982	2 376	1 716	1 675	2 376	1 730	3 251
1983	2 424	1 980	1 471	2 424	1 989	2 816

1) Ohne Innerdeutschen Handel
2) Die Daten wurden um die amerikanischen "Transshipments", die Transitgetreidelieferungen, die in den OECD-Angaben nicht enthalten sind, nach oben korrigiert

Quellen: Statistics of foreign trade (OECD), Eastern Europe Review of Agriculture in 1981 and Outlook for 1982 and Outlook for 1984. Hrsq. U.S. State Department of Agriculture

Key:

- | | |
|--------------------------|--|
| 1. Year | 6. Accumulated negative balance since 1970 in million \$ |
| 2. OECD data | 7. Corrected accumulated negative balance in million \$ |
| 3. Corrected OECD data | |
| 4. Exports in million \$ | |
| 5. Imports in million \$ | |
- 1) Excluding inner-German trade
2) The figures were corrected upward by the U.S. "transshipments," the transit grain deliveries, which are not included in OECD data.

Sources: Statistics of foreign trade (OECD), Eastern Europe Review of Agriculture in 1981 and Outlook for 1982 and Outlook for 1984. Published by U.S. State Department of Agriculture [sic]

Table 14

Daten zur Auslandsverschuldung der DDR Data on Foreign Indebtedness of the GDR					
(1) Hartdevisenverschuldung in Mrd. US \$					
Jahr (2)	1980	1981	1982	1983	1984 ¹⁾
Bekannte Verbindlichkeiten gegenüber Banken (5)	9,9 ²⁾	10,7 ²⁾	9,1 ³⁾	8,4 ³⁾	8,4 ⁴⁾
Bekannte Verbindlichkeiten gegenüber Lieferanten 3) (4)	1,8	2,0	1,6	2,0	.
Bekannte Guthaben gegenüber Banken 2) (5)	2,2	2,2	2,0	3,4	4,2 ⁴⁾
Nettodevisenverschuldung (6)	9,5	10,5	8,5	7,0	
(7) Handelsbilanzdefizite in Verrechnungseinheiten (VE)					
Kumulierte Passivsaldo im IDH 5) in Mrd. VE/DM (8)	3,9	3,7	3,7	4,1	3,6
(Wert in US \$ ⁶⁾) (9)	(2,1)	(1,6)	(1,5)	(1,6)	(1,3)
(10) Handelsbilanzdefizite in tr. Rbl.					
Kumulierte Passivsaldo im Handel mit der UdSSR in Mrd. tr. Rbl. 7) (11)	2,0	2,4	3,0	3,2	3,0
(fiktiver Wert in US \$) 8) (12)	(3,1)	(3,3)	(4,1)	(4,2)	(3,8)
1) Stand Ende Juni					
2) Daten aus der Halbjahresberichterstattung der BIZ über die Fälligkeitenverteilung. Juli 1981 - Juli 1984. Da ein Teil der Verbindlichkeiten und Guthaben in anderen Währungen bestehen als US \$, enthalten die Daten Kurseffekte.					
3) Daten aus der Halbjahresberichterstattung zur Verschuldung bei Banken und Lieferanten. April und Juli 1984. In diesen BIZ-Berichten weichen die Angaben geringfügig gegenüber denen in der Tabelle verwendeten Daten aus der Berichterstattung über die Fälligkeitenverteilung ab. Für 1980 und 1981 mußten die Lieferantenkredite geschätzt werden.					
4) Quartalsberichterstattung 2. Quartal November 1984					
5) Jahresmitteilungen des BMWI über die Entwicklung des IDH.					
6) Umrechnungskurse 1 US \$ 1980: 1,82 DM; 1981: 2,26 DM; 1982: 2,43 DM; 1983: 2,55 DM; 1984: 2,70 DM					
7) Statistische Außenhandelsjahrbücher der UdSSR 1974 - 1983					
8) Überhöhter amtlicher Umrechnungskurs der sowjetischen Staatsbank 1 tr. Rbl. = 1980: 1,53 US \$; 1981: 1,39 US \$; 1982: 1,38 US \$; 1983: 1,35 US \$; 1984: 1,26 US \$					

[Key on following page]

Key:

- | | |
|---|--|
| 1. Hard currency indebtedness
in billion US\$ | 9. (Value in US\$) |
| 2. Year | 10. Trade balance deficits in
tr. rubles |
| 3. Known liabilities to banks | 11. Accumulated negative balances
in trade with USSR in billion
tr. rubles |
| 4. Known liabilities to suppliers | 12. (Assumed value in US\$) |
| 5. Known credit balances in banks | |
| 6. Net foreign currency debts | |
| 7. Trade balance deficits in units
of account (VE) | |
| 8. Accumulated negative balances
inner-German trade in billion VE/DM | |
-
- 1) At the end of June
 - 2) Data from the semi-annual report of BIS [Bank for International Settlement] on spacing of due dates. July 1981-July 1984. Since some of the liabilities and favorable credit balances consist in currencies other than US\$, the data contain exchange rate effects.
 - 3) Data from the semi-annual report on indebtedness to banks and suppliers. April and July 1984. In these BIS reports, data vary slightly from the data used in the table from the report on spacing of due dates. For 1980 and 1981, supplier credits had to be estimated.
 - 4) Quarterly report, second quarter, November 1984.
 - 5) Annual reports of the BMWI [Ministry for Economics] on the development of inner-German trade.
 - 6) Exchange rates of 1 US\$ = 1980: DM 1.82; 1981: DM 2.26; 1982: DM 2.43; 1983: DM 2.55; 1984: DM 2.70.
 - 7) Statistical Yearbooks of USSR Foreign Trade 1974-1983.
 - 8) Excessively high official exchange rate of the Soviet State Bank. 1 tr. ruble = 1980: US\$ 1.53; 1981: \$1.39; 1982: \$1.38; 1983: \$1.35; 1984: \$1.26.

HUNGARY

ECONOMIC, LEGAL UNCERTAINTIES DAUNT SMALL UNDERTAKINGS

Description of the Squeeze

Budapest HETI VILAGGAZDASAG in Hungarian No 29, 20 Jul 85 pp 50-51

[Article by Agnes Tibor: "Small Undertakings: In the Squeeze"]

[Text] The small undertakings started 3 years ago have fundamentally fulfilled the hopes attached to them--one can read in numerous studies and political and authoritative statements. Despite this favorable judgment a number of obsolete measures, or measures taken with insufficient circumspection, still hold back the unfolding or further development of small undertakings.

The small undertakings--economic work associations, special groups, small cooperatives, etc.--launched with a bouquet of decrees at the beginning of 1982 have contributed to a significant degree to ending shortage items and in a number of areas they have aided the development of competition--the economists say. They have done so spectacularly, for example, in software manufacture, construction industry planning, in the clothing fashion industries, in personal transportation and in personal services. In addition, they have increased the social work time base, that is they have decreased the labor shortage, brought the reserves hiding in organization to the surface and proven the productivity increasing role of immediate interest.

Naturally there has also been talk about the negative phenomena accompanying the small undertakings in the articles and studies which have appeared since 1982. For example, that they are reluctant to invest larger sums, that they do not satisfy the needs of the populace to the expected degree, that they contribute to increasing tensions within the enterprise, and that some of the small undertakings are making incomes too large compared to the work done. But the researchers studying the background of these phenomena also point out that some of these perversities do not derive from the functioning of the small undertakings--for example, the tensions within the enterprise would exist without them too--and that some of them, for example the lack of willingness to invest or incomes leaping up and not based on work, could be ended with suitable regulation and control.

At the 13th congress of the MSZMP in March of this year they put it this way: "Ensuring the definite role of state enterprises and cooperatives, in the future also we will support that supplementary and auxiliary economic activity which fits into the system of socialist management and contributes to the results of the enterprises and better quality supply to the populace." But the figures say more than research reports and official documents. For example we can calculate, if not precisely then at least approximately, from the materials constantly prepared in the ministry of finance--not containing final data--that in the small undertakings there are about 2-2.5 times as much sales receipts per work hour and about 3 times as much sales receipts for a given value of fixed assets as in the large enterprises. But even if the data serving as a basis for the above calculation cannot be regarded as final or 100 percent reliable, it is still probable that the estimates are not far from the truth.

Data on Small Undertakings at the end of 1984

Organizational Form	Number of Organizations	Number of Members*
Small cooperatives	393	16,000
GMK's		
[economic work associations]	7,873	42,000
VGMK's [enterprise GMK's]	18,178	200,000
Industrial and service		
cooperative groups	2,424	79,800
Civil law associations	190	844
Lump sum accounting form	6,000	no data
Total	35,058	350,000

*75-80 percent of the members of small cooperatives have this as their chief occupation. In the other forms the ratio of those having this as their chief occupation is around 30 percent.

And yet it appears that neither the analyses of the researchers, nor the findings in official documents, nor reference to more or less reliable figures are sufficient to prompt those responsible to solve a few long existing, fundamental problems of the small undertakings. The practical problems should be solved first. For example, even today small undertakings which are not legal entities cannot own either real estate or a vehicle. If a member--who buys such things from his taxed income--leases assets in these categories to the undertaking then he must pay a tax and even a social security fee on the rent received for them.

Small undertakings which do not have legal entity status--primarily the economic work associations not bound to a legal entity and the PJT's [civil law associations]--are in a more disadvantageous situation than the legal entities in obtaining materials and tools, in allocation of premises, in obtaining telex machines and telephones and even in buying printed checks; either they must wait for a longer time or they must pay more for the "infrastructure" needed to operate. In numerous cases the obscure or contradictory

nature of the regulations makes it difficult for the inexperienced entrepreneurs to orient themselves. It is not clear, for example, whether the income of a helping family member counts as a cost, how amortization can be accounted for (if at all) on a car owned by the member but used by the association, whether a GMK must keep way-bills, in what special cases one can account for trips out, and so forth. Even today the undertakings can take accumulated common property from one organizational form into another only on the basis of an ad hoc permit, and it is still disputed whether anyone can be excluded from the undertaking on the basis of the association contract. The lack of regulations holds back an increase in the credits which can be extended to small undertakings and hinders the founding of common undertakings by those with and without legal entity status. A regulation should make possible new forms which will make possible a more complex linkage of risk assumption and income than today. Bringing the small undertakings into the central development programs is not so much a legal as it is an economic task, for example through competitive bidding, or by extending, and in many cases creating, a deposit collection right for small banks suiting the small undertakings in scale and attitude. Without this the small banks will not have sufficient funds for the credits needed by the undertakings.

The unsolved problems which have been around for years have been compounded by new ones by the measures taken at the beginning of this year. The increased association tax, the increase in the social security fee for entrepreneurs with part-time jobs, and the special tax just introduced have confused and shaken the confidence of the entrepreneurs, prompting them to limit their investments and in some cases give up the undertaking.

It was not so much the increasing magnitude of the withdrawals that elicited the doubts--although the special tax forced many of the economic work associations active in agriculture and many of the non-agricultural special groups to cease their operations or switch to another form--as it was the psychological effect of the increases. The special tax, the burdens of which must be assumed ultimately by the small undertakings themselves in the majority of cases, formally applies to the big organizations giving them commissions, further feeding the distrust which was manifested in the majority of the big organizations from the beginning. Following the appearance of the decree there was a director's circular letter at more than one large enterprise which in the good case warned those authorized to do so to give a commission to a small undertaking only if it would accept the work with the same conditions as the large competing organization--naturally counting in the special tax. In the bad case the circular letter forbade all contracts with a small undertaking.

Raising the social security fees caused similar problems for the small undertakings. Here also the increase in the size of the sum to be paid was not the chief problem, but rather that the fee was changed without any compensation, as if a simple tax increase were involved. A consultation with the interest representation organs of the small undertakings did not precede either measure--as is customary in the changing of many regulations even today. As of now the small undertakings do not have any interest representation.

When they ignore the interests of the small entrepreneurs, when the voice of those opposed to the undertakings--the envious, the cautious and those who do not understand--grows louder, then it seems less urgent to clear up the theoretical questions without which the small undertaking cannot really become an organic part of the economy. The theoretical questions to be cleared up include, for example, what we mean by the concept "undertaking." The regulation pertaining to the small undertakings today makes no distinction in essential questions--for example, in regard to earning income--between an autonomous work group within an enterprise (many of the VGМК's belong here) and an independent small undertaking which takes the risk, as for example the non-enterprise GМК's.

Clearing up the social policy role of wages and incomes is a theoretical question--although it does not affect the small undertakings alone. Whether the social security contribution is a tax or not is a theoretical question. It is a theoretical question whether the small undertakings fill such a significant social-economic role that they should necessarily have an interest representation organ, and naturally it is also a theoretical question how far the undertakings can go in earning income and accumulating capital.

Answers to these questions are needed for security and perspective. Otherwise it is to be feared that the entrepreneurial spirit let loose 3 years ago will crawl back into the bottle, or seek scope in the black economy.

Interview With Chief Auditor

Budapest HETI VILAGGAZDASAG in Hungarian No 29, 20 Jul 85 p 51

[Interview with Dezso Suto, director-in-chief, auditing main directorate of the ministry of finance]

[Text] The county auditing directorates of the ministry of finance audit the bookkeeping and tax payments of the small undertakings. The auditing main directorate of the ministry of finance brings together the activities of the directorates. We talked with the chief of this organization, director-in-chief Dezso Suto, about his experiences gathered in studying the small undertakings.

[Question] How do you view the 3 year operation of the small undertakings?

[Answer] Our auditing experiences are not bad, the majority of the undertakings understand and apply the rules pertaining to them. It is true that our auditors have found minor data and record keeping errors and late payments at nearly 60 percent of the undertakings, but for the most part--we feel--the negligence can be attributed to lack of information. In any case, ignorance of the regulations can be less and less an excuse, for it is one of the fundamental requirements of an undertaking that a person who gets into it should be clear about the operating conditions. Our auditors will be less and less indulgent of those committing mistakes. We recommend to entrepreneurs inexperienced in bookkeeping that they employ an expert for this work.

As an economist it is my view that the small entrepreneurs have strengthened many positive elements in the economy--flexibility, interest, closer contact with the customer. Many of them are finding great possibilities in the still neglected background industry, have discovered the value increasing role of speed and quality. They are also contributing indirectly to improving enterprise and cooperative management; they have shown the deficiencies of internal interest, work discipline and work organization, the weak points of regulation; so they are useful and necessary supplements to the Hungarian economy, based fundamentally on the activity of enterprises and cooperatives.

[Question] You talked of the lack of information among the small entrepreneurs, but you did not mention that very frequently the ambiguously worded regulations, gaps in the regulations and contradictory regulations make a clear vision difficult. I am informed that you people publish several dozen interpretations of the regulations each month at the request of the entrepreneurs. Have you initiated with the organs issuing the regulations an effort to make the ill-matched prescriptions unambiguous?

[Answer] Since a new form is involved the rules and methods must be formed in the beginning together with practice and experience. We are constantly preparing materials in which we call the attention of the government people responsible for the economy to the economic policy and regulatory errors discovered in the course of auditing. Most recently, for example, we wrote material for a report being prepared for the May session of the Economic Policy Committee of the MSZMP. In this we pointed out that a further increase in the number of undertakings and an expansion of their activities were being held back by the fact that there was no form suitable for different types of undertakings with few personnel among which those undertaking some material risk and possibly greater profit therewith might find something that suited them. We pointed out that the conditions for acquiring and operating real estate and vehicles had not been worked out fairly for the small undertakings and that the entrepreneurs could put their capital deriving from an undertaking back into the undertaking only after taxation.

[Question] The auditing main directorate was reorganized at the beginning of January. What was the purpose of the reorganization?

[Answer] The increase in the number of small undertakings made it impossible to postpone the separation of the auditing of them from the branch--trade industry and agriculture--departments. We established independent small undertakings departments in the county directorates and in the Budapest main directorate; more than 300 trained experts work in these already. In this way this sort of work of the organization has become, or will be, faster, more professional and more uniform.

8984
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SOCIETY, ENTERPRISES FACE DILEMMAS POSED BY DISMISSAL OF DIRECTORS

Budapest NEPSZABADSAG in Hungarian 22 Jul 85 p 5

[Article by Katalin Bossanyi: "Defeated Directors?"]

[Text] Does the old director stay, or do we choose a new one? Spoken or unspoken, this question troubles the managers and workers of organizations that have switched over to the new enterprise leadership forms, but the branch ministries as well. Understandably, because if the collectives do not endorse the director in the position he has held up until now, that is--over and above the incidental increase in local tensions and managerial headaches--at the same time a criticism of the ministry's cadre management policy.

Great Expectation

The great expectation is entirely legitimate, even if we know that selecting the directors, though important, is only one element in the switchover to new forms of collective leadership. The purpose and meaning of the changes are much more than this. The workers' voice in--and control over--the enterprise's management is not a one-time democratic gesture but the continuous exercise of proprietary rights conferred by the state: prudent collective conduct by which the workers--through the leadership of the expert manager they have chosen--can better administer the enterprise's resources, adjust more flexibly to the market environment, and handle more effectively the joint property entrusted to them.

All this, however, does not diminish the director's importance and role. Nor does it alter his personal responsibility. For this very reason, endorsing the directors or selecting new ones is of increased significance. And although in sectors of the national economy other than agriculture the new bodies of collective leadership are only now being established, it is reasonable to ponder jointly the experiences so far, and the dismissal of several directors is in any event food for thought. It is not our aim to analyze special cases and examine the causes--this must be done jointly by the defeated directors themselves and the collectives they guided--but to point out the broader lessons from which, perhaps, the remaining organizations can learn something.

First of all, the facts. In agriculture, the new managerial bodies had already been elected in 198 of the 230 concerned organizations by 1 July. A competition was conducted for the new director in 24 cases, and the collectives on five state

farms did not endorse the director who had held his post up until then. The transformation is still so insignificant in domestic commerce that the changes cannot be evaluated. There will be a new leadership form in 91 of the building trade's 101 enterprises. There has been an election for director at 16 enterprises so far: a competition was routinely conducted in four cases, and at two enterprises the previous director was not reelected. In industry, 46 of the 306 organizations directly supervised by a branch ministry remain under state management, and 162 organizations will choose their leaders by the end of the year. By mid-July, there had been an election for director at 35 enterprises, and four directors were not confirmed in their posts by the collectives.

"Only that many!" say a lot of people with a plainly dismissive wave of the hand, while others prefer to phrase it sneeringly this way: "Still only that many..." It is true that no worthwhile conclusion about any kind of tendency can be drawn from the number of nonconfirmations up until now. What has happened so far, however, draws emphatic attention to the fact that the game is really turning bloody here, because it is possible to get kicked out! (When the mechanism for electing directors takes shape, a change in leaders will become more common, and we can speak about real elections. These first nonconfirmations mean personal defeat: the collective has awarded the director's work so far with a dismissal.) And this lesson is addressed mainly to the directors: pay more attention, take more seriously the developing new leadership bodies, the workers' opinion at the time of preparation. I myself spoke with several council members of industrial and building-trade enterprises which had dismissed their directors. The members' chief complaint was that the former director had not really listened to them and, as a matter of fact, had regarded the entire election as a formality. In almost every case, however, the workers objected to the fact that the director had not given a "campaign speech." It is therefore worthwhile to speculate on the reciprocal psychological effects of preparation, because the majority of dismissed directors reasoned that they had worked at the enterprise for many years and so they had been characterized by their work up until then. But others reasoned that they did not need to campaign for themselves: if they were elected, they would reveal their plans. Well, the new situation plainly calls for conduct which seems unusual on the part of the leaders. The directors themselves have to decide where the boundary is between self-advertisement and real and necessary information. That is to say, behind the unwillingness it occasionally appeared that the director did not consider the new collective managerial body his partner. Incidentally, agriculture's experiences in this matter can be borrowed. Here, too, after all--with respect to the proportions--there were more nonconfirmations during the first elections on the state farms. It would be difficult to decide, after the event, whether the others were afraid of this or just realized what was at stake. Yet it is a fact that afterwards, in a crucial majority of state farms and foodstuff factories, much more thorough preparatory work was begun. The directors paid a lot of attention to the delegates, and a "program speech" assessing the first half-year, sketching prospects for the future and requesting help was not left out, either.

The Good or the Bad?

What must also be discussed is the broader/narrower reaction of the socioeconomic community to the elections. The first reflex of some regional party organizations,

in lieu of factual information, was a news blackout. This is harmful because rumormongering and whispering campaigns only stir up new tensions and further corrupt the atmosphere. And that of the collectives? With one or two exceptions, where the workers' verdict drew a legitimate parallel between the former director's work and the enterprise's weak performance, the general reaction was one of amazement. For in several places, directors were fired who had managed enterprises more profitable than the average. "Is excellent output not enough?" more than one of them asked himself, his entourage and his superiors after the election. And he must have discovered that the answer is no. Because management is turning into what is virtually a fine art: the director does not just manage through a resolute and technocratic approach, he knows how to mobilize forces for the tasks. That is to say, he can convince people his ideas are sensible, and he thus enjoys the workers' trust during measures which by necessity are not always popular. It is also evident, of course, that one or two directors known precisely for their consistent conduct were not elected, either. Who, as their subordinates said, "placed the crossbar too high..."

All this seems to serve the arguments of those who think that the collectives are "still not ready" for the election and do not yet know how to exercise properly their increased democratic rights. We believe that one or two "faulty products" of the director elections do not in themselves justify this summary judgment. It indicates, rather, that the workers' opinions have been suppressed for too long, and now when they finally rose to the surface--in a given case--they burst forth in the wrong direction. But the conflicting interests of the organization's various groups and the signs of a split in leadership were also recognizable in the paraselene of the collective decisions. Up until now, they have existed here and there, and now they have risen to the surface in connection with the elections for director.

It is clear at the same time that the enterprises have so far more readily chosen the enterprise council form as opposed to the general assembly and delegate assembly forms, out of implicit consideration for the fact that it could be easier to work with--and "work on"--a narrower body. But the opposite is also true, as is apparent from the composition of the enterprise council. By virtue of the fact that--alongside the workers' representatives--the director's deputies and the independent units' leaders are present in identical proportion on the managerial body, the various organizational/managerial interest groups can acquire greater importance in voting.

Majority Opinion

The question that has been raised in several forums must be mentioned here: to what degree does the dismissal of directors express the majority's opinion? In this connection, reference was made to the blank spots and unclear points in the statutory provisions. From among them, we now mention only that the MT [Labor Code] and SZOT [National Council of Trade Unions] guidelines for the switchover have been published, though it is a matter of interpretation whether or not this is now a decree. The unclear points chiefly disturb the preparatory work. The question of questions is: to what extent, during the election, do the enterprise council members or the delegates represent merely their own or the collective's viewpoint? The supreme authorities, namely, have recommended the directors

defeated so far for further employment, and the regionally authorized party organizations and trade unions have agreed with this. Indeed, one of the preparatory committee's important functions is to inquire, even before the election, through the delegates: to what extent does this effort correspond with the workers' opinion? And since nowhere have people expressed face to face that they do not intend to elect the old director--this goal came to light only after the secret balloting--the delegates at a few enterprises are now accused of insincerity by the leaders of party organizations and trade unions. This should be deplored very cautiously, however. The balloting is secret in order for it to be possible to guarantee that the voters are free and protected from being influenced. After all, there is plainly a reason for it if the people at an enterprise do not openly express their opinion. At the same time, it provides food for thought: in the absence of legal notification, how can the workers make certain that their delegate has really represented their viewpoint? This problem has emerged most sharply so far at the Kner Printing House where--after the director was rejected by a 17-12 vote--70 percent of the collective began to gather signatures spontaneously, demanding that a new election be held because the previous one did not reflect the majority's opinion. There is no possibility for this, however, since the election conformed to the rules; so a competition must be conducted.

But what is the fate of the defeated director? In agriculture, two of the five directors requested early retirement, one of them found a job himself, and two have repeatedly applied for a director's post. In every instance in the building trade and in industry, a competition is conducted in which the nonelected director can take part, if he satisfies the announcement's conditions. Former directors can also experience some pressure: their professional superiors and the regionally authorized party organizations almost automatically expect them to try again, although this decision should be made solely by the director concerned.

Finally, we must talk about the transition period. This is all the more justified because 2-3 months usually elapse between the competition's announcement and assessment and the election of a new director. Indeed, there are cases in which it is longer than this, since a two-thirds majority of votes is needed to elect a director. At the Debrecen Model Farm, for example, the new candidate did not receive a majority this size until after the fourth ballot. But to this very day there is no director at the Mezohegyes State Farm. Here it was not a matter of defeat, merely that the previous director of the thriving farm had retired, and both his deputies competed for the post. One of them is a member of the megye party committee, the other a member of the megye council, and the workers were unable to choose between them after a number of ballots. We have mentioned the example merely because it is rather hard to obtain an absolute majority, especially in the case of several strong candidates. (This is why many believe that a simple majority would be sufficient for electing a director.) It can considerably prolong an otherwise lengthy process, and it can extend the lawless state of being without a director.

You Have to Work!

The former director--since he was appointed by the founder, the branch ministry--automatically stays at his post until the new election and thus must make decisions

on various issues. His position is rather delicate, because he does not bear the consequences of these managerial decisions, whether they are good or less successful. To make matters worse, here he is on the threshold of the seventh 5-year plan, the preparation of next year's contracts. He must reach agreements on these with the enterprise council, the corporate body which dismissed him. But at such times it also becomes clear--due precisely to the reciprocal effects--how hard it is to draw a line between so-called strategic decisions (those which belong to the province of the collective managerial bodies) and the managerial acts which determine the daily, operational work.

It is also perceptible that the transition greatly upsets the life of the enterprises: this is what people talk about before and after work. People conjecture, there are a lot of rumors, new cliques form. And production can suffer everywhere. But most of the nonelected directors have emphasized afterwards that though they were deeply hurt by the collective's decision--it forced them to examine their conscience--they would do their level best, while they were still in office, to see to it that the "director crisis" did not lead to new tension in the work of the enterprise they had guided up until then. It is of great importance who the director is, and yet there is only one thing more significant than this: what result does the enterprise achieve? The latter must not come to a halt, because the unfavorable impact of a temporary standstill can harm the entire collective, and the ripple effect can be felt by the entire profession, the entire economy.

12327
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FOOD INDUSTRY SITUATION ASSESSED

Warsaw DZIENNIK LUDOWY in Polish 19 Jun 85 p 3

[Article by Janusz Tarniewski: "Food Economy"]

[Text] The achievements of the joint 11th Plenum of the PZPR CC and United Peasants' Alliance (ZSL) CC which almost three years ago--in January 1983--hammered out the foundations for developing agriculture and the food industry can be appraised in various ways, depending on the criteria of assessment. This is obvious when taking into account the number of problems involved and the expectations and aspirations of various social groups in this area. It is a well known fact that the joint agricultural policy has had its opponents, not many, but vociferous. Everyone capable of an objective evaluation, however, cannot but admit that the decisions at the Plenum were correct, as the results prove.

This is first and foremost confirmed in the agricultural outputs over the past 3 years, and especially last year. Many figures could be quoted to support this claim, but as these are well known, I will only mention two of them. The national income produced in agriculture rose by 2% in 1984, while the net final production output was 4.5% higher than in 1978, before the crisis began. This success is to a large extent due to crop production, but some improvements were also noted in livestock farming (the decline was halted in all sectors except cattle farming). Even more important is the fact that this was attained with relatively lower spending. Labor efficiency and land management improved, as did the use of agricultural inputs.

Consequently, and also thanks to the food processing industry, the food market has been rebuilt and there is less rationing. In spite of growing population figures, consumption is high, higher than the international norms. Meanwhile, the export of agricultural products and food rose considerably, while imports dropped, which is significant for Poland's balance of payments.

The effects of the joint agricultural policy are, therefore, unquestionable, and it is impossible to overestimate their significance in improving the socio-economic situation in the country. But the most important achievement of the 11th Plenum was that in spite of unpleasant experiences, it revived great hopes for the rural population, while its provisions gained the broad, if not general, support of the peasants, who at last believed that this time the discrepancy between theory and practice could be eliminated.

In short, they credited the Party and the ZSL with their confidence. The term "credited" seems justified, because previous agricultural policies were also correct, but their implementation ran along different lines.

This time the authorities' intentions have gone beyond declarations. Most targets included in the plenum resolution have already been attained, such as the constitutional provision on the continuity of private farm ownership, equal economic conditions for all sectors of agriculture, the introduction of a linear tax, annual assessment of farming profitability and the ensuing changes in procurement prices to guarantee profitability, improvements in the credit system, a new system of farmers' national insurance, a Government program for improving living conditions in villages and the status of socio-professional peasants' organizations given to farmers' circles and associations of producers of specific agricultural products.

The list of targets attained is obviously longer, and taken together they protect the agricultural policy from distortion. It is hard, however, to ignore certain threats.

The relation between procurement prices for agricultural products and the cost of agricultural inputs and services has been deteriorating for three years. In 1984, these went up by 10 and 13% respectively, and the relation between them is even worse now.

The supply of agricultural machinery and equipment has improved, especially where horsedrawn equipment is concerned. More spare are available, but shortages persist, partly due to the pathetic quality of those that are produced. More complex machinery and equipment--especially combine harvesters, spraying machines, trailers and tractors--are in short supply, as restructuring in the industry is too slow. Industrial production for agriculture went up from 4 to 6%, but this is still 2% less than planned.

Shortages of fertilizers, however, remain the most pressing problem. The use of fertilizers fell in three consecutive years starting in 1980. Last year, the use of fertilizers went up by 12 kg per hectare, reaching 182.5 kg, but this was nonetheless 10 kg lower than in 1979-80. The use of fertilizers expected this year, 193-195kg, is unrealistic and the figure will probably be lower than last year. Supplies of lime are far too low (some 75% of all soils are acidic), and a lot remains to be done before the deliveries of pesticides can be described as timely.

Difficulties in rational land distribution by the State Land Fund have persisted for years, especially in regions where soils are poor. Changes of farm ownership take a long time.

The 11th Plenum found it necessary to allocate at least 30% of all funds invested each year for the development of agriculture and the food industry. In 1983, however, their share amounted to only 23.8%, with 23.2% in 1984, and 24% expected this year. Consequently, the land improvement projects included in the National Socio-Economic Plan for 1983-85 will not be completed, and even the losses resulting from the aging of land improvement machinery will not be compensated for.

The share of the food processing industry in investments amounted to 3.7% in 1981-82 and 4.1% in 1984. Its share in all investments on agriculture and the food industry is also low. Its potential for self-financing its development is low too, as the profits in this sector total a mere 3% of total costs. Hence the difficulties with rational management of agricultural products, difficulties which became particularly apparent in the past few years, when the crops were good.

That is why the most important problem concurrent with that of working out a system that ensures stable profitability of agricultural production and better supplies of agricultural inputs is to promote the speedy development of the food processing industry, in accordance with the provisions of the Government plan. Otherwise, it will not be possible to implement one of the strategic targets of the current agricultural policy which emerged from the political ideas of the joint 11th Plenum; this target is to attain Poland's food self-sufficiency by 1990. And besides, the efforts and hard work of farmers, agricultural cooperative employees and the people working in state farms cannot be wasted.

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CAUSES FOR SERBIA'S EXPORT DISADVANTAGES DISCUSSED

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 8 Jun 85 p 12

[Article by V. Dulkanac: "Foreign Trade--Why Are Exports Falling?"]

[Text] Finding and classifying the major causes for the lag--i.e. the decline--in Serbia's exports over the last four years has "tormented" republic authorities for a long time, or for at least as long as it has been taking place. The matter has been made more timely due to an unfavorable trend in trade with the rest of the world since the beginning of the year, because this has indicated that a certain improvement in this sector which had taken place last year was quite temporary. For this reason, the executive council last week established basic positions and made evaluations of the situation in the area of foreign economic relations which will be the foundation for policy and support at the federal level during the next planning period.

The Republic's Point of View

There is general agreement in the republic that internal economic conditions, especially "factors of a systemic nature," are the major culprits in the export situation. The following have been particularly singled out--investment policy during the last ten years, the use of foreign accumulation, and the system of managing foreign exchange realized.

Overall investment policy in the republic is being faulted for never having actually been favorable for the export economy. Thus, during the last two planning periods priorities in development have been given to energy, raw materials, and food, with special emphasis on finding substitutes for imports. Keeping in mind the structure of investments now in progress as well, considerable resources will continue to flow into the sectors mentioned.

The same tendencies have also been characteristic of the use of foreign accumulation. According to data of the Serbian National Bank, during the period between October, 1977 and September of last year, approximately \$3.7 billion were spent in 30 of the most important organizations of associated labor [OAL] alone within Serbia. Of this, \$1.7 billion were invested in ferrous metallurgy, the electrical industry and the highway industry. This foreign accumulation was "less necessary" for constructing these projects and was "more necessary"--at least as is now being maintained--for operating the foreign exchange market, or foreign exchange system, at that time.

The republic is also characterized by having a large concentration of debts in industries which will not be able to repay these debts with exports. Almost half of the total debt of the republic belongs to the eight largest debtors (with a total debt of \$1,659 million). And of this amount, \$955 million in debt is owed by the ferrous metals industry, the electrical and the highway industries alone.

"Unfair" Position

The unilateral increase in restrictions in the management of foreign exchange and the republic's position in connection with this matter is assumed to be an essential cause for Serbia's lag in exports.

Thus, in 1981 restrictions on management of foreign exchange for OALs in Serbia amounted to 18.7 percent of foreign exchange income realized by export of goods and services. During the following year, they amounted to approximately 35 percent, in 1983, 49.7 percent, and both this year and last restrictions amounted to 54 percent of foreign exchange income realized. This large and unilateral setting aside of funds for general social needs does not affect all republic economies the same way, as has been maintained. Several reasons are cited for Serbia's "especially" unfavorable position. But above all, Serbia's disproportionate burden particularly with regard to convertible foreign exchange influx is stressed, an area in which this republic had 23.8 percent of the total amount coming in, while it gave 26.1 percent of the funds set aside. It is said that these amounts were "far more proportional" with regard to other republics.

Otherwise, the fact that this republic has a high proportion of goods foreign exchange income in its total income (73 percent), both compared to the country as a whole (which has a 69.6 percent proportion) and compared still less favorably to some republics (Croatia, for example, which allegedly "only" had a 59.2 percent share of goods foreign exchange income in the total), is viewed as a primary reason for Serbia's unfavorable position. Along with unilateral restrictions and the great dependence of the economy on imports, it is a great hindrance for Serbia. During the period under consideration, for example, it is stressed that both Croatia and Serbia had identical income based on the export of goods, but that things "were far better" for the Croatian economy because this republic had twice as much foreign exchange income based on the export of services.

That is why it is considered extremely unfair here that some industries with a high level of foreign exchange inherent in their cost structures (such as the rubber and chemical industries, the processing of nonmetals, etc.) set aside the same amount as OALs in tourism, hotel and restaurant management, and the lumber industry.

In any case, the total percentage of funds set aside would have been lower if the economy had not found a way to avoid these foreign exchange liabilities in recent years. The system of so-called special foreign trade business has been acknowledged as the most reliable method. Serbia's economy by "necessity" is also quite well adapted to this. While export share through special business was 37 percent of Yugoslavia's convertible export last year, a 43 percent level was recorded for Serbia.

It has been noted that conditions which restrict the export expansion of Serbia's economy also include unstable conditions of economic functioning, frequent changes in regulations, high inflation, as well as restrictive policy on import of equipment and unsatisfactory financial support for exports. It has also been stressed that there is unsatisfactory legal and economic security for exporters. Measures are to be proposed based on these problems.

During the last three years, Serbia's total exports have fallen at an average annual rate of 5 percent compared to 1981, and exports to the convertible accounting area have fallen at an average rate of .9 percent. The same trends have also been noted in the service sector. Total export of services during the period under consideration has fallen at an average annual rate of 15 percent. Moreover, the convertible export of services has fallen at an average yearly rate of 19.7 percent.

Thus the percentage of Serbia's total exports of the total exports of the country during the period 1981-1984 has actually fallen from 24.3 percent to 23.8 percent. In exports to the convertible accounting area, however, it has declined from 29.5 percent to 26.2 percent.

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OUTLOOK FOR UNIFIED DEVELOPMENT OF NUCLEAR POWER PLANTS

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 24 Jul 85 p 3

[Article by Radmila Jovanovic: "Electricity Using Unified Technology; By End of Next Year Yugoslavia Will Decide on Type of Nuclear Power Plants To Be Built"]

[Text] There are now no more obstacles to scheduling international bidding for selecting a unified nuclear fuel cycle and the kind of nuclear power plant to be built. On 18 July, at the Federal Executive Council, all those authorized in this matter placed their signatures on the Social Agreement concerning Unified Procedure, and one can expect that by the end of next year the type of atomic power station [A-centrala] to be constructed in Yugoslavia will have been decided upon. Regarding the diversity of equipment used in virtually all of the electric power plants built up to now, it can be said that electricity will flow from nuclear power stations using a unified technology.

Documentation for scheduling the international bidding, which has been worked on solely at the national level, has already been prepared and may be published by the end of the month. Then, both the last nonbelievers and those who oppose the construction of nuclear power plants on Yugoslav soil will have to make their case because they have not yet done so in the face of the inevitability of a multi-faceted solution to the energy crisis and to technological development. Agreements have provided for starting construction of a series of nuclear power plants before the year 2000. For now they are talking about at least four, of which Prevlaka, named for the place between Ivanic-Grad and Zagreb, where it will be built, will be the first. A resolution has been passed by the highest offices in Croatia and Slovenia regarding its construction. They will combine forces to build it as the first one--the Krsko Nuclear Power Plant.

The construction of nuclear power plants can be postponed, but not for too long. After ten years of a relatively slow period in the construction of nuclear power plants, one can expect a more rapid increase in the number of atomic power stations in the rest of the world in the future, especially in the developed countries. Last year nuclear power plants had a 27.2 percent share of electricity production in countries of the European Economic Community. At the end of last spring the Associated Press reported that the share of nuclear power plants would increase to 50 percent by the end of the century. Moreover, the construction of a large number of nuclear power stations is being planned even in

countries like the United States and the Federal Republic of Germany, which possess far greater reserves of coal and whose coal is high-caloric. They have estimated that they might cover a total of 20 percent of the total growth in electricity consumption with the use of coal in the years ahead.

Yugoslavia might be able to satisfy growth in electrical consumption over the next few decades using its coal reserves and its hydroelectric potential, but available quantities would be quickly exhausted, and the country would not be prepared for production of electricity from other sources, nor would its industry be in a position to obtain other sources through its own capacities. The time is now to be concerned with this matter. It is estimated that domestic industry might be ready to produce 70 percent of the equipment necessary for atomic power stations by the end of the century.

"Whoever has satisfied the high quality demands for taking part in the construction of nuclear power plants will be able to take part in the production of spaceships as well, and will be able to obtain more profitable jobs on the world market more readily. Steam separators, such as the Energoinvest factory makes for nuclear power plants in the USSR, cost about five times more than those for thermoelectric power plants, from which they do not differ in any other respect except for quality of manufacture," explains Dr Naim Afgan, professor of energy installations at the Machinery Department at Zagreb, and technical advisor at the Boris Kidric Institute of Nuclear Sciences in Vinca, near Belgrade.

According to one group of specialists from Canada, who stayed in Yugoslavia, visited factories, and offered their technology for atomic power stations, our industry has everything it needs to manufacture equipment for nuclear power plants. All that is needed is for everything to be organized, the job divided up, and everyone entrusted to the job for which he is most capable. Since we are dealing with projects and technologies which can, in the case of a small error, be catastrophic for people and for the natural environment, the most logical thing to do would be to connect all participants in the future construction of nuclear power plants together interactively and to place them under society's strictest unified supervision at the national level. After all, this is the way it has been done in countries in the European Economic Community, in which not one incident has been known to take place at any nuclear power plant although private capital plays the leading role there. However, this is not the case when one is dealing with atomic power stations. There, the oldest one, from top to bottom, is one whose organization is provided for by a special state, or national, institution, which unifies all those who take part in it. It is believed that this experience will be useful to Yugoslavia as well.

Opponents of nuclear power plants have cited a thousand and one reasons so far for being against them. They cite, among other things, the fact that with regard to this expensive--the most expensive--investment, outdated technology will be chosen and purchased, equipment which has already become obsolete in the developed countries. The best proof that the time when this type of thing took place is in the past is indicated by the way the legal regulations, the agreement process, and the elaboration of documentation for scheduling the international bidding for selecting a unified fuel cycle and the type of nuclear power plants to be built, were prepared.

"The rest of the world, including the developed countries, is continuing to build nuclear power plants based on a light-water reactor. Developed countries are working on the use of a fast-breeder reactor, but it is still in the experimental phase. One can expect it to be put into use only at the end of the century. In addition, nuclear power plants of this type can only be built by those who are going to have so-called light-water atomic power stations, because plutonium is necessary for the operation of a fast-breeder reactor and it is obtained from the spent fuel from a light-water reactor. For this reason, the federal government will have to decide while it is selecting the fuel cycle whether this country will master the technology for enriching uranium, upon which the present atomic power station operates, or the technology for processing this spent fuel, which would be more logical and more effective for our technological independence," says Dr Naim Afgan.

Enormous amounts of money will be necessary to construct nuclear power plants. Today, one megawatt in a nuclear power plant, together with the corresponding mine, costs approximately \$2 million. Money for the construction of such expensive projects can no longer be guaranteed by any republic or province alone. For these reasons, the first Yugoslav atomic power station is being built at this time with joint funds of two republics, and it will be this way for all the others. Everyone in the electrical industry thinks that new power plants will also have to be financed in a different, considerably more favorable way than Krsko is being financed, and that a real economic communality will begin to be experienced with them in this economic area.

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STATUS OF LIVESTOCK, FEED INDUSTRY VIEWED

Belgrade GLASNIK POLJOPRIVREDNE PROIZVODNJE, PRERADE, I PLASMANA in Serbo-Croatian No 5, May 85 (BILTEN supplement) pp 7-12

[Excerpt] The main prerequisite for the development of agricultural production is the development of the livestock industry, and especially cattle raising. The long-term programs for the development of agroindustrial production stipulated that meat production would be increased from the present 1,280,000 tons to 3 million tons, milk from 4.6 to 14 billion liters, and eggs from 4.6 to 8 billion. Achieving this volume of production was conditional upon undertaking appropriate economic, organizational, and technical measures to ensure the continuing economic interest of the producers in increasing the volume of production.

Although our country has exceptionally large areas used for meadows and pastures suitable for livestock production, and considerable possibilities for the production of livestock feed on arable land, the livestock population is stagnating (more precisely, the number of cattle is slightly declining, the number of sheep is stagnating, and the number of pigs and poultry is increasing).

The overall rate of production per hectare is still low, as can be seen from a comparison with some European countries whose natural conditions correspond to those of our country.

Number of Head of Livestock per Hectare of Arable Land

<u>Type</u>	<u>Yugoslavia</u>	<u>FRG</u>	<u>England</u>	<u>Italy</u>	<u>France</u>
Cattle	0.8	2.1	2.0	0.9	1.4
Pigs	1.0	3.1	1.2	0.9	0.7
Sheep	1.0	0.2	4.2	1.0	0.7

This indicates an extensive use of land and a lag in agricultural production.

After several years of stagnation, a revival of livestock production began in 1983. Contributing factors in this were the record production of corn

in 1983, more regular supplies of protein feed, and also relatively good purchase prices for livestock. The increase in the population of livestock, especially pigs and poultry, especially in the areas in which the volume of livestock production was not coordinated with the production of corn, led to an increase in demand and in prices for corn, from 20-25 dinars in January to 32-34 dinars in September 1984.

As a result of the increase in the livestock population and the production of meat, as well as the insufficient supply of feed, there was an increase in the supply of livestock for slaughtering. In the larger Yugoslav slaughterhouses, at which the quality of cattle and pigs slaughtered is assessed, during the first 7 months of 1984, cattle slaughtering increased 9.4 percent by number and 10.6 percent by weight in comparison with the same period in 1983. In the total number of cattle slaughtered, the proportion of fattened young cattle increased from 83.3 percent to 87.8 percent, and the proportion of calves from 2.7 percent to 3 percent, while the proportion of older cattle fell from 14 percent to 9.2 percent. According to these data, there was an increase at the slaughterhouses in the slaughtering of young cattle, by about 43,000 head, and of calves by about 2,000 head, but there was a decrease in the slaughtering of older cattle (mainly cows) by about 13,000 head, which does not indicate increased slaughter of the main herd and the young of the cattle.*

In the first 7 months of 1984, in comparison with the same period in 1983, the slaughter of pigs increased by about 667,000 head, i.e., 34.9 percent. The largest increase in slaughtering, about 445,000 head or 64 percent, occurred in Vojvodina. In the total number of pigs slaughtered, the proportion of meat pigs (65-110 kg) increased from 78.5 percent to 80.3 percent, and the structure of slaughter improved in all republics and provinces.

According to statistical data, in the first 6 months of this year, industrial slaughterhouses produced 414,984 tons of fresh meat, which is about 20 percent more than in the same period last year. During the same period, the sale of fresh meat increased by about 13 percent compared to last year, when there was not enough meat for sale, but in comparison with consumption over a longer period of time, because of the reduction in the purchasing power of the population, sales declined, which led to an increase of about 52 percent in stocks of meat. In addition to this, the sale of fresh meat was also increased by the interventionary purchase of meat for the state reserves. The increased production of meat could not be marketed on the domestic market and in exports, and consequently, in accordance with the conclusions of the Federal Executive Council, commodity reserve organizations began interventionary purchases of pork and beef. The Federal Directorate for Commodity Reserves intervened and purchased about 20,000 tons of pork and beef, while the republic and provincial directorates for reserves

* The slaughter of cattle declined in Vojvodina (25 percent) and Croatia (17 percent), but increased in Serbia (51 percent), Slovenia (17 percent), and Bosnia-Herzegovina (2 percent).

purchased about 35,000 tons of fresh meat (Bosnia-Hercegovina 1,300 tons, Croatia 9,600 tons, Macedonia 1,200 tons, Slovenia 4,600 tons, Serbia 4,000 tons, Vojvodina 14,400 tons, and Kosovo 200 tons), so that a total of about 55,000 tons was purchased for the commodity reserves.* For the most part, however, pig halves were purchased for the republic and provincial reserves, and these contain about 62 percent meat and bones, and 38 percent fats and other edible parts. In August, the slaughter of pigs in slaughterhouses declined, and now it is at last year's level, but the supply of livestock for slaughter is not declining in the areas affected by drought.

For interventionary purchases, the price of meat was calculated on the basis of 165 dinars per kilogram of the live weight of the pigs, and 175 dinars per kilogram of the live weight of the young cattle. For supplying meat to the market, however, the slaughterhouses bought livestock at lower prices and thus tried to improve their economic position, which put primary livestock production in a difficult position.

Exports of livestock and meat during the last 7 months of 1984 were at last year's level in terms of value, but were quantitatively higher by about 10 percent. Exports of livestock and meat were made more difficult by the increased supply and the decline in meat prices on the world market.

The market's supply of grain for livestock feed improved after the barley harvest, but barley and a mixture of barley and wheat sold for 32 dinars per kg, like corn. This price was stable from mid-July to the end of August, when the price of these feeds increased to 34 dinars per kg. So far this year there have not been any pronounced problems in supplying the livestock industry with protein feed. The increased production of soy last year, and the imports of protein feed arranged, but also the shortage of corn, contributed to this. Although there have not been any major market disruptions in the supply of protein feed, the situation is not satisfactory, as indicated by the data that for a kilogram of increase, socialized farms have a 10-11 percent increase in feed consumption. The increase in the prices of soybeans and fish flour also indicates a shortage of these feeds.

In the areas affected by the drought, yields of fodder crops were reduced, and thus the production of hay, silage, and other bulk feeds is not meeting the needs of the livestock industry for winter feed, which leads to an increased supply of livestock for slaughter.

Milk purchases from the 78 major milk producers were 1 percent lower in the first 6 months of this year than in the same period last year.

In 1984, as a result of the increase in the pig and poultry population, feed consumption and meat production increased. The slaughterhouses industry, in spite of a 13 percent increase in marketing, did not succeed in selling the increased production of fresh meat. According to the data available,

* Source for data: Federal Committee for Agriculture.

in August there was a decline in the supply of pigs. This year, however, there has been a significant increase in the slaughter of fattened livestock.

According to reports from the cooperative associations of the republics and provinces, in some areas the young and the breeding stock were slaughtered, especially in pig raising. This will have an adverse effect on the volume of the production of meat and milk in 1985.

In regard to the overall development to date of the livestock industry on the farms of agricultural workers in our country, it can be said that it has been accompanied by fairly large cyclical oscillations, with an alternation of phases of the growth and decline of production, and the increase or reduction of the livestock population (including breeding stock).

According to data from the SZS [Federal Statistical Office] on the livestock population at the beginning of 1984, the total stock of cattle on the farms of agricultural workers was 4,473,000, i.e., 2 percent less than a year before; the number of cows and pregnant heifers declined by almost the same extent. The largest decline in cattle was in Macedonia (10 percent) and Vojvodina (5 percent). The number of cattle failed to decline only in Montenegro and Kosovo. The total stock of pigs is 11 percent larger, with a decline, by 1 percent, observed only in Macedonia. The increase in the number of sows and pregnant pigs amounts to 14 percent. The stock of sheep is at the same level as last year, and the number of poultry has increased by an average of 1 percent.

In regard to the state of the livestock industry on the farms of agricultural workers, also indicative are the data according to which deliveries of livestock after organized fattening in 1983 was larger than in 1982--by about 4 percent for cattle (although total purchases increased by about 6 percent), and as much as 41 percent for sheep (with a decline in total purchases of about 1 percent). This confirms the fact that last year there was an increase in so-called free purchasing, in which part of socially organized production also participated, either under the influence of a justifiable desire on the part of the producers to obtain adequate income in compensation for their work and investments, or because of a failure to take into account their own long-term interests, subordinating them to immediate results.

The disruptions that occurred in the livestock industry during 1983 and particularly in 1984 were primarily a result of a crisis in the concept of livestock production, which can be seen as follows:

1. A failure to take into account the fact of the existence of a firm interdependence between the production of livestock feed and livestock production. We are stressing this because feed has a primary influence upon the development, volume, and economy of livestock production, and constitutes the most important component of the structure of expenses.

In the past, and even today, the dominant orientation is unjustifiably almost exclusively toward feed of industrial origin, "by the bag," neglecting

the development of one's own production of fodder (soy, silage corn, legumes, hay, the efficient use of pastures, etc.).

The situation indicates the essence of the problem, which consists of the fact that the development of the fodder base has been neglected and has not been coordinated with the requirements for efficient utilization of the fund of livestock.

This concept in the production of livestock feed and in the feeding of livestock has caused a high consumption of corn, and thus also the appearance of a great disparity between the prices of feed and livestock. This is the main reason for the occurrence of a crisis in livestock production.

2. The construction of large and expensive livestock installations in the social sector, as well as the construction of the so-called "minifarms" for paid fattening by agricultural workers in socially organized production, supported by social funds, when there is no production of one's own feed (corn, silage, bulk fodder, etc.), is also one of the causes of the crisis in livestock production.

This method of raising livestock has exerted pressure to increase the requirements for finished feed and corn, and this in turn has led to a continual and uncontrolled growth of the prices for livestock feed and corn.

3. A large part of the social funds for stimulating production has been aimed at and used for erecting new and expensive installations, while there has been neglect of the adaptation of facilities for livestock in the private sector, which is not so small, and the number of which is around 2,700,000.

To a great extent this has resulted from an incorrect orientation in livestock production, and adherence to the existing norms for building facilities. This concept in the development of the livestock industry has narrowed the room for involving as many farmers as possible in socially organized production.

4. The insufficient self-management organization of farmers, and the insufficient total number of organizations of farmers and their unequal distribution, especially in the hilly and mountainous region, is also one of the major reasons for the crisis in livestock production.

The insufficient spread of farmer organizations is a limiting factor in the adoption and implementation of numerous measures that are important for the development and enhancement of livestock production.

5. Although intensification of the process of livestock raising requires considerably more rapid progress and the comprehensive development of the livestock-veterinary service, it can be said that we are lagging fairly far behind in this regard. This service has not been set up and organized so as to cover overall livestock production, from social and private farms, through opstinas, regions, provinces and republics, up to the federation.

For this reason, the livestock-veterinary service cannot develop systematic work and professional activity in applying the results of science, introducing modern technology, the specialization of production, the specialization and breeding of livestock, educating and informing farmers, protecting the health of livestock, and guiding the development of the livestock industry in accordance with regional characteristics and potentials.

All of these shortcomings in the livestock-veterinary service also occur in a much more severe form when there are no farmer organizations, which is particularly characteristic of the hilly-mountainous region.

6. In the past, efforts have been made and major results have been achieved in changing the breed composition of livestock in order to increase productivity.

Recently, results in this work have been absent. This lag is particularly felt on agricultural workers' farms. This is particularly manifested in the decline in artificial insemination. The use of selection, the control of production traits, and the keeping of breeding records have also lagged far behind.

The lack of work on selection and on using modern zootechnical measures is a consequence of the lack of clear orientation and coordination of the work, insufficient continuity in the work, and frequent organizational changes, as well as problems with financing.

7. The policy of financing current investments in the livestock industry in socially organized production has not been sufficiently adapted to the current situation and needs. The method of financing the production and reserves of feed and livestock has remained the same as in previous years, although it is well known that it does not suit the needs of stimulating the production of one's own livestock feed and better utilization of it (increasing the production of bulk fodder, the production of silage, keeping stocks of corn and corn silage, young, etc.) on the farms of agricultural workers who are carrying out the socially organized production of livestock. In addition to this, the available credit resources, including rediscount credits, have not kept pace with the growing needs; this, along with other factors, has frequently resulted in farmers not being able to obtain financing, or even in their being paid late for deliveries of livestock on the basis of association and production cooperation.

8. The slaughterhouse industry and the milk industry, as the ones most interested in the development of livestock production, have not made any fundamental contribution or brought about more rapid development of livestock production. This can be seen in the insufficient long-term business and income linkage on a long-term basis.

This attitude of the slaughterhouses and milk producers toward livestock production is resulting in an uncontrolled market, unfair competition, an inflation of prices, and a direct threat to socially organized livestock production in the private sector.

Such an attitude toward livestock production has an unfavorable effect on the process of the association of farmers, and that is why it happens that very often, the organized farmers do worse economically.

The attitude of the feed factories is no better in regard to mutual linkage with the primary agricultural production, viewed from the standpoint of its influence on the profitability and economy of livestock production.

Most of the feed factories are oriented toward complete mixtures, and this has contributed considerably to the increase in corn prices.

In connection with this, it is necessary to emphasize the clear demands of the farmers that the feed factories provide them only with additional mixtures that they cannot produce themselves. In this way, they would ensure cheaper feed, as one of the most important prerequisites for a more stable development of the livestock industry.

9. The trend toward a continuing growth of exports of livestock products constitutes significant progress. The volume of exports achieved, however, falls short of the potential capabilities and the possible economic results.

Recently the possibilities for exports have become increasingly more pronounced. This is occurring at a time when our livestock production is becoming more and more expensive. In addition to this, the conditions set by the importing countries, which are increasingly more difficult, are bringing about a decrease in exports, in spite of the incentives for exports.

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CRISIS IN LIVESTOCK INDUSTRY DISCUSSED

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 29 Jun - 1 Jul 85 p 3

[Article by Vlastimir Popovic: "Peasants Before Shops"]

[Text] Goats are raised in Vojvodina, and wheat in hilly-mountainous regions. This is only one illustration of the state of our agriculture, in which there is still no substantive link between farming and livestock raising, nor a uniform national agricultural policy. This was also noted at the Action Conference of Communist Farmers that was recently held in Novi Sad.

In our situation, the crisis in the livestock industry can be manifested in two completely opposite ways: when there is too little meat, and when there is too much of it. The period between shortage and abundance can be considered a sort of normal situation, but only if matters are viewed superficially. The causes of cyclical crisis are always deeper, and they have to do with the overall lack of organization in our agriculture and the insufficient support from systemic and economic measures. This latest crisis is the seventh in the last 15 years, or at least that is the calculation of the Economic Chamber of Yugoslavia. It is too short a period for too many crises. In practice, the instability of the market for livestock, meat, and processed products is continual, and what is called a crisis is only a more extreme form in which it is manifested.

Most of those familiar with the situation in our livestock industry agree that the causes of the present situation lie in adherence to an obsolete development concept, based on feeding livestock out of bags and raising livestock exclusively in herds (especially in cattle raising). At the same time, there is an even more pronounced separation between plant and livestock production in the social sector of agriculture. At the Action Conference of Communists in the Agroindustrial Complex, which was recently held in Novi Sad, one peasant from Indjija asked where our agriculture was going, when people in Vojvodina were starting to raise goats, and when peasants bought milk in shops. At the same meeting, a representative of AIPK [presumably Agro-Industrial Food Processing Combine] in Banja Luka pointed out the "tragic situation" from the standpoint of cheap and high-quality production. Specifically, because of disrupted price relationships, farmers in the hilly and mountainous region are dropping production in which they have a so-called comparative advantage, i.e., livestock raising, and deciding to raise grain, although the wheat produced there, for example, is 40-50 percent more expensive than in Vojvodina or Slavonija.

Decline in Production Threatened

If the hilly and mountainous regions have these comparative advantages for the development of the livestock industry, then this means that two thirds of the territory of Yugoslavia, inhabited by about 50 percent of the population, has them. But viewed overall, our country has noticeably fewer of all types of livestock per 100 hectares than the European average. There are 27 percent fewer cattle, 4 percent fewer sheep, and 24 percent fewer pigs. In economics it is known that an intensification of agriculture can be based on promoting the livestock industry, since this makes up about 75 percent of the value of total agricultural production.

Raising livestock does not pay. This is indicated by both social and private farms. Within the agricultural field a redistribution of income at the expense of livestock production is continuing, and to all of this one must add the very great influence of the enormously increased interest on the loans that livestock raisers are being forced to take. The combines are faced with a dilemma: whether to produce or not; and the private farms, faced with these two evils, have opted for the solution of satisfying only their own needs, or, as stated above, of switching to more profitable work.

It is already happening that newly built facilities for raising livestock are half empty. The breeders have calculated that for each fattened animal (in pig raising) they have a net loss of 7,000 to 10,000 dinars, because of the increased feed prices. Now there is a wait of up to 2 months for a breeder to come to the railroad to ship pigs that he had after all contracted to deliver. No one has to be an economist to understand what it means to ship pigs weighing 150 kilograms--there is no quality, and the losses are enormous for both the producers and the slaughterhouses. This was said at the action conference by a peasant from Ada. A representative of the Agricultural Combine in Krsko recalled that the relationships of meat and feed prices in our country had been disrupted, since the relationship in the world is that one kilogram of pork (live weight) is worth as much as 13-15 kilograms of corn. In our country it is worth only 5-6 kilograms of that grain.

No Happiness from the Bag

There are many economic reasons why the Long-Term Economic Stabilization Program made a certain division of production between the social and private sectors. The latter has so far been linked more to livestock raising, since it thereby gets better value for its own feed and work, and there are greater opportunities for fuller employment of all members of the household. Now the breeders are faced with three major problems, as stated at the action conference by one of the members of the LCY Central Committee. Specifically, these are the increase in feed prices, the poor functioning of the commodity reserves, and the pressure of interest rates. The commodity reserves have shown themselves to be impotent and unwilling to take in an increased flow of livestock (which occurred because of larger investments in the livestock industry). Apparently the producers are now expected to bear the growing expenses of storage themselves. They are not able

to do so, since they have been impoverished by the growth in the prices of feed and everything else.

Unless the situation is resolved very soon, the next crisis will assume the form of a shortage of meat, but it will not be resolved with the present separation between farming and the livestock industry. If the initial expenses in farming were reimbursed, then under the present conditions this would not guarantee that the livestock raisers could obtain corn and other fodder more cheaply. On the contrary, this would only increase interest in farm production and confirm the decision of the peasants to reduce livestock production even further. But if instead of the separation of two naturally linked fields, an income linkage were created in which meat or milk or processed products were the final product, and not corn or crushed seeds, then it would be possible to think about changes for the better.

Obviously there will not be any way out this time either if things are viewed and resolved in a partial manner. Production in the livestock industry, for example, is being planned for 20 years and more. This planning presupposes a clear picture of future farming production, the sources and purposes of financing, possible markets, and countless other things. It could have been known several years ago that the way out is not fattening livestock from the bag, abandoning hilly and mountainous regions, neglecting livestock raising on social farms, and the growth of prices in order to cover all of these mistakes.

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