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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

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CEMA: ITS STRUCTURE, GOALS, WEAKNESSES ANALYZED

Frankfurt/Main FRANKFURTER RUNDSCHAU in German 28 Jan 84 p 6

[Article by Pierre Simonitsch, Geneva: "The Eastern Counterpart of the EEC: Increasing Tensions in CEMA"]

[Text] Not only the European Economic Community finds itself in a deep crisis. The EEC's Eastern counterpart, the Council for Mutual Economic Assistance, as well has experienced growing tensions for months. Although the final communique of the just-completed three-day round of meetings of the CEMA Executive Committee is speaking verbosely of new "measures to improve cooperation" within the next five decades, there is no mention of the most crucial issue: No agreement has apparently been reached as yet on a date for a summit meeting of state and party leaders of the 10 fraternal socialist nations which had been scheduled for last summer. Eastern sources have long intimated that Kremlin chief Yuri Andropov's lingering illness is by no means the only reason. More or less old-time members of CEMA are apparently pushing for changes in CEMA's inflexible pricing system which benefits primarily the USSR. Our Geneva correspondent, whose primary concern is international organizations, has made inquiries to gain insight into CEMA's largely unknown structure and operations.

The slender highrise at the banks of the Moskva river, with its sweeping facade, stands out pleasingly from the neighboring buildings--an overly elaborate hotel built during the Stalin era and the massive row of houses of the Kalinin project. Its 30 floors house the secretariat of CEMA, in the West also known as Comecon. Established, at Soviet initiative, in 1949, as the counterpart of the Marshall Plan, CEMA is today trying to compete with the European Economic Community.

The economic basis for such an undertaking does exist: one-tenth of the world's population lives in CEMA member countries--the USSR, GDR, Poland, Hungary, Bulgaria, Rumania, Czechoslovakia, Mongolia, Vietnam and Cuba--and they earn 25 percent of the world's income. With its 444 million population, CEMA exceeds by far the number of people living in the EEC (272 million), not to mention its geographical size.

The differences between the EEC and CEMA are in their structure. In CEMA, one economic and military superpower, the USSR with her 268 million people, sets the tone. Two of the 10 members, Cuba and Vietnam, are far removed from the center. Stark differences exist among them in terms of their development--such as between the GDR and Mongolia. The only common link is the communist social system.

No Common Market

CEMA is not a common market; it does not have a parliament of its own, no court of justice, no common agricultural policy, no free movement of persons and services. Not even the currencies of its members are convertible with one another. There are no supernational bodies, and its secretariat has no political authority.

Compared with the 16,000 emloyees of the EEC, the administrative apparatus of CEMA is modest. Some 800 experts, not including support staff, work in the tall building at the Moskva river. The positions are allocated on the basis of membership contributions which, in turn, are determined by national incomes. That means 30 percent for the USSR, who provides, of course, the secretary; currently Nikolai Fadeyev.

Its supreme body is the Council, at which once a year the heads of governments convene and discusses key issues. The permanent representatives of the member states, with the rank of deputy prime ministers, meet four or five times a year in the Executive Committee. Unlike in the EEC, no consensus is required for decision-making. Basically, decisions are taken by majority vote although it is hard to imagine the USSR being defeated in a vote.

In addition, the CEMA framework consists of a number of specialized organizations in the various member countries, which are known as Intertextil, Interenergo, Agromasch or Intermetall. Lately, they have attempted to design unconventional forms of cooperation, e.g. at the enterprise level. Two community banks provide loans and do the interstate trade clearing: the International Bank for Economic Cooperation (IBEC) and the International Investment Bank (IIB). Yugoslavia and Finland have associate agreements with CEMA. A number of other countries--such as Iraq, South Yemen, Mexico, Ethiopia, Angola and Afghanistan--enjoy observer status.

Negotiations between CEMA and the EEC have produced no results so far. In the eyes of the EEC, the Eastern economic community is not an equal partner for an agreement because it does not have a supranational authority. Moscow believes that this is merely an excuse: it feels that the EEC countries don't really want an agreement with CEMA for political reasons because they pursue different trade policies vis-a-vis the individual East European nations. It believes these EEC policies are designed to weaken the unity of the socialist community.

One of the six deputy secretaries is Werner Liebig of the GDR. Liebig emphasizes the "truly democratic character" of CEMA. Nowadays, former

inconsistencies are overcome by better coordination among the member states, he says. The objective is to achieve proportional development according to plan while, at the same time, bringing the development of each member state closer to the same level.

"CEMA's economic integration has progressed further than is commonly believed," the deputy secretary contends. "We want to elevate countries such as Mongolia, Cuba or Vietnam to a higher level of development. In our system, we have a law of adaptation which is objective. There is no example of another economic community which would succeed in narrowing the differences between the underdeveloped and the highly developed members."

Liebig considers the international division of labor within CEMA as "an objective requirement." It does not make any sense for the smaller countries to invest in all sectors. Liebig also has an answer for Rumania who, for instance, opposes this type of labor division because she is afraid of being downgraded to an agrarian country. "These fears have been largely resolved. Also, agriculture has been upgraded in the meantime." The GDR citizen is citing the example of Bulgaria which has been able not only to modernize its agriculture but also to enter the industrial age.

Becoming Independent of the West

The long-term goal of CEMA, Liebig says, is to become independent of Western markets. Since the early 1970s, the East bloc has been changing over to "intensive production." The introduction of energy-saving production methods is now being emphasized. Microelectronis are being promoted in the socialist national economy as well.

The CEMA countries have agreed on a joint program for the production of computers. They have developed a uniform system of electronic data processing installations named "Series". Thirty research centers and 70 enterprises with more than 300,000 employees are working on the "Series." Plans call for reciprocal shipments by 1985 of modern EDP equipment in the amount of 15 billion rubles per year. The East European countries expect the development and use of industrial robots to result in improved productivity and manpower savings. Most of the CEMA countries are suffering from a manpower shortage. In addition, the productivity of the individual is way below Western levels.

Another key area is the development of nuclear energy. By 1990, the CEMA countries want to build new atomic power plants with a total capacity in excess of 30 million kilowatts. A cooperative agreement covers the period 1981-1990. About half of the installations are supposed to be constructed in the USSR, and the remainder in other CEMA countries. The agreement requires the standardization of equipment components.

CEMA promotes nuclear energy because the conventional energy resources seem to be insufficient to meet future needs. On this issue, Oleg Bogomolov, a member of the Soviet Academy, writes as follows, "The possibilities for a consistently higher Soviet exports of some types of fuel and raw materials are limited. Here the effects of having to resort to the exploitation of

lower-yielding deposits in remote areas are becoming apparent and hence the need to step up investments, transportation expenditures, etc."

The economist Oleg Rybakov is more outspoken. "The extensive growth factors (exploitation of large areas at low cost) have, for the most part, been exhausted. During the past decade--particularly the 1976-1980 period--, economic development in the socialist countries has become more complicated in some respects. A rapid increase in the import of important Soviet fuels, energy resources and raw materials on extremely easy terms are now limited."

Rybakov continues, "For a variety of reasons, the socialist countries have not been able to compensate for the depleted extensive growth factors with accomplishments in the technological-scientific area, by increased economic effectiveness and growing productivity. The reserves of socialist economic integration were not properly utilized either."

There is little indication of such self-criticism at the CEMA building. The director of the Division for Economic Information, Milan Kraichir, a Czech citizen, defends himself with a pile of brochures which paint an idyllic picture of what has been accomplished. For instance, according to his statistics, Rumania's national income has increased by 541 percent over the past 20 years, her industrial production grown almost tenfold, energy production has increased by 882 percent and meat production by 342 percent.

The fact that Rumania is close to economic bankruptcy is proof of how meaningless these figures really are. The country has heavy foreign debts and is internationally insolvent. Meat has become a luxury for the people and draconic economy measures had to be imposed in the electric power sector. The "conducator" (leader) Nicolae Ceausescu himself warned of a "communism of misery."

Another trade impediment for all CEMA countries is the fact that their currencies are not convertible, and thus without value abroad. In order to be able to buy urgently needed goods in the West, they either have to compete in world markets, negotiate compensation deals or-if necessary as in the case of the USSR--draw on their gold reserves. Of course, nobody would spend hard currency within the CEMA sphere. Because of that, trade is being balanced by way of a multilateral clearing system.

Asked about the lack of convertibility of the CEMA currencies, Konstantinov, the expert responsible for foreign exchange matters, boasts, "We have no trouble with fluctuating exchange rates. We solved that problem once and for all in 1963 when we introduced the transferable ruble." When asked whether there are ever any conflicts in CEMA because of the over- or undervaluation of specific currencies, Konstantinov has a simple answer, "The relationship between the transferable ruble and the other currencies has been settled in CEMA on a scientific basis."

At the moment, it is easier for CEMA to hold on to its money than to stage the long-planned summit meeting of the secretaries-general of the brother parties. It is not Andropov's lingering illness that is the main reason for

the delay, but the differences that have arisen. Hungary, the GDR, Czechoslovakia and even Bulgaria are unhappy with the inflexible pricing system and the ruble-based clearing system and are pushing for limited convertibility of their currencies. Rumania is insisting on more solidarity (read: economic assistance) from the more successful CEMA countries. The USSR, on the other hand, is benefitting from the current practice. As a CEMA observer noted, "Moscow is taking the view that what benefits the USSR, also benefits CEMA."

7821
CSO: 2300/306

DUMMY FIRMS IN FRG EARN HARD CURRENCY FOR GDR

Bonn DIE WELT in German 1 Feb 84 p 4

[Article by Manfred Schell: "How East Berlin Uses Fictitious Firms to Earn Millions in the West"]

[Text] The security authorities touched a hot iron and provided details in a report about "Communist-controlled" firms in the FRG. One of the key statements in the report, which was written as of December 31, 1983 and which meanwhile has been submitted to the competent political authorities, says, "It is estimated that these domestic controlled firms handle intra-German commercial transactions and services valued in excess of M 4 billion a year." Estimates that put their pretax profits at about M 200 million a year "are probably too low."

The firms in question are commercial enterprises that are supported by the GDR. These firms, the report claims, are supervised by the SED Central Committee's "Communications Courier Service," in cooperation with the GDR Ministry for Foreign Trade. The Communications Courier Service under the direction of Josef Steidl and his deputy Julius Cebulla is primarily responsible for "staffing" the firms. The commercial activities are largely the responsibility of State Secretary Alexander Schalck-Golodkowski whom Klaus Boelling calls the "expert for profit maximization."

The security authorities believe the GDR uses the controlled firms to accomplish essentially the following three objectives:

. to gain access to foreign exchange. In this, the SED is exploiting or circumventing the regulations concerning intra-German commercial transactions and the applicable tax laws.

. to obtain goods, including sometimes embargoed products, which the GDR economy is in urgent need of, as well as to provide SED functionaries with luxury goods from the West.

. to earn profits that make up part of the more than M 60 million the SED is currently spending to support the DKP.

Trust Agreements with Proven Comrades

The establishment and takeover of firms by the GDR is patterned on concepts developed by its economic and legal experts. Frequently, "deserving comrades" are put in. The funds are being advanced by the GDR. But even proven comrades of long-standing are entrusted with the funds only after they have signed a trust agreement. Thus, a notarial document negotiated by the late GDR jurist Kaul in 1974 reveals that the former KPD functionary Hans Eigner held in trust for Chemie-Export, the state-owned foreign trade enterprise, 50 percent of the shares in a firm located in Essen. Eigner had obligated himself to exercise the "rights derived from the acquired shares only in consonance and accordance with instructions received from Chemie-Export and, in particular, to transfer the shares at any time, as instructed, to the natural or legal person named by Chemie-Export."

In recent years, the GDR has begun to transfer the capital shares held by communists to controlled firms in Western foreign countries.

In many instances, the security authorities report, "the same persons are turning up in top positions of the controlled companies." Thus, Hans-Joachim Meiser, a businessman who, in 1960, was found guilty of foreign exchange violations in intra-German trade, established the Berlin Export-Import Bank with a capital stock of M 4 million. Reportedly, the firm Otra Overseas Trading Trust, formed in Vaduz (Liechtenstein) in 1953, has contributed to it; one of the board members who have single-signature procura, was Director Adolf Wilhelm Fehr. After Meister's conviction, the commercial setup is reported to have been largely dissolved. Still, Fehr's name subsequently showed up as a member of the board in a number of foreign controlled firms; he is believed to have held that position in the Hanseatic Institution in Vaduz at least until the end of 1982.

Back Payment of Taxes to Protect Supporters

This firm reportedly owns the building in Hamburg-Eppendorn where KPD chief Ernst Thaelmann used to live. Today, it houses the exhibition rooms of a DKP affiliate, the board of trustees of the Ernst Thaelmann Memorial, as well as the administrative office of the DKP district organization in Hamburg. In order not to reveal its real financial backers, the GDR is sometimes taking on considerable financial obligations. In one case, a controlled firm is said to have made back payments for taxes to the tune of M 1.5 million in order to avoid revealing the names of its supporters.

GDR-controlled firms established in the FRG and West Berlin work in the East-West trade area and as forwarding agents. Controlled firms in Western foreign countries are also mentioned as owners of real estate holdings "that are for the sole use of the DKP or its front organizations."

By making foreign companies owners of these real estate holdings, the GDR is taking account of the ban the FRG Constitutional Court imposed on the KPD: as it happened to the KPD at the time, it is possible that the DKP might lose

its party property through confiscation if it were outlawed. Thus, the firm Rexim S.A. of Lugano (Switzerland), which also owns the condominium Editor-in-Chief Georg Polikeit of UNSERE ZEIT [Our Time] is occupying in Wuppertal-Vohwinkel, is also the owner of the building which houses the DKP leadership in Duesseldorf. The firm is believed to be the sole owner of a West Berlin company (capital assets of M 4 million) and co-owner of another enterprise (capital share M 1.02 million).

According to the security authorities' report, DKP functionaries and state-owned enterprises from East-European countries, besides controlled firms, are participating in the capital of the DKP in-house printing firm Plambeck & Co., Printing and Publishing, in Neuss: Etablissement Monument/Liechtenstein, which also owns the building of the firm Plambeck in Neuss, is said to participate with a DM 400,000 share. The Globus Newspaper, Printing and Publishing Company, and enterprise linked to Austria's KP, is holding a DM 300,000 share. The DKP functionaries Kurt Bachmann and Georg Polikeit are participating with DM 10,000 each. Also, shares of M 500,000 each belong to the firms AGPOL (Poland), KULTURA (Hungary) and HUNGEXPO (Hungary). The enterprises TISKOVA AGENTURA ORBIS (Czechoslovakia) reportedly have underwritten DM 400,000 and BULGARREKLAMA (Bulgaria) DM 300,000.

The report of the security authorities also describes "methods for reducing profits." To avoid paying taxes to the local authorities on the largest possible portion of its earnings, the GDR tries to "skim off profits" in the following way: In business transactions with parties in the FRG, the GDR insists that, in the exeuction of contracts, domestic firms under its control be included as "forwarding agents" or "agents". Although the controlled firm plays only rarely an active part in the business transaction, it charges and collects fees of between 3 and 5 percent of the value of the transaction. The enterprises also seek to cut their profits by "creating profit-reducing operating expenses."

The GDR accomplishes such a profit reduction largely by making a second agent part of the deal, i.e., the firm SIMPEX, Trade and Advisory Services, East Berlin, Oranienburger Strasse 1. SIMPEX, which is headed by SED functionary Hans Springmann, enters into an agreement with the respective controlled firm to handle for the enterprise "agent services" (e.g. procure official permits, book cargo space) within the GDR against payment of a fee. But, in reality, SIMPEX is a camouflaged part of the SED Central Committee's Commerce Division which charges the controlled firms for "agent fees". The payment of agent fees to SIMPEX is handled through the German Bank/German Foreign Trade Bank (GDR) in the form of units of account. Official documents indicate that "tax-free agent fees in excess of DM 60 million a year are flowing into the GDR via SIMPEX."

Earnings Are Used to Support DKP

The FRG security authorities' 13-page report also gives details on how the DKP is being financed. Profits earned by the controlled firms are remitted

"directly or through foreign controlled companies to the GDR and there are made available for financing communist activities in the FRG." However, these firms also receive "direct" support for the DKP, e.g. through "fictitious working relationships." A number of DKP functionaries reportedly are employed by these companies as "field representatives" although they, in fact, work "exclusively for the DKP." Thus, the DKP functionaries Heinz-Juergen Nieth and Gerda Mies allegedly worked for a firm in West Berlin although their residence was in the FRG.

Nieth is a staff member of the KPD party leadership and Gerda Mies, wife of DKP Chairman Herbert Mies, is a member of the DKP district executive of Rhineland-Westphalia. Likewise, Mies's chauffeur, Hans Jurgen Koelling, was listed as a "staff member" of the Berlin enterprise. While the usual salary of full-time DKP district functionaries ranges from between DM 40,000 - 45,000 a year (before taxes), these alleged staff members "earned" a combined gross salary of about DM 270,000, plus expenses.

7821
CSO: 2300/298

FRG SALES OF PLANTS, EQUIPMENT TO GDR REVIEWED

Duesseldorf HANDELSBLATT in German 10/11 Feb 84 p 15

[Article by cmk]

/Text/ Berlin--Over the past 9 years, plant deliveries by West German firms to the GDR reached a value of more than DM 3.3 billion. Most of this business was transacted between 1975 and 1980. After that, inner-German trade was concentrated more and more on commercial transactions with a constantly rising volume.

The biggest chunk in the plant business was the erection of a PVC plant by Hoechst affiliate Uhde, worth DM 1.1 billion. This order of magnitude however would seem to be an exception for quite some time to come. The average volumes were between DM 35 and DM 300 million. In view of this order value, one can also assign absolute special status to the erection of an engine factory by VW in the GDR.

Here are the most important plant deliveries and big deals since 1975:

Schkoppau PVC plant (Uhde/Hoechst) DM 1.1 billion;

Eberswalde slaughterhouse (Berlin Consult) DM 230 million;

Gotha wood chipboard plant (Ferrostahl) DM 80 million;

Henningsdorf electrical steel plant (Krupp) DM 120 million;

Ueckermuende fittings foundry (Krupp) DM 120 million;

Tangermuende bone processing plant (Berlin Consult) DM 45 million;

Zielitz potash granulate plant (Salzgitter) DM 110 million;

Kirchheim gas concrete plant (Hebel) DM 50 million;

Waltershausen rubber mixing plant (Buehler-Miag) DM 150 million;

Porschdorf strip steel refining plant (Varimex Machine-Building and Industrial Plants, Incorporated) DM 45 million;

Bernau semiconductor plant (Berlin Consult) DM 35 million;

Auerhammer special working material plant (Sundwig Eisenhuette) DM 170 million;

Jena South thermal power plant (Krupp) DM 190 million;

Zeitz synthesis-gas plant (Krupp-Koppers) DM 10.3 million;

Rostock Port transloading equipment for fertilizer (Salzgitter) DM 57 million;

Pisteritz fertilizer plant (Kloeckner Industrial Plants) about DM 300 million.

No Financing Problems

In addition to this, we have a series of big business deals, such as the delivery of a gas tanker (Salzgitter) worth DM 81 million; the famous Gulf deal with DM 90 million, as well as the DM 100-million order for Waggon-Union for the delivery of freight cars and tank cars. The so-called car reconstruction projects for the GDR hold a special position. This reconditioning and delivery of former West German Federal Railroad cars, over the years, amount to a business volume totalling DM 152 million for Krupp-Handel.

There have never been any difficulties in financing these deals in inner-German trade and there will probably be no such difficulties in the future either. Two variants have taken shape and proved themselves over the years. Basically, these big deals are covered by West German government work based on trust. Of course, the GDR must make downpayments and intermediate payments of 15 percent. There are two ways to finance these deals. First of all, there are loans from one bank to the next, in which case the financing banks must assume an in-house risk or net retention of 5 percent. Variant B is the so-called supplier loan in which case the supplier firm must bear an in-house risk of 15 percent. This supplier loan has become increasingly unpopular with the passage of time because the in-house risk or net retention must be shown in the balance sheet and because it is reduced only in keeping with the repayment process. But because the exporter does not want to be stuck with just one deal, such in-house risk amounts can accumulate quite considerably.

Financing transactions in business with the GDR involve the interest rates customary on the market. In case of an inter-bank loan, the interest rate today would, with the surcharge, come to 7.5 percent until further notice." The supplier loan would also, according to the current situation on the market, involve an interest rate of 7.5 percent and there would be an exchange tax of 0.15 percent on it. The downpayments and the intermediate payments which the GDR must make are financed from the Euromarket. Because they are tied to exports, this is a transaction which the banks love to handle.

5058
CSO: 2300/340

NONAGRICULTURAL CO-OPS FOUND IN NEED OF REFORM

Budapest VALOSAG in Hungarian No 2, Feb 84 pp 17-27

[Article by Gabor Agonacs et al,* Cooperative Research Institute: "The Cooperative Movement in the Process of Economic Reform"]

[Text] Development of our agriculture in the 1970's was so spectacular, and the agricultural cooperatives' role within the branch so decisive, that these successes confirmed the strength and viability of our agricultural cooperative movement. In recent years, when the difficulties of our economy became apparent, the reputation of our producer cooperatives and specialized cooperatives has especially been enhanced. Partially because our industry's trade deficit is being offset primarily by agriculture's trade surplus. And also because our system of agricultural enterprises has maintained its dynamic growth, in spite of the increasingly difficult commercial and financial conditions under which enterprises operate. (The agricultural enterprises' profits rose from 17.5 billion forints in 1978 to 25.8 billion in 1982; and within this the profits of agricultural cooperatives, from 13.6 billion to over 20 billion forints. All this occurred under conditions when the agricultural parity ratio declined, the volume of capital barely rose, and the gap between industrial and agricultural earnings widened further in industry's favor.)

Our agricultural cooperatives have set an example in streamlining their organization, in developing forms of enterprise management that rely also on the activity of small-scale producers, and in shaping the structure of their activities flexibly, in accordance with demand. Their successes, from the viewpoint of our cooperative movement's results, have often overshadowed the successes of the other cooperative branches. For example, the important role that consumer cooperatives played in the development of our domestic trade in the 1970's, or in the stabilization and technical renewal of the activities of small-scale producers. Or the rapid growth of the savings cooperatives, despite their subordination to the OTP [National Savings Bank].

Since our agricultural cooperatives are in the center of attention within the cooperative movement, their dynamism easily creates the impression that the cooperative movement's path of development seems free of serious problems and will be uninterrupted also in the near future. But we are convinced that even our agricultural cooperatives have exhausted the growth opportunities inherent in the forms of organization that evolved in the 1970's. Specifically their

*Jozsef Bak, Jozsef Domokos, Pal Juhasz, Laszlo Szenay and Gyula Teller.

results to date are compelling them to reform their forms of management and their system of internal and external relations. Experimentation with new forms also can be found behind the present results. But if the individual organizational innovations are to become a reform leading to the entire movement's new upsurge, we must face the entire system of problems confronting us.

Our review of the cooperative movement's problems and our recommendations for further progress tie in with the efforts to continue the reform of economic management and enterprise management. Since we are placing emphasis specifically on what has to be done, in the following we will concentrate not on the movement's results to date, but on the problems for whose solution the movement must reform itself. Our article is intended to serve merely as a framework for our proposals, and not as a draft resolution to be submitted to a public body. It is material that is offered for debate and expresses its coauthors' present views, but in the course of the debate the individual coauthors might even adopt differing views.

1. Economic Management's Reform and the Cooperatives

The programs for reforming Hungary's economic management system have not considered cooperatives as particular enterprises, and the cooperative movement as a whole, in the depth and extent that the cooperative sector's relative weight within our economy and the economic--and simultaneously also social--importance of cooperatives would have warranted. A factor in this has obviously been the dominant role of state ownership, as a result of which the problems of the state enterprises' supervision and management are in the forefront of the attention of the central agencies, and of the economic research associated with these agencies. This one-sidedness is reinforced by the fact that our organizations that manage the economy are simultaneously the organizations that exercise the state's rights as the owner of the enterprises, and therefore the problems of state management within these organizations are often mixed with the problems of managing assets. (This is why these organizations are unable to distinguish within themselves the rights to which they are entitled as managing and regulating organizations, from their rights as representatives of the state in its capacity as owner, i.e., from what they may regulate only at state enterprises.)

The enterprise organization of our cooperatives has adapted so closely to the dominant enterprise form, and has assumed so many characteristics of the state enterprises, that the cooperatives' enterprise management problems often seem no different from those of the state enterprises. And the process of reforming enterprise management seems to require the same forms for the cooperatives as for the state enterprises. The cooperatives' special problems are not in the forefront of attention also because most cooperatives, especially in agriculture and the sphere of circulation, have proven more flexible and better able to develop and to tolerate recession than most state enterprises, even under unchanged conditions. Moreover, the recession hit our industry sooner and harder than agriculture, and in political thinking--with harmful one-sidedness--the cooperative movement's problems often are equated with the problems of agriculture.

The many representatives of the cooperative movement also have been a factor in that the reform movement has neglected the problems of cooperatives, and thus

has not taken really into account up to now the advantages inherent in cooperatives. When the agricultural cooperatives' successes are cited with justifiable pride, it is often contended that the forms have already developed by means of which their enterprise operation can attain the necessary flexibility, the large farms are able to integrate and boost small-scale production, the cooperatives are able to care for their members, etc. There are even views to the effect that also the necessary variety of cooperative forms exists, and there is no need for new types of cooperatives, small cooperatives, and new enterprise forms. (The influence of these views is evident, for example, in that the regulations governing small cooperatives do not apply to agriculture, and the regulations on specialized cooperative groups offer less autonomy to the specialized cooperative groups in agriculture than the ones in industry or services.)

Yet the cooperative movement, too, has no alternative but to reform itself. The development of cooperatives has come up against the constraints of their own forms of enterprise management: the possibilities of stimulation through the managements of the cooperatives have been exhausted, and cooperative ownership will be unable to exert its dynamic influence unless it sheds the enterprise forms that became the dominant in the 1970's. The country's economic difficulties are highlighting the resulting problems. The protracted recession makes it necessary to find more efficient forms of management also in the cooperatives, which up to now have seemed dynamic; it will compel the country to integrate into the domestic and foreign markets more expediently than heretofore, under a greater variety of forms and with more room for entrepreneurship, the various activities of small-scale producers, the individual and collective businesses. Over and above all this, the anticipated reform of the state enterprises' system of supervision and management poses a challenge to which the cooperative movement can respond with its individual aspect intact only if it improves itself in the cooperative manner, utilizing its store of historical and national experience and forms.

If our system of cooperative enterprises remains unchanged, if these enterprises continue to exercise cooperative ownership on the basis of the licenses to use and enjoy that have evolved so far, and if they merely introduce innovations in enterprise management, then they will lose their individual aspect and will renounce the opportunities that make cooperatives what they are and enable them to compete against enterprises capable of greater capital concentration: cooperation based on the individual members' efforts, mutual assistance serving the special interest of the members joining their efforts, and the greater willingness to innovation of the employee who is also co-owner. For as the enterprise business work partnerships, enterprise specialized co-op groups and subsidiaries spread, as the enterprises employ greater variety than heretofore in farming out production and using cottage industries, and as plant democracy gains strength and as a system of autonomous units with incentives of their own develops, organizational forms that up to now we tended to regard as privileges of the cooperatives might become commonplace within state enterprises. (Our cooperatives, incidentally, have used these organizational opportunities to an extent far from what would have been expedient and feasible.) The reformed state enterprises' competition must be accompanied by a reform of the cooperatives that combines enterprise-management innovations with the use of cooperative forms.

The social conditions of the cooperative movement's reform are likewise given. Since the present system of cooperative enterprises and their types evolved, the citizens' production and consumption standards have changed--because of the development of our economic and social conditions that was due in no small part specifically to the operation of cooperatives--to such an extent that the one-time, original motives for forming cooperatives have partially lost their significance. (Cooperation's earlier function was to integrate into the national economy the partially isolated markets, the producing and consuming communities.)

There have been social changes especially in the villages and small towns: economic relations have ceased to bear the imprints of feudal society; the labor markets, split by localities and social strata, have been integrated into a unified, national labor-market system; the differences between individual families in terms of economic opportunity have narrowed; the producer and consumer status of wage earners has become practically uniform, etc. As a result of all this, the citizens' technical and economic know-how has been updated, and the business and consumption standards of the individual social groups have become more open and flexible: new models are readily assimilated, relations between social groups are easily established, etc. And most importantly, it has become a general practice for wage earners to participate in both the first and the second economy. Through experience they have thus developed the skills with which they are able to gather information, establish contacts, cooperate and bargain at their workplace or in their joint work organization; they know the labor market and the commodity market; and the members of most social groups have refreshed or just developed also their skills in forming individual or family businesses. Because of their dual orientation, they have learned the way to utilize individually the new technical and economic opportunities, the techniques of forming alliances in the interest of individual and family businesses or moonlighting, and the ever-newer forms of gaining information.

The cooperative is the type of economic organization that best utilizes the greater economic sophistication of the people. But only if it finds the organizational forms that consistently take into consideration that the members' productive work is not only managed joint work but also fits into the network of family businesses, and that the members' consumption not only ensures the objective requisites of subsistence and of a renewed way of life but is also productive consumption.

This production and consumption require not only objects, management and incentives, but also services that differ by individuals and household and hence cannot be uniform, comprehensive and constantly improving institutions that promote coordination, and organizations within which both the interdependence and separation of businesses can take place.

The entire economic and social environment is changing, and the process of transformation stemming from cultural change is now being accelerated also by the constraints of the protracted recession. The cooperatives' system of institutions cannot remain unchanged, and their developmental trends that follow the traditional patterns of the state enterprises cannot continue. The desirable transformation has already started. But if these changes are to be

coordinated so as to produce a general dynamism of the cooperative movement's economic activity, the specific--cooperative--nature of cooperative ownership must be restored and strengthened. It will be expedient to review our tasks from three different points of view: (1) the economic activity of the cooperatives as enterprises; (2) the economic activity of the cooperative members; and (3) the cooperative movement's economic prospects.

2. Modernization of Enterprise Management in the Cooperatives

The first viewpoint, the problems of enterprise management in the cooperatives, dominates cooperative thinking so completely as if the system of enterprises that developed by the early 1960's, and which has remained essentially unchanged since then, were the cooperative movement. It was unquestionably an important political result that the cooperatives gained acceptance as equal, at least in principle, members of the Hungarian system of enterprises. This required the federations, the official centers of the cooperative movement, to undertake the representation of the cooperative enterprises and to integrate themselves into the Hungarian economy's system of enterprise supervision. But this situation led to treating the problems one-sidedly. The cooperative movement became conservative. Its interest-representing activity meant the safeguarding of the given cooperative enterprises' interests, and it perceived its prospects and tasks as the prospects and tasks of the given enterprises. Paradoxically, the cooperative movement protected the cooperatives even from the formation of new cooperatives: for example, it prevented the specialized co-op group movement from becoming the basis for the formation of new cooperatives.

Admittedly, the movement's conservatism stemmed to a significant extent from external constraints: at one time the movement had to defend itself against political aspirations that professed the superiority of state ownership and, specifically for that reason, wanted only strongly controlled cooperatives that were "kept in hand"; it had to bargain with legislators and the drafters of the economic regulations to protect its existing organizations' freedom of action.

Although it does not follow from the natural economic dominance of state enterprises under socialism that also cooperative ownership must function under the same forms as state ownership, nonetheless the cooperatives' internal organization and work organization changed only in one direction: in the same way as the internal organization and work organization of the state enterprises changed. This was the direction in which the political leadership steered the cooperatives with its chairman-centered "responsible manager" approach, with frequent outside interference, and with an election mechanism that required a "certificate of reliability." This was the form into which the cooperatives were forced by the system of accounting that served first of all the requirements of control, and secondly the managing bureaucracy, but was unsuitable for use by the individual working collectives to evaluate their own performance and the activity of others. Changes in this direction were induced by the professional management that evolved, partially because it was in the interest of the professional managers to mystify conditions so as to ensure their own superiority over the membership, and partially because the managers did not even know of other methods of enterprise management and work organization than what were developed for the state enterprises. Thus within the

cooperative enterprises the professional managers' superiority in exercising power was much greater than what was warranted technically, and both the supervision of work organization and the setting of the enterprise's economic objectives became the domain of upper management. Their drawbacks in access to information, and the manner of their election made the elected managers and the control committee unsuitable for any real sharing of power between them and the professional managers. And the general meeting of members--specifically because its special-interest subgroups have no opportunity to manage their own affairs, and thus even to obtain information within the enterprise--is unable to form judgments on the basis of the masses of information processed according to the controlling bureaucracy's requirements. Due to the shortcomings of our election mechanisms, it is not even able to elect. ("You have no choice when there is only one candidate.") Especially unsuitable for the formulation and assertion of the membership's will is the system of partial general meetings of members.

The drive to merge cooperatives weakened the members' sense of co-ownership even in the cooperatives were there were no forced mergers. For this drive --together with other spectacular drives carried out in response to outside expectations--made it clear to cooperative members that not even the size of their enterprise depended on what other groups' activities their own group's activity was interwoven with, and on how the various groups got along with one another, but on what the chairman up there decided. And in large cooperatives only the power of the management that stands above the membership is indeed able to coordinate the groups that previously were going their separate ways.

In producer cooperatives the peculiar efficiency advantage of cooperation over the capitalist or state enterprise stems specifically from the workers' dual status as employees and also as co-owners. Their one type of economic interest limits the other. When emphasis shifts one-sidedly to employment--especially at present when there is a developed second economy--the worker strives to hold back his performance. And this not only means that I at least try to work with moderation if my wages cannot be raised any further, but also that I exert myself as little as possible in performing my regular work. At home I have a greater need for my ingenuity and concentration. Bargaining between management and membership assumes the forms of bargaining between employer and worker.

The cooperative whose members lose their sense of co-ownership soon finds itself in a crisis. Thus our industrial cooperatives have lost their efficiency advantage with which they were able to offset even 15 years ago their drawback of being eclipsed by the state enterprises within the national economy's system of cooperation. Today they are unable to offset the effects of the discrimination against them during the 1970's (of the central wage increases for the workers of large enterprises, and of the classification of enterprises). The recession is affecting them more severely than it does state industry: earnings in the industrial cooperatives are lagging behind state industry by more than 10 percent, and their attrition rate is twice higher.

Such signs of crisis are not yet evident in the agricultural cooperatives. (In them, admittedly, a more personal relationship between the member and his cooperative is preserved to some extent by the household plot, especially by the

system of services for the household plots, and by the fact that the cooperative enterprise in agriculture is more protected from competition than the industrial cooperative is. In a given area the agricultural cooperative has a monopoly on land use and functions as an enterprise that determines the activity of the branch.) But even in the agricultural cooperatives, for example, complaints by managers have become general that "tractor operators have become unreliable," as if the managers themselves had not contributed to the organization's becoming one in which self-interest dictates unreliability. And it is unquestionably true that manpower is being used wastefully in the agricultural cooperatives as well.

In the geographic areas and in the activities where capitalist or state enterprises are unable to operate profitably, the consumer cooperatives' economic viability is strengthened by the fact that members advance the capital needed to maintain the given activity, build or make available buildings or premises, perform tasks (act as agents, coordinators, etc.) for which other enterprises would need hired help, etc. But only the members do this who feel that the store, the service business or marketing agency is their own. Each group of members has to control and partially to manage not only, and not primarily, the giant enterprise encompassing the conglomerate that is inscrutable and, in many of its details, uninteresting to the stores, businesses and agencies, but merely the sections of immediate interest to the group. (The consumers in a small village or at the end of a village form a cooperative to operate their own general store and to sell their produce. Everything else is merely a consequence of this.)

Admittedly, the consumer cooperatives may justifiably be proud of their special-purpose share capital totaling one billion forints. But even so there are many activities that are whithering away because a profitable form of operation that relies on the members has not been found for them. (A factor in this, of course, is also the trade markup's rigid regulation that does not take special situations into consideration.)

Our most important task in developing the cooperative enterprises further is to reinforce the cooperative character of ownership. A property relationship between the member and the cooperative is merely an external--but by no means negligible--form of the membership's standing as co-owners. (Of course, a too high proportion of indivisible joint assets indicates already from this point of view the loosening of ownership relations.) Complete right of disposition, rather than the rent, is the real meaning of ownership. And it is feasible and expedient to enhance interest in the right of disposition by increasing significantly the ratio of divisible assets to indivisible joint assets. In this way also the interest in receiving rent strengthens the link to the cooperative.

In addition to the prerequisites within the cooperative enterprise, of course, there are also external prerequisites for strengthening the members' right of disposition, and thereby for providing a stronger incentive to utilize the joint assets more efficiently. One task of the cooperative movement is to intervene in favor of ensuring the external prerequisites. (Taking into account, of course, that a modern state, especially a socialist one, sets limits for exercising the owner's rights. These limits, however, must be clearly defined and cannot mean a takeover of the right of disposition.)

Autonomy is the most important external prerequisite for the operation of a cooperative or of any organized democracy. (And cooperative democracy is not merely a form of plant democracy, but the collective membership's position of power, the exercise of its right of disposition.) We must achieve public administration's renunciation of its ambitions to direct cooperatives, to control cooperative elections in their present form, to require "certificates of loyalty," etc. Now when the forms of economic management that were customary in the mid-1970's are obviously unsuitable, and when attention is shifting everywhere to the enterprises' demand for economic independence, economic management is more likely to take seriously the cooperatives' demand for autonomy. (It is true, for example, that economic management has treated a substantial proportion of the cooperatives' reserve funds as if they were state assets, over which it has the right of disposition. This example is a reminder that the statutes should define more accurately how far the government's authority extends, and what authority is reserved for the National Assembly.) The bargaining process that takes place when economic management and regulation draft their legislative package should be made open so that the cooperative enterprises' peculiarities and special interests may be formulated clearly, and sensible compromises may be reached. It must be made unambiguously clear that regulation cannot be so detailed, and cannot limit the use of own resources and internal income allocation so closely, as in the case of state enterprises. (Not only because this is not expedient even in the case of state enterprises, but because not even the state can dispose of anything that it does not own.)

We must achieve more simple statutory regulations on operating, professional and accounting by-laws that will permit the most diverse internal solutions. To avoid impossible situations such as that the by-laws regulate even internal relations that should be regulated by contract or not at all; that the combined total length of the by-laws of an AFESZ [general consumer and marketing cooperative]--the activity of such cooperatives is the most diverse--runs to between 600 and 800 pages; that the cooperatives are obliged to pay tax even on unrealized incomes; that even small organizations are forced to keep unnecessary officials, etc.

(Naturally, the economic regulators' effect of guiding the enterprises' operations along fixed trajectories cannot be terminated simply by designing different regulators for the cooperatives. The entire national system of income regulation will have to be redesigned. However, the most diverse reform concepts agree that income regulation through enterprise regulation is one of the most immediate obstacles to improving efficiency and to reforming enterprise organizations. Especially when income regulation does not pursue enterprise-management objectives but is a direct instrument for controlling purchasing power. Instead of the present system of income regulation, it will probably be more expedient to change over to taxing personal incomes.)

The external prerequisites will become internal ones. The main constraint on the economic activity of cooperatives is that they are functioning as enterprises in which the activity of the parts is subordinated to the activity of a group that has an economic interest in how the bottom line of the joint balance sheet develops. And the spheres of authority and internal incentives have been devised as if the cooperative "were carved from a single block," as if it were a single giant enterprise. Thus nobody but the center is able to represent the

interests of the whole, which must necessarily take precedence over the interests of the constituent groups. And this center determines with essentially Taylorian logic--but not in a consistently developed Taylorian organization, because of the ambivalent set of objectives--the subdivision of the enterprise into parts, the spheres of authority, internal control, and the forms of the incentives.

Yet the overwhelming majority of our cooperatives do not meet the conditions of this enterprise form. Their activities are dismembered, and the internal technological links do not form--and cannot form, except in the case of a few smaller industrial cooperatives--a dense and necessary network between the parts. And if the activities of the parts are not truly interdependent, or if their interdependence is not a technological necessity because the shipping, service or receiving section could be replaced also by an outside partner, then at the peak of this organization's management pyramid, which controls also the material flows, the internal power function will be the dominant, instead of the service function. The peak of the management pyramid becomes the owners' alienated representative. Not only cooperative principles, but--from the viewpoint of an asset-managing and production organization--also economic reason requires that such an enterprise loosen its unity. It must strive to change into a network of businesses, in the same way that even the capitalist corporations are doing, bearing in mind the interests of their stockholders. Incidentally, enterprise management is more concerned with controlling the disruptive forces than with planning business strategy, organizing production services, and evaluating the members' aspirations and needs. (The following is most obvious in the history of the general consumer and marketing cooperatives' organization, but is typical also of the other cooperatives under the present enterprise form and approach: when authority is being decentralized, the center violates its own rules and interferes in the activity of the units; and when authority is being centralized, the network "breaks loose" and there follow movements that counter the efforts of the center.)

Albeit hesistantly, transformation of the enterprise structures has nonetheless started. The autonomy of the subdivisions, or at least of the subdivision managers, is broadening, although in most cases their authority is not clearly defined. Specialized co-op groups, and such modes of operation as fixed rate payments, contracting, leasing and the cashier-free system are spreading. In a few producer cooperatives there have been formed independent groups practically with the status of subsidiaries. The general consumer and marketing cooperatives have introduced new forms of operating their networks and are departing from the system of boards of directors.

3. Relations Between the Cooperatives' Enterprise Management and Membership

Today, as a rule, the enterprises' structure is being transformed only for pragmatic considerations: in this way it is possible to solve more easily certain problems of economic activity, to operate subdivisions that otherwise would not be sufficiently profitable or could be maintained only at the cost of substantial investments, or to retain in the cooperative employees and cooperating small-scale producers who otherwise would leave the cooperative enterprise. Often it seems as if merely a desire to alleviate the tensions caused by the system of income regulation were motivating the enterprise to

avail itself of the opportunities to employ autonomous forms of management (and as if this same system of income regulation were simultaneously preventing the wider application of the organizational principle of autonomous work-organization units in the cooperative's basic activity).

Except in certain forms of mass production within manufacturing that require much internal cooperation, however, the efficiency of enterprise organization is enhanced if the technologically separable phases of vertically integrated production, or the activities that have evolved for separate social groups, are segregated also within the enterprise's organization: if their decision-making authority, responsibility and tasks are defined and they split off from the enterprise's uniform block, and if contracts and/or interest relations, not by-laws, determine their relationship with the management of the enterprise and with the other units, which preferably are likewise autonomous. This development can truly mobilize its participants, and can enable the cooperative to really utilize the opportunities for economic activity that the economic environment provides, if the change in the enterprise structure is followed, or often even preceded, by a change in the cooperative structure. If the membership groups that operate the individual subdivisions receive sufficient authority that enables them--within the limits of the contractual obligations that link them to the other parts of the cooperative--to mold their activity and management, and even their financial relations, in accordance with their own needs and possibilities.

In this way we can achieve that there be several integration centers for the integration of the first and the second economy, thus responding in a more diversified manner to the ad hoc needs and opportunities; that the utilization of the cooperative's assets and of its working collectives' working power be more complete and especially more profit-oriented than at present; and that the cooperative enterprise be more recession-resistant and simultaneously better able to expand.

In the case of consumer cooperatives, the group of consumers or small-scale producers that participates in the subdivision's supervision and management is thus able to find the forms through which the costs of operating the subdivision can be reduced or its operation can be better adapted to its users' needs, and direct financial relations can develop between the subdivision and the group of members interested in the subdivision's operation. In this way it is possible to alleviate the contradiction that the consumer cooperative as an enterprise has an interest in a return on the joint assets, but the consumers formed the cooperative for their individual profit. The cooperative's interests are tied to the joint enterprise, and the cooperative members' interests are tied to their own households or farms.

In this way also the "credit unions" can become virtual commercial banks, the organizers of their members' network of businesses. (To this end, of course, the often fictitious membership of the savings cooperatives also must be transformed, and the cooperative must become the joint enterprise of a group of members who are interested in construction, services for the population, small-scale farming, utilization of local production opportunities, and in the more efficient organization of consumption.) The savings cooperatives must not be

simply money lenders, but organizations that promote the utilization of local business opportunities.

In the producer cooperatives, business autonomy of the groups of members is an important condition for restoring the cooperative nature of ownership, and for letting the possible new forms of financial relations become the source of a new upsurge. (In this case the share and especially the special-purpose share, and the loans and special-purpose loans provided by the members would link them primarily to the autonomous subdivision, not to the joint enterprise. At the same time also the members' own assets and contacts would be harnessed for the subdivision's activity.) The economic substantiation of cooperative democracy would be strengthened also in this manner.

Simultaneously this is also the most expedient way of relieving the stresses that arise from the members' interests in the first and the second economy. In this way it is possible to achieve that the member will find it worthwhile to devote to the joint enterprise the concentration and effort that he has been devoting to his moonlighting, or to better coordinate the member's activities in the first and the second economy. The function of integrating small-scale production and small businesses--this function is at present only secondary in the producer cooperatives and has not developed at all in the industrial cooperatives--also can develop faster in this manner. For it is likewise a cooperative function to organize small-scale producers into cooperatives.

We too believe that it was not expedient to form large cooperatives through cooperative-merger drives, that this undermined cooperative ownership and often worsened the efficiency of the cooperative enterprises' operation. However, we do not regard the breakup of the merged cooperatives the only expedient way of relaxing the stresses that have arisen in this manner. At the same time it is important that the legal conditions for separation and withdrawal be simplified and made truly realisitic; the membership should be able to separate where it wishes to do so, and the breakup and reintegration of cooperatives should not require the intervention of outside organs of power. (Nay, the outside organs of power should not hamper or even direct this process.) For the large organizations--specifically because their stock of fixed capital is spread more widely, and it is easier for them to concentrate financial resources--can be an ideal framework for the development of a form of cooperative enterprise that undergoes internal differentiation, converts itself into a chain of businesses and inspires new businesses. Naturally, this development too will lead to where individual subdivisions become completely independent. But it also carries with it the possibility that the businesses formed outside the cooperatives can integrate themselves into the system of cooperative assets and members.

Thus our ideal can be the abolition of the present situation under which cooperative must necessarily be identically equal to cooperative enterprise in terms of size. Within the framework of a cooperative there should be able to operate several enterprises, each one under the supervision of a group of coowners. And conversely, a cooperative or a partial group within it should be able to participate, under more simple conditions than at present, in establishing businesses: supply chains, service enterprises, marketing agencies, vertical organizing centers, etc.

This ideal of a cooperative enterprise reassesses the conceptions as to what the expedient tasks of the cooperative's management are. While up to now the administrative function of the cooperative's management has been in the forefront of attention (the management determined how the work organization was to function, and directed and oversaw it), under the new concept its asset-managing function is the dominant. The cooperative becomes similar to the center of a trust, or to a holding company. With the autonomous units it concludes contracts and agreements for the utilization of parts of the joint assets; seeks business opportunities for the better utilization of the assets; seeks forms through which to inspire major or minor business and business opportunities in its economic area, and to integrate them into the cooperative's sphere of activity; organizes services to ensure the operation of its own subdivisions; and even undertakes as an entrepreneur to organize credit relations, to provide technical or business consulting, to operate an information and accounting system that meets the information needs of the groups of members, to act as intermediary agency between partial businesses, etc. In outlining this ideal of a cooperative enterprise, our purpose is to point out the direction of organizational development that is desirable from the viewpoint of reforming cooperative management.

The cooperative enterprise's reform and the strengthening of its cooperative nature play an important role not only in the upsurge of enterprise management, but--as we have repeatedly indicated--also in converting into cooperative activity such consumer and producer activities of the circle of members and potential members that up to now have been associated with cooperatives only incidentally. In other words, also in terms of the problems that we must solve from our second point of view. We must face up to the fact that adequate cooperative forms are lacking for private production and business activity. The cooperative serves even small-scale production activity associated with the household-plot system or specialized co-op groups only when, and to the extent that, such activity fits into the joint enterprise's interest. If the cooperative principles of mutual assistance and open membership are to truly assert themselves, the cooperatives must be more receptive and more willing to provide services than at present. Not the member should have to adapt to what the cooperative offers, but also partial groups of members should find a form for asserting their economic ambitions, for developing cooperations that make their own businesses more secure.

4. The Cooperative Movement's Reform

From all this it follows that also the cooperative movement's entire system must be developed further. Although the cooperative movement cannot abandon representation of the cooperative enterprises' interests through the system of federations, it must reckon also with phenomena for whose handling it has not yet developed a strategy. Thus the cooperative movement must adjust to the fact that it will be competing with state enterprises and groups of small entrepreneurs also in activities in which it has enjoyed monopoly power up to now, at least within a given geographic area. It must reckon also with the emergence of competition--desirable competition, in our opinion--between cooperatives, especially between cooperatives that are classified into different branches but operate in the same geographic area. After all, cooperatives are ceasing to exist in their pure forms and types. Even up to now the AFESZ's

have not been merely consumer cooperatives but have retained--albeit often in rudimentary form--their function of private producers' cooperatives and have formed also industrial subdivisions. The agricultural cooperatives have broadened their activity to include also industry, trade, and more recently even certain services. Some agricultural cooperatives have assumed also the functions of small-scale producers' cooperatives. But in a given geographic area the changes up to now in specialization and character have created only occasional competitive situations, with each cooperative enterprise striving to occupy the vacuum left by the official organizations. However, if the transformation of the cooperatives' enterprise-management system accelerates--and especially if the autonomy of the individual members' groups increases, and the changes in enterprise management proceed in the direction of what the groups' members need as private producers and consumers, aiming to utilize the local opportunities for economic activity--then it might become an everyday occurrence to decide which cooperative the small-scale producers should collaborate with, whether the production or service groups should join the enterprise system of the industrial, agricultural or consumer cooperative, or should they perhaps be independent, and which cooperative should utilize some local business opportunity, say, one that is based on commuting construction workers.

The interests of the cooperative movement as a whole can best be served if the movement encourages, rather than curbs, this competition and especially the silent rivalry between the potential organizing centers. Indeed, it would be in conflict with cooperative principles if cooperators or potential cooperators had no alternatives in developing their cooperation. (It may not always be in the interest of even individual cooperative enterprises to solve within their own framework, for example, the utilization of their assets or the supply of their cooperational needs. Often the asset is utilized more efficiently, and the cooperating partner is capable of better activity at lower cost if it operates as a part of another enterprise, as an independent organization or in a system of private businesses. A return on the asset provided for use can be ensured also by means of a lease or cooperation contract.) Not only is it undesirable for the cooperative movement to curb competition between existing cooperatives, but it is also expedient for it to aid the formation of new cooperatives. New consumer and marketing cooperatives, the cooperatives of merchants and other small businessmen, and small production and service cooperatives (even in agriculture) could expediently boost the economy; by promoting creative activity and by aiding the better utilization of local labor, they could integrate individual geographic and economic areas into the national economy more effectively than at present.

The renewal and reform of cooperation's vast store of forms could enhance the revival of those economic functions for which the cooperative movement initially emerged and spread. They will help to achieve that the utilization of business opportunities will not depend on what needs and forms of activity the already established and capital-rich enterprises happen to find suitable and are able to fit into their enterprise activity, in accordance with their own internal relations of power. The cooperative movement must achieve a higher level of mutual assistance. That this is possible even under present-day conditions can be demonstrated on the example of the Mondragon cooperative chain's operation in the Basque region of Spain. Through the collaboration of industrial cooperatives and credit unions it has been able not only to create jobs,

but also to raise the work standards and economic potential of its region. As another example, there are the many methods of French regional planning. The opportunities of the consumers and producers in a given economic area--of a geographic environment or branch of activity--can unfold successfully if they are able to unite. If they receive assistance in developing their ties with the other parts of the national economy or the world economy. If they are able to obtain capital and know-how not only on the basis of their already realized wealth, but of their present and future abilities and skills as well.

For the cooperative movement's higher-level solidarity and feasible further national-economic role to unfold, the movement must create new organs and set new tasks for its system of federations. There is need for agency organs that will help to develop intercooperative business links and will inspire the establishment of necessary or feasible new businesses. For although it is not expedient to set fixed trajectories for the formation and reorganization of cooperative businesses, it is expedient and necessary to organize their collaboration that enhances the stability of the businesses and aids, through their solidarity, the implementation of large-scale economic programs. Specifically for this reason, there is need for collaboration that is managed at the community and district levels and seeks what cooperative forms can aid the economy of the community or district, and especially what new businesses could enhance the community or district's potential and improve its utilization. (However, we feel obliged to call attention also to the dangers inherent in the present forms of collaboration. Thus the present form of community collaboration between the individual councils on the one hand, and the state enterprises and cooperatives operating on their territory on the other, the so-called coordination contribution, poses a serious threat to the assertion of society's overall interests, to legality, to the population's interests, and to the equal assertion of rights and sharing of obligations. Within the framework of reforming community finances, therefore, serious consideration should be given to placing the relations between the local councils and the business organizations within their territory on new principles. Although this is far more than a cooperative problem, it unavoidably affects the cooperatives as well.)

There is a need for a cooperative banking system. (This too is in accord with the economic reform's efforts to develop a system of commercial banks.) A cooperative banking system is more important than a system of branch banks, although that is necessary as well. For it is important that the financing of businesses constitute an integrated system: the depositor should be motivated not only by the interest he receives, but also by the knowledge that his money is helping to develop the market of his own business or his own cooperational needs. Under our present economic system there is a restriction that leads to a curtailment of business activity: a cooperative may use its assets only within its own enterprise and, conversely, it must strive to improve its stability (with money obtained from somewhere) by establishing new activities within its enterprise. If we wish to relax this restriction, we must find such forms for the rechanneling of assets that give the owner of the assets a say in what his money will be used for. (Without specialized commercial banks, joint-venture and bond-issuing forms are able to realize the flow of capital only in a rudimentary manner, and they are entirely unsuitable for "increasing their solidarity" by combining the cash flows of different businesses.) Even the

business-organizing agencies can score resounding successes only when they not only bring the partners together, but also find sources of financing. In other words, when they are the agencies of a cooperative bank, for example. (At the same time, they must have ties also with other banks and territorial funds.) Practical application of the noble principle of mutual assistance requires also an ordinary institution such as a banking system.

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STAGES IN CRITICISM OF ECONOMIC MECHANISM TRACED

Budapest KOZGAZDASAGI SZEMLE in Hungarian No 7-8, 1983 pp 802-807

[Article by Andras Brody: "Three Waves of Criticism of the Hungarian Economic Mechanism"]

[Text] The literature dealing with the economic mechenism, that is, with the institutional and regulating system of economic guidance, has proliferated with increasing strength since its modest beginnings in the 1950's.[1] The collection of documents by the Economics Institute, its studies and data show that:

1. in the 1950's (the collection was started in 1956 when the question became a "theme") 20 articles appeared on the average;

2. in the 1960's the intensity increased tenfold--with the peak in 1967 when almost 260 studies and books appeared;

3. in the 1970's the interest declined somewhat;

4. starting in 1977 the number of publications again showed a sharp rise, and at present they are still increasing although it appears at a somewhat slower rate.

These data do not include official documents which were not published and do not reflect the scope, depth and quality of the works, since the books by Gyorgy Peter (Source 17), Janos Kornai (7, 8, 9) and Tamas Bauer (2) are represented as no more important than the FIGYELO glossaries. And still they give us a picture of the rapid growth and its cyclical nature, and this picture mirrors in a very interesting way the pace of economic growth: the slowing of growth in every period evokes a new wave of literature that is concerned, analytical, critical or that offers proposals.

[1]Delivered at the 143rd General Assembly of the Hungarian Academy of Sciences held 5-6 May 1983.

It is food for thought that in the more developed countries the economic recession has called forth criticism of economic policies or of economic politicians--independently of whether they actually may be blamed for the cyclical movement of production--while we restlessly search for shackles of development in the rules of the game for economic life. It seems our collective consciousness is speaking out here: we could work better and more successfully if there were a way.

Two contradictory but very widespread common beliefs coincide with the above idea: according to one there is a shortage of manpower in the economy and according to the other a shortage of capital. Since in economics we can only speak of relative, that is, comparative shortages, live work can in no way be too little as compared to embodied work if embodied work is too little as compared to live work.

Public attitudes, however, do not conceive of work and capital shortage in a scientific way, but in a more simple way that if we had more manpower and could invest more we would also produce more. But in this fetchingly naive concept there are two latently erroneous assumptions. One believes that our economic growth is actually determined by these factors, namely, that the plan economy--in contrast to other economies--is limited by utlimate resources and not by the internal interrelationships and the purchasing capability of the market. This formula has been enunciated, and in its proper place we shall return to it. The other, related concept is that the economy can develop only to the extent that its resources permit, namely, that growth can only be extensive.

With this we have arrived at denying the possibilities of intensive growth. Intensive growth, considered abstractly, is capable of assuring an increase in the volume of production from an unchanged volume of resources, and--this is the truly decisive factor--the development and modernization of the quality and composition of production.

With the conclusion of the reconstruction period following the war (that is, between 1949 and 1952), Hungary took the wrong course, for according to the nature of things it should then have embarked on a course of intensive development. This did not happen for various reasons, and because of this the tensions are constantly increasing which feed and strengthen the criticism of the mechanism itself.

Finally, in recent years with the broadening of criticism the process has begun by which it almost recognizes itself--it reviews and comments on its own birth and its career to now. The studies of Ivan T. Berend (3) and of Laszlo Szamuely (21)--I borrowed the title of my report from the latter author--have surveyed and analyzed the historical-political or theoretical-ideological background to the rise of the criticism.

As Szamuely says, the criticism of management weaknesses almost systematically goes through those levels which place responsibility for errors first on external circumstance, the outside and the enemy, then on the lack of discipline, and the poor execution of ideas that were thought to be correct. But as a consequence of the stubborn permanence of the general nature of the errors, the need

to search for the inner causes and the actual patterns emerged. In Szamuely's view, the investigation will rise to a scientific level only when the economic guidance system itself will be made an object of criticism. In this respect, the history of our subject moves on a line of increasing generalization and objectivation.

Ivan T. Berend also distinguishes various stages: the period 1953-1956, which is characterized by timid theoretical experiments and the first, very modest attempts at correction; the 1956-1957 period, characterized by radicalizing debates and partial reforms. The reforms of 1965-1968 which broke radical new ground were followed by the retrogressive efforts of the early 1970's, and beginning in 1977 these yielded to a new wave of reform which is continuing its momentum to this day. Thus in this respect the symptoms of broadening and deepening, and--in the case of delayed reforms--a stronger radicalization calls our attention to the fact that by coming to a scientific level our subject also becomes the focus of political life.

From the beginning, criticism of the mechanism in the theoretical field meant pushing aside the traditional ideological materials, university manuals and the brochure literature relating to political economies, at first in concealed form and then increasingly in more open debate. I recall Gyorgy Peter's matter-of-fact reasoning according to which a proposition can be a scientific law if it can be proved or denied. But in the course material of the time, he found few such propositions, only normative prescriptions and wishes. He was particularly taken at the time by the phrase "the law of planned, proportional development," because--as he said--it not only failed to assert anything but also lacked a linguistic predicative in its conceptualization.

This confrontation brought about a situation in which those who--to quote Istvan Friss--wished to remain true to the Marxist-Leninist ideals of the plan branded as revisionist, deviationist, and heretical the new emerging thoughts and every attempt at its birth to analyze reality.[1] As pointed out by Ivan T. Berend, the genealogy of solutions employed in practice did not succeed in leading the way back to Lenin or Marx. Apparently Aladar Madarasz is on the right track when he sees their sources in the utopias that developed at the time of the Second International (14).

The supposition is also noteworthy which finds the earlier institutions of plan management in the offices of capitalist war economies. The promising study of Gyorgy Lengyel (13), however, needs, more information from banks, ministries and other areas of the state apparatus. But it is clear that the "crushing" of the capitalist state apparatus proposed by Marx has by no means been realized: although new persons have come to head the old structures, the obsolete structure frequently shows through in a bizarre way in the texture of our modernizing life.

[1]I must note that the categories of orthodoxy, deviation, and so forth are not epistemological concepts and are rarely useful in scientific debate--they originally belonged to the inventory of theology, and in political usage they replace reason with the principle of authority.

With the working up of the Soviet economic guidance and theoretical materials from the 1920's and 1930's, research was also started in concretizing ideas, although the works of Laszlo Szamuely (20) and Matyas J. Kovacs (10) have not given an evaluation that may be regarded as definitive. The history of theory can be written only with a new thoery, and such could by no means have developed.

The scientific task now on the agenda is the description of reality and release from utopian notions and normative pleonasms. Here exceptional help is being given by young research cadres in the school of "case studies," which seek to show the everyday life of socialism by dealing in reality with devotion and respect, not as they would like to see it but as it actually is. Thus we are living in a time of descriptive works and monographs, but more and more we are sensing the need for some kind of guiding principle which would provide a way to organize these practical studies and unify the points of view and their scientific terminology.

Well aware of this shortcoming was Janos Kornia, who as early as when he was writing his doctoral dissertation appeared as one of the fighters for the reform movement. He did so first in a somewhat exploratory manner with "Anti-equilibrium," and then giving weight and more exact outlines to the emerging but still unbodied concepts; "Scarcity" created the apparatus with the help of which the specifics of plan management in our age can be described and analyzed. This achievement is very important even if some of the theses--and perhaps not auxiliary ones--are being surpassed by further research. But it could not have been surpassed without that help which was given by these books, creating a terminology, framework and scientific outlook in which socialism, as it exists, can be discussed and debated sine ira et studio, that is, scientifically and without the use of theological categories.

By virtue of Tamas Bauer's incisive cycle studies one of the important theses, the above-mentioned idea of a "resource-limit" economy, has already become doubtful. The fact of strong investment fluctuations, which Bauer exposed with monographic accuracy in all the economies of East Central Europe, does not support the thesis that these economies are limited by prevailing resource shortages. Similarly, Bauer's work shows that the generally "soft" budgetary limits can become very "hard" and in fact impenetrable in certain phases of the cycle. Therefore the soft limitations do not explain the scarcity phenomena, and in fact these shortages become more severe in the period of hardening budgetary limits. Thus scarcity cannot be fully accounted for by budgetary reasons.

Attila Karoly Soos (19) moved forward in these questions when he showed how and why the enterprises become interested in assuring that shortages, to a certain extent, should constantly exist on the market for their goods. In the existing regulatory system and in the course of plan compromises, only those enterprises can hope for subsidies (wage preferences, price supports, investment credits, and--in general--special treatment) which can show that they need central help to satisfy the logjam of social needs. On the other hand, enterprises which in a thoughtless way fully meet demands can only count on working during the following period without state support and under more strict conditions.

It is in this way that normative regulation leads to holding back production and achievement. Lajos Hethy and Csaba Mako (6) also study this characteristic counter-incentive--after many published case studies, illuminating and broad-scale work and wage studies--on broad circles of workers (in point of fact on capitalism and socialism alike).

And we must pause here for a moment, because the appearance of this work itself indicates that interest in the questions raised by criticism has shifted from economics in the narrow sense of the word to sociology. Perhaps I am mistaken if I believe--in any event what has already been presented points in this direction--that the nucleus of the circle of questions is to be found in the pitfalls of normative regulation. Pushing aside the undeveloped self-regulating mechanism of the Hungarian economy--and society--we have entrusted decision-making to offices since the year of the turn. In this way society does not build from within but yields to external norms. Kalman Kulcsar perceived with a sharp eye these political and legislative characteristics of East Central Europe, its voluntarism, and its excessive reliance on normatives in his sociological investigative works (11, 12). If to this we add Jozsef Bognar's (4) and Rezso Nyers' (16) essentially political studies, we clearly have the picture of a constantly more comprehensive, broadening, problem-raising scientific activity.

The first wave of criticism started modestly and pragmatically from the fact of an erroneous use of material incentive, and the arguments hardly went beyond a criticism of the premium system. The second wave--from compulsion and necessity--studied our institutional system as well, but was restricted rather greatly to the organization of economic guidance. The third wave went farther with the works of Marton Tardos (22) and Tamas Sarkozy (18), raising also questions of ownership and, as we see, brought along with it the interest and participation of jurists, sociologists, economic historians, and political scientists in a much broader area than I could report on within the limits of my own science.

All of this stimulates me to examine the original question posed and the definition of the subject: we are probably dealing here with more than merely the study of an economic mechanism in the narrow sense. As one of the early users of the term "economic mechanism"[1](5) in addition to Sandor Balazsy (1), I shall seize this opportunity to exercise scientific self-criticism because of the excessively narrow shape of the concept and the subject. In fact, the Marxist concept, which we were then aiming at, was expressed in a number of places in "Des Kapital" as "social mechanism"--that is what we should have used then, too, for it has now become clear in practice that it is of no use for us to work on the economic mechanisms if these retrograde and ruin the social mechanisms, left unaffected, which we expected to build up and improve.

I could also stylishly conceptualize in the language of system outlook, which in its own way tries to organize in mathematically accessible models the categories of Marxist dialectics and totality: the subsystem (economy) without leaving out of consideration the system as a whole (society).

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[1]According to information provided by Laszlo Szamuely, the expression first appeared at the 1954 Oszod work conference, the materials of which, however, were not published.

And finally this means it is possible that in this broadly developing cooperation which is extending to all the social sciences, the leading role will not finally fall to economics. The sensitivity of domestic economics, however, with which the problem was first revealed--both in our country and in the countries of socialist community--were first analyzed here with scientific methods, and workable solutions in practice were first proposed--this merit and priority are indisputable.

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MINISTER CITES PROBLEMS IN SUPPLYING ECONOMY WITH METAL

Bucharest ROMANIA LIBERA in Romanian 13 Jan 84 pp 1, 5; 16 Jan 84 p 3

[Two-part interview with Neculai Agachi, minister of the metallurgical industry, by Magda Brighidau: "The Basic Problem for the Metallurical Industry: Fully Supplying the Necessary Amounts of Metal to the National Economy;" date and place not specified]

[13 Jan 84, pp 1, 5]

[Text] [Question] Four years have passed since the 12th RCP Congress, an event of special significance in the life of the entire country, which established as a central objective for the current five year plan the transition to a new quality in all fields of activity. Keeping in mind the importance of the metallurgical industry within the framework of the national economy, we ask, comrade minister, if you would refer, to start with, to several of the results that have been obtained during this period.

[Answer] The 12th Party Congress was, in all aspects, a particularly special event in the life of the country and through the promotion of the ideas of moving to a new quality in all fields of activity it gave a heretofore unknown dynamics to the concerns for achieving economic-social progress. The examples which express the manner in which this fundamental task was achieved in the metallurgical industry are numerous and for that reason I will only note several of the more significant ones. In the area of modern production facilities and the high technological and performance levels attained since the 12th Congress, I should mention the 3,500 cubic meter furnace, the 850,000 ton capacity coking batteries, the semi-finished and heavy plate rolling mills - all at the Galati Steel Combine - the new steel pipe facilities for diameters greater than 16 inches, as well as the stainless steel pipe facilities, the ultra-high-power electric furnaces and the installations for the production of an entire range of magnesium products. A more exact definition of the qualitative progress can be seen, however, in the newly introduced production technologies which have especially greatly expanded the possibilities of the metallurical industry to provide to the entire economy, in particular the top branches of technical progress, the variety of products required by its more rapid development, creating, at the same time, new opportunities for increasing economic efficiency throughout our entire branch. In saying this, I have in mind the expansion of continuous steel casting and the

development of unconventional technologies which give superior characteristics to steel, such as vacuum treating, using inert gases and remelting under slag and in a vacuum. The broad promotion of new technologies today creates for us the conditions under which we can currently produce plate, pipe and wire from stainless and refractory steels, sheet products for the electrotechnical industry and rolled steel products for the vehicle, aircraft and ship industries, for deep drilling activities and for nuclear energy projects - fields which, at the time of the 12th Congress, did not exist or were at the beginning of their development.

[Question] At the National Party Conference, the metallurgical industry was given the task of providing the national economy by 1985 with all the types of metals that are needed. Since research makes an essential contribution in the assimilation of certain new types of steels and to the elaboration of new technologies and better use of raw materials, we ask that you refer to several of the achievements obtained over this period.

[Answer] The achievement of this task has been one of the basic concerns of our research and design institutes and centers, as well as the specialists in the production units. In recent years, the actions carried out in this direction have led to the use of technologies which have ensured the production of new highly technical products slated for equipment in the machine building, electrotechnical, petroleum and chemical industries.

The efforts made by our specialists are seen to a good degree in the achievements of 1983, compared to 1980. Thus, the production of stainless steel is 2.4 times greater, the production of steel for bearings is 2.7 times greater and stainless steel pipe 2.3 times greater, with this being merely several examples involving this activity.

The results obtained in recent years were based upon our own designs from the research institutes and the specialists in the enterprises. We have in mind that on the basis of our own designs of producing new metallurical products from steels having a high degree of purity, with a high resistence to corrosion and mechanical and thermal shock, and with special electrical and magnetic properties. We will introduce the production of galvanized sheet steel on the basis of our own technology. Special attention will be given to the production of metallurgical products now in the course of being introduced that will be used in equipment for nuclear-electric power plants.

The intensification of research and new production actions will contribute to the development of the branches of the national economy that consume metal and to the substantial reduction of imports.

[Question] In 1984, the metallurgical industry also has the tasks that have especially come out of the programs recently approved by the party and state leadership in the Law on the Sole National Economic-Social Development Plan for Romania. We ask you, comrade minister, to inform our readers about some of the objectives established for the metallurgical branch.

[Answer] From the very beginning, it is appropriate for me to state that 1984 places before the metallurgical industry a series of problems of major importance for the country's economy which the collectives of metallurgists will have to resolve in an exemplary manner in accordance with the provisions of the recent programs approved by the party and state leadership, the Law on the Sole National Plan for this year and in light of the precious directives issued by the secretary general of the party, comrade Nicolae Ceausescu.

Without a doubt, fully supplying the amount of metal needed by the national economy, in the varieties ordered by the users, represents the basic problem for the metallurgical industry and one which requires the solution of certain new problems on the multiple levels of the higher quality that we must give to the results of all of our activities. In this framework, I have in mind the special tasks that we have for rapidly getting into current production new varieties of steel slated for the achievement of priority programs in the national economy, for the full provision of the metals needed in them, for the raising of the technical and quality level of all metallurgical products to a higher level, and for the accentuated growth of production efficiency, especially on the basis of increasing the degree-of-use of facilities and labor productivity, as well as on the basis of better using raw materials and materials.

This year, the metallurgical industry's tasks are great and complex, particularly in a qualitative sense, and for that reason I want to discuss them. Thus, the 1984 plan and the priority programs of our branch call for the continuing development of physical production, which, in comparison to the achievements of 1983, mark increases of 23 percent for metallurgical coke, 18 percent for rough steel, 18 percent for fully-finished rolled steel and 24 percent for steel pipe. Within this framework, however, we should especially stress the structural improvement and variety diversification in metallurgical production in order to be able supply the requirements for the machine building industry, in particular for the production of technological equipment, bearings, and assembly components, and for the automobile industry, the energy industry and other branches, including some top-level sub-branches such as nuclear energy, the aeronautical industry and the electronics and electrotechnical industry. Alloy steel production will increased by 20 percent and within this framework there will be a more accentuated growth in the production of steel for bearings, stainless and refractory steels, steels for tools and silicon steels, much in demand by the economy.

The development of the production of steels having high physical-mechanical characteristics at a more accentuated rate will be accompanied by a more accentuated processing of metals by increasing the percentage of steels that are cold-processed in bars, plate and sheet, pipe and wire with a higher dimensional precision.

In dealing more decisively with the problems of improving the structure of production and the functional characteristics and reliability of the products, we are to an equal degree concerned about those aspects referring to the

economic efficiency of the activities of the metallurgical combines and enterprises. The measures outlined at the level of all production units regarding the reduction of specific consumption rates for raw materials, materials, fuels and energy, the growth in labor productivity and the improvement of the structure of production, must ensure the reduction of production costs by at least 45 lei per 1,000 lei of goods production and a corresponding increase in the efficiency of the entire branch.

[Question] Because you mentioned the reduction in the consumption of fuels and energy, beginning with placing metallurgy at the forefront of the large consumers, we ask that you make some references to those actions regarding staying within the new consumption standards.

[Answer] In fact, the metallurgical industry is among the large consumers of energy and fuels. Metallurgical technological processes are carried out at high temperatures, a fact which brings about the consumption of significant quantities of energy, fuels and other energy fluids and agents. In 1984 alone just to achieve the production plan, it is necessary to use over eight million tons of coal and over nine billion kilowatt-hours.

In order to stay within the standards for consumption and the levels of fuels and energy allocated in the plan at the level of the entire ministry, the industrial centrals and the units, programs have been established calling for the improvement of production technologies, the modernization of equipment, and the growth in the degree of recovering reusable and other energy sources.

Among the numerous actions undertaken and which will continue in the coming period, I can mention the more-than-four-percent decrease in the percentage of Martins steel - a technology having a large cumulative consumption of fuel - and a corresponding increase in the percentage of electric steel which ensures the most reduced level of cumulative fuel consumption; the upward movement of the percentage of continuous casting steel to 30.8 percent; the use of hot ingots in the reducer rolling mills in a proportion of over 80 percent and at a temperature of approximately 850°C; the expansion of the steel alloying technology outside the furnace ("pot technology"), the desulfurization of pig iron in the pot, the treatment of steel in a vacuum and others.

In the same context of concerns, we are giving special attention to the recovery and use of reusable energy resources. Our programs call for the volume of reusable energy resources to increase in 1984 by approximately 30 percent compared to the achievements of 1982. We will additionally recover, as a result, approximately 880,000 tons of coal, primarily by putting into operation certain new recovery boilers at the furnaces and certain rolling mills, expanding the technological procedure for the dry quenching of coke, and putting into operation certain 12 megawatt groups using semi-coke gases, luquid coke and others.

For the overall ministry, our program for the rationalization of energy consumption calls for a savings of 155,000 tons of coal, 247 million kwh and 147,000 Gcal compared to the consumption standards achieved in 1983.

[16 Jan 84, p 3]

[Question] The top party leadership recently approved two especially important programs, for quality and for increasing labor productivity, with both containing tasks and objectives and having 1985 as the first stage of completion. What are the objectives that have been established for completion this year by the metallurgical industry?

[Answer] In connection with the first program, which refers to the improvement of the technical and quality level of products, our actions first of all call for an increase in the purity and the homogeneity of the steels and, especially, those which have special uses, and the attainment of the physical-mechanical parameters outlined by the users of metals for the production of equipment and installations of a high technical level and great complexity. We have in mind the production of certain types of steels having a reduced level of alloying, but with properties similar to those types of steel that are highly alloyed with scarce alloying elements. Similarly, we will extend the unconventional technological procedures for treating steel in the casting ladle, which ensures a higher quality of steel from the point of view of purity, as well as a reduction in the consumption of ferro-alloys.

[Question] The achievement of these objectives also requires taking certain organizational measures...

[Answer] Certainly, and to this end the program regarding the improvement of the technical and quality level of products, an integral part of the 1984 state plan, was worked within our ministry and forwarded to the centrals and enterprises, which drew up their own programs specific to these production units.

With regards to the conservation of fuels and energy, also established in this program, I will give only two examples. Starting with the fact that in the pig iron production sector we use 52 percent of the energy used in the production of metal, our first actions call for constant operational parameters for the furnaces and raw materials used in the furnace, with this path of action having to obtain for us a reduction in coke consumption equivalent to a total annual savings of 420,000 tons. The second example refers to the continuing improvement of the characteristics of metallurgical electrodes so that in 1985 they will ensure, as we recently promised the party leadership, staying within lower consumption rates of 7.5-8 kg per ton of steel, which is attained at the international level, and, at the same time, creating the possibilities for us to reduce electrical energy consumption this year in the electric furnaces by 46 kwh/ton compared to 1983.

[Question] A main means of reducing metal consumption in the metallurgical industry is increasing the percentage of steel produced through the development and diversification of continuous casting steel production. What will 1984 bring about that is new in this direction?

[Answer] The percentage of fully-finished rolled steel obtained from a ton of steel must reach 86 percent this year. Certainly, this is a task of special

economic efficiency if we keep in mind that an increase of one percent in the amount of metal obtained represents approximately 130,000 tons of metal brought into the economic circuit by way of processing rolled products. An especially important influence upon getting this metal is increasing the percentage of rimmed steel and continuously cast steel, in connection with this the units of our ministry have taken the necessary measures. A continuing increase in obtaining metal is also favorably influenced by other factors, such as standardizing the types of steel and products, rolling at negative tolerances and using overflows that result from the rolling process.

The actions for increasing the percentage of metal that is obtained must also be supported by other ministries that are directly interested, furthermore, in obtaining more metals for their development.

[Question] What specifically do you expect from the other industrial branches?

[Answer] The participation of the other branches in the achievement of increasing the amount of metals obtained lies in adhering to the programs for the qualitative and quantitative delivery of refractory brick, spare parts and rolling cylinders for metallurgical equipment and installations, and devices and equipment for measuring parameters and controling production, which, in a general context, ensures a continuing development of the production of metal needed by the economy.

[Question] The achievement of all these objectives depends upon the competency of the people and for that reason we ask you to make some references to the provisions along the lines of raising qualifications and upgrading professional training in the immediate future.

[Answer] The collective leadership organ of the Ministry of the Metallurgical Industry has established a complex training system for the workforce, adopting measures designed to sensitize the responsible persons in the ministry, centrals and enterprises and to increase the responsibility of the leadership collectives along the lines of recruiting, training and upgrade training for personnel, with special stress being placed on the quality of training for all personnel. These measures will lead to the fact that, beginning in 1984, over 80 percent of the qualified workers assigned each year to production will be obtained from among the ranks of the graduates of industrial high schools and professional schools organized alongside the metallurgical enterprises.

We have in mind the training of students in a broad profile so that tomorrow's graduates will benefit from a thorough political and professional-scientific training. To this end, actions will be intensified to improve school programs of integrating education with production - by organizing actions for teaching specialized and technological disciplines during periods of practice. At the same time, work will be done along the lines of continuing to develop the teaching-material base.

In the same context, increased attention will also continue to be given to upgrade training actions, both along the lines of multi-qualifications and

along the lines of improving the professional training of personnel. Labor productivity has increased by reducing the number of personnel indirectly involved in production, as a result of the multi-qualifications in only the last 2 years, by over 4,000 workers, with another 5,000 workers in this category to be enrolled in multi-qualifications courses in the immediate future.

Having at its base the precious directives issued by the secretary general of the party at the Working Conference of the RCP Central Committee on 21-22 October 1982, the leadership council of the ministry has adopted a group of measures on the basis of which we have moved to the weekly organization of evening classes to improve qualifications and to carry out upgrade training for all categories of personnel in the ministry's units so that during the 1983-1985 period 170,000 qualified workers, 7,000 foremen and 9,000 personnel with higher studies will graduate from a form of upgrade training. By doing this, we will complete in 1985, as established by the National Party Conference, the process of upgrade training for all worker personnel.

[Question] How is the metallurgical industry working to recoup the shortfalls in certain investment projects and in the start-up of production facilities on-time this year? With what kind of economic efficiency will this be done?

[Answer] Along the lines of recouping shortfalls and the on-time start-up of production facilities, as well as achieving the investment plan for 1984, actions were undertaken so that all the undelivered equipment will be rescheduled with the machine building industries in the first months of 1984. The necessary construction documentation has been provided under better conditions for our own builders, as well as for the other builders, and we are pursuing a better supply of manpower by specialty, as well as material resources, so as to eliminate the shortcomings which, to date, have led to delays in start-ups. Similarly, the ministry has established other measures as well, among which I can mention: concentrating each enterprises own construction-assembly potential on the main projects slated to start operations in 1984, involving alongside the builders in assembly and test-out work on the equipment an increased number of workers from the user of the investment project, and rigorously pursuing at the suppliers, together with the Ministry of the Machine Building Industry and the Ministry of Machine-Tool, Electronics and Electrotechnical Industry, the delivery schedules for the equipment that has been contracted and the achievement of the programs for the in-country production of machinery for the fit of rollers, drawing presses and presses for the production of metallurgical electrodes.

By bringing into production the new facilities scheduled for 1984 at Calarasi, Calan, Tirgoviste, Turda, Otelul Rosu, Buzau, Slatina and a new enterprise at Titu, there will be a noticeable increase in the economic efficiency of the branch by reducing the imports of metallurgical coke, electrotechnical plate, electro-corindon, special thin plate steel, special electrodes for welding, metallurgical electrodes with improved characteristics and UHP electrodes

for electric furnaces, pipes for class III boilers up to 20 inches in diameter and new varieties of metallic cords for tires.

Similarly, at Hunedoara, Tirgoviste and Slatina, there will be an expansion of "metallurgy in the ladle" and installations for the production of steel in a vacuum. There will also be an intensification of actions to recover reusable materials and to recover secondary energy resources, and for products for the aeronautical and nuclear industries.

[Question] What other new developments in the field of Romanian metallurgy in 1984 would you like to tell the readers of ROMANIA LIBERA about?

[Answer] As you know, the 1984 plan places special tasks before the metallurgists. The funds for the development of the branch exceed by 20 percent those allocated in 1983. A series of new production facilities will be put into operation which will ensure an increase in the degree-of-use of metals and the continuing diversification of metallurgical production, objectives which influence the attainment of the levels of production in the current five year plan for the production of steel and rolled steel and for plate, sheet and other products. This leads us to state that 1984 is decisive for the achievement of the tasks for the entire five year plan.

In closing, I would like to use this opportunity to state the firm pledge of the metallurgists to meet with new successes and deeds of work the great events of this year - the 12th Party Congress and the 40th anniversary of the revolution of national and social antifascist and anti-imperialist liberation.

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CHANGES IN FOOD CONSUMPTION SURVEYED, PROJECTED TO 1990

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[Article by Artur Starc, Zagreb: "Changes in the Diet and Projection of the Demand for Foodstuffs"]

[Excerpts] 1. Certain Elements in the Long-Range Development of the Diet

Nutrition represents a very urgent problem, especially with respect to supply of scarce foodstuffs to the urban population. The general disruptions of social reproduction and of commodity-money relations and the growth of final consumption beyond realistic possibilities have also affected the consumption of foodstuffs. To this we should also add the many problems along the line from primary agricultural production to final consumption of food. The period of economic stabilization, the transition from "stagflation" to more rapid and stable development, will probably last several years. Yet we need to examine the long-term factors of development and changes in the pattern of nutrition, we need to see how much they have been disturbed in recent years and in what direction they will operate in the future.

Let us examine some of the long-term factors in this order: population growth, growth of income and the income elasticity of food, and the relative prices of foodstuffs.

The growth of the actual population [including only members of the household actually living at home--translator's note] has been low in the past because so many people took employment abroad, while in the coming period, at least up to 1985, it will be greater than the growth of the permanent population. Still more important than this are the changes in the composition of the population which have brought about an increase in the number of commodity consumers. In the 1961-1981 period the growth of the nonfarm population was 6.6 million, that of the urban population about 5.4 million, the reduction of the rural population was about 1.5 million, but at the same time the number of commodity consumers increased. (The reduction pertains to farm households, while the number of mixed and nonfarm rural households increased; aside from that the farm households have also been buying more and more food.) In the future we can anticipate a further growth of the commodity-consuming population, and that because of the continuation of structural changes in the population.

The growth of income and changes in income elasticity represent a dynamic factor in changes in the pattern of personal consumption. Over the 1960-1980 period the annual growth rate of per capita income was 5.3 percent, and the growth rate of expenditures for personal consumption 5.1 percent (4.0 percent over the period 1970-1980), calculated in permanent 1972 prices. There has been a change in the pattern of personal consumption, as can be seen in the table.

Indicator	Pattern of Consumption				Index	Elasticity
	1955	1960	1970	1980	1980/55	Coefficient
Food	60.2	50.2	39.7	36.5	262	0.60
Beverages and tobacco	14.1	12.0	11.3	10.8	332	0.77
Clothing and footwear	10.5	13.6	13.6	11.9	490	1.13
Housing	9.9	11.1	15.2	16.5	721	1.66
Other expenditures	7.9	12.3	20.1	24.3	1,052	2.42

Source: "SGJ 1982" [Statistical Yearbook of Yugoslavia for 1982], Tables 102-14. The pattern of personal consumption and index numbers are based on a computation of consumption in 1972 prices. The difference between the sum of the proportions and 100 was not distributed for the years 1955 and 1960. Housing embraces accommodation and the furnishing of the household, heat, lighting, etc.; other expenditures embrace hygiene and health, culture and entertainment, transportation and communications, personal articles, etc. The elasticity coefficients (E) were computed relative to total expenditures for personal consumption (index number 1980/1985 = 434) and they represent only a rough approximation.

The share of food has dropped from 60.2 to 36.5 percent (less in current prices, from 52.9 to 38.3 percent), although the total volume increased about 2.6-fold over 1955 and 2.2-fold over 1960. There has on the other hand been an increase in the consumption of products representing a higher standard of living, of so-called "luxury goods," which by and large come under "other expenditures." Within this heterogeneous group the largest increase was for expenditures for transportation and communications (vehicles, fuel, etc.), which have a very high elasticity coefficient. Much the same is true of equipping and furnishing the household within the group "housing." The very rapid increase in consumption of durables, promoted by credit policy, has also affected other forms of consumption undoubtedly, food among them. Expenditures for food in current prices have been increasing greatly, but the pattern in the expenditures has changed to the advantage of consumption of more expensive products and toward higher calories. The smallest increases were for expenditures for bread and flour, fats, sugar and fresh milk. In 1980 expenditures for vegetables and fruit were greater than expenditures for bread and flour (16.6 percent and 14.6 percent, respectively, of total food expenditures). There has been a drop in consumption in kind and an increase in consumption through trade, hostelry, etc., which means that the foodstuffs market has expanded and that market criteria are becoming ever more pronounced in this sphere of consumption.

In coming years changes in the pattern of personal consumption will follow this trend only in a general way. In the period of economic stabilization we can anticipate a slower growth of consumption of products representing the higher standard of living. This could tend to bring about a greater increase of "deferred" consumption of foodstuffs. The change of the diet will be affected by the faster or slower growth of agricultural production and by its adaptation to the requirements of domestic demand and exports. It is realistic to expect a further drop in consumption in kind and a growth of commodity consumption, but it is a question whether in the years immediately to come consumption in kind will drop at the same rate as previously. (Consumption in kind is less elastic than commodity consumption. It persists as something to fall back on when there is a shortage of commodity stocks.) And then price relations, substitution effects, etc., will influence the pattern of consumption. These are all questions seeking an answer in the analyses which ought to be done on an ongoing basis.

In the past period, 1960-1980, food expenditures in permanent prices (1972) increased at an annual rate of 4.2 percent, while the growth rate of the social product of agriculture was 2.5 percent. That is also the level of the growth rate of the physical volume of production as computed in agricultural statistics. If expenditures for food are reduced for the sake of comparison to the "physical" volume of consumption, then the annual growth rate of consumption over that period was 3.3 percent, which is one-third higher than the growth rate of agricultural production.* The mechanism of the market and prices has brought nominal demand to the level of the available supply. Without imports the rise in the prices of foodstuffs would have been greater.

The relative prices of farm products, measured in the usual way relative to producer prices of industrial products, if we take the year 1966 as the base year, which is when a more favorable price relation in primary distribution of the national income was reestablished for agriculture following the economic reform, increased 1.5-fold by 1980. However, the index numbers of the growth of retail prices of agricultural and industrial products over the period 1960-1980 are approximately the same. Other data also indicate

* This growth rate of consumption was obtained by multiplying foodstuffs, all converted to raw farm products, by the same prices used in computing the physical volume of the finished raw and processed foods, which specifically were 1972 purchase prices. The growth rates of production and consumption were calculated from the values obtained for the 1960-1980 period.

Another method of comparison is to compute aggregate demand on the basis of a formula which contains the growth rate of the population and per capita income and the income elasticity of food, as well as relative prices. For example: $T_f = S + E \cdot D/r \pm (1 - r)k$ (see M. Trkulja, "Politika dugorocnog razvoja poljoprivrede" [Policy of Agriculture's Long-Range Development], Novi Sad, 1970). The difficulty in applying this or any similar formula lies not so much in estimating the reduced elasticity coefficient of the quantities consumed (E) as in calculating the relative prices of raw and processed foods (in the denominator of the formula), especially when the relative prices diverge considerably from unity.

indirectly that further distributions and redistributions did occur, so that the projected improvement of the economic status of agricultural producers was in large part eliminated. Still the price rise of raw and processed foods did generate to a considerable extent the rise of other prices and tended to raise the cost of living, while on the other hand it did not essentially contribute to a growth in agricultural production nor a rise in the relative income of farmers, although there are differences between the socialized and private sector of agriculture. Private agriculture, and mixed households still more, made up for the lag in agricultural production with income from off the farm. (According to surveys, total available resources per member of these households remained approximately at the same level as nonfarm households in 1963 and 1978.) It is obvious that factors in development of agriculture are much more complex and cannot be reduced solely to price relations. But it can be observed that price policy in the past has been aimed at protecting the standard of living and that the development of agriculture would have been faster if prices had been set more according to economic criteria, which would have stimulated higher labor productivity.

Output is lagging behind consumption, and in recent years this discrepancy has become pronounced because of the very rapid increase in commodity demand, which agriculture has not been able to keep up with with its supply. Agricultural production, that is, the supply, is relatively inelastic, but this does not reveal a great deal if we analyze the growth of commodities and all distributions from primary agricultural production through industrial processing and trade to final consumption.

These considerations were presented in order to suggest the need to study consumption, and especially the demand for commodities, from several angles, since we need to clarify the place of demand in the entire process of reproduction. We, of course, need the most reliable possible quantitative balances of production and consumption of foodstuffs as the point of departure for projections and plans, but it would be good to round them out with many other elements of not only quantitative, but also qualitative analysis.

2. Certain Characteristics of Consumption of Foodstuffs

To examine the future development of consumption and accordingly the production of foodstuffs, it would be worthwhile to analyze changes in consumption of foodstuffs which have taken place to date. We can use to that end statistical data computed on the basis of balances of production and consumption which are given in statistical yearbooks. They are used in the last section to compile a projection of demand. Yet here the figures of the surveys of household income, expenditure and consumption, which have been conducted every fifth year since 1963, are used to analyze consumption, since they provide information about the pattern of consumption by categories of households concerning the proportion of consumption in kind (produced by the household itself), concerning distribution of consumption of foodstuffs relative to the size of the household's income, etc. Aside from that, changes over those 15 years between 1963 and 1978 correspond more or less to the anticipated changes and show certain regular patterns, which justifies this kind of analysis. The differences between the survey data and the statistical balances

can be explained by the fact that the survey contains consumption only within the household, but there are other reasons as well. With certain exceptions, the index numbers of changes over that period coincide fairly well. In general the difference lies in the fact that the survey shows a lower consumption of grain and higher consumption of the products of animal husbandry, that is, better-quality nutrition than shown in the balances.

In order to understand better the relationships in consumption of various socioeconomic groups of households we should take into account the differing level and pattern of income (available resources), which also affect the pattern of distribution (resources used) and accordingly the amount of food and pattern of nutrition. For example, the available resources per member of farm household represent 50 percent of the resources of nonfarm households and 70 percent of those of mixed households. These relationships hardly changed at all over the period being analyzed, from 1963 to 1978. The share of food in the resources used average 35.2 percent for all households in 1978: 48.2 percent in farm households, 38.4 percent in mixed households, and 31.4 percent in nonfarm households. In that period the share of food dropped furthest in farm households. The share of food consumption in kind averaged 26 percent, but it was 66 percent in farm households and 48 percent in mixed households. (Here we should take into account that consumption in kind was also calculated in retail prices; a computation in purchase prices would have shown a lower percentage.)

Table 1. Food Consumption Per Household Member According to the 1978 Survey and the 1978/1963 Index Numbers

Indicator	Annual Average, kg				Breakdown, %		Index 1978/63		
	1	2	3	4	In Kind	Commodity	Total	In Kind	Commodity
Grain, total	195.9	172.1	120.8	151.2	24.0	76.0	84	50	106
Wheat	167.6	148.5	112.3	134.2	19.8	80.2	93	57	111
Corn	22.7	18.3	3.2	11.8	74.8	25.2	36	35	38
Vegetables, total	154.4	147.5	137.5	143.8	45.2	54.8	112	93	135
Potatoes	61.0	60.1	43.2	52.0	56.7	43.3	92	83	106
Other vegetables	93.4	87.4	94.3	91.8	38.7	61.3	128	103	150
Fruit, total	56.4	69.5	92.2	79.1	24.1	75.9	160	94	207
Fruit and grapes	58.3	63.4	77.8	69.5	27.5	72.5	146	95	183
Tropical fruit	3.2	6.0	14.4	9.6	1.0	99.0	533	25	679
Fresh meat	37.0	37.8	47.4	42.4	36.0	64.0	230	215	240
Beef	4.7	8.3	16.6	11.7	6.8	93.2	202	200	202
Pork	17.5	16.5	14.5	15.7	54.1	45.9	258	242	279
Poultry	11.2	10.0	12.7	11.6	42.2	57.8	352	213	670
Processed foods	11.9	12.6	10.2	11.3	43.4	56.6	145	91	267
Meat, total	51.3	52.9	59.6	55.9	37.9	62.1	202	156	246

Table 1 (continued)

Indicator	Annual Average, kg				Breakdown, %		Index 1978/63		
	1	2	3	4	In Kind	Commodity	Total	In Kind	Commodity
Fats, total	17.4	18.0	18.9	18.3	24.6	75.4	143	107	160
Animal fat	10.4	9.0	5.3	7.4	59.5	40.5	99	110	85
Vegetable oils	7.0	9.0	13.6	10.9	0.9	99.1	206	50	212
Fresh milk	114.7	120.9	122.8	112.7	47.6	52.4	141	112	183
Dairy products	11.8	10.8	10.4	10.8	43.5	56.5	193	147	254
Eggs, number	145.5	147.9	162.1	154.4	47.2	52.8	238	145	339
Sugar	15.4	16.6	16.5	16.3	--	100.0	154	--	154
Wine, liters	19.5	25.5	10.8	17.0	60.0	40.0	138	119	184
Beer, liters	13.0	15.5	18.1	16.3	--	100.0	741	--	741

1 = Farm households; 2 = mixed; 3 = nonfarm households; 4 = all households. The pattern of consumption and index numbers pertain to all households.

Grain is given in terms of flour. The coefficients were 0.75 for bread, 1.2 for alimentary paste, 0.8 for other grains, and 1.2 for rice. Alimentary pastes were included in wheat consumption. The category "Grain, total" includes other grains and rice.

"Meat, total": processed meat products were converted to the equivalent of fresh meat. The coefficients were 1.14 for dried bacon, 1.23 for dried meat and other dried meat products, and 1.02 for canned meat.

The figures in Table 1 illustrate in detail the pattern of consumption and changes for individual foodstuffs: a drop in consumption of grain and potatoes and an increase in consumption of vegetables, fruit and products of animal husbandry (except fats), which is incidentally typical of many other countries at approximately the same level of economic development. Farm households still have the "agrarian" pattern of consumption with a high share of grain and consumption in kind in general, while the mixed households have a transitional pattern in the direction of the nonfarm households. And then the changes (the index numbers) show in general a larger increase in commodity consumption, that is, of products purchased, than for products consumed from the household's own production. In the case of foodstuffs of plant origin we can establish a drop in consumption in kind for almost all products in all categories of households. Changes in consumption of the products of animal husbandry are somewhat different: although commodity consumption grew more than consumption in kind, the latter did nevertheless increase, and that is especially true of meat. The trend toward greater commodity consumption exists in the farm households and is still more pronounced in the mixed households, while worker and other nonfarm households already have the features of the orientation toward the purchasing of food. The fact that commodity consumption increased on the average about twice as much as consumption

in kind between 1963 and 1978 is significant from the standpoint of the supply of foodstuffs to the population.

There are large differences in consumption of foodstuffs depending on the amount of income per household member. The average share of food in available resources was 35.2 percent, but it varied from 60.2 percent per member in the group of households with the lowest income to 22.1 percent in the group with the highest income (the lowest and highest income are meant in the context of the distribution of available resources as given in the 1978 survey). Consequently, the rise in the prices of foodstuffs manifests itself more sensitively in households with smaller income, and under conditions of the inflationary rise of prices, the system to protect the standard of living can offset this only to a small extent. The pattern of the diet, i.e., its energy and biochemical composition, and the consumption of individual foodstuffs also show considerable differences. Daily calorie consumption (average 3,080 calories or 12,895 joules) increases from 2,290 in the group with the lowest income to 3,710 in the group with the highest income. There is a parallel change in the caloric composition: the share of grain drops from 68.3 percent to 30.8 percent, while the share of fruit and processed fruit products increases from 1.3 percent to 5.5 percent, that of meat and processed meat products from 4.0 to 22.2 percent, that of milk and eggs from 7.2 percent to 12.9 percent, and so on. Protein consumption (daily average 94 grams) was 1.7-fold greater in the highest group than in the lowest group, and for protein of animal origin the difference was 4.4-fold; the share of the latter proteins in total protein climbs from 22.8 percent to 60.2 percent.

A comparison of the republics and provinces grouped in ascending order with respect to the size of income per household member is very instructive. The range of consumption results above all from differences in the size of income and then from the composition of households, habits in consumption, etc., as well as the differing pattern of agricultural production. If, for example, we compare SR [Socialist Republic] Slovenia and SAP [Socialist Autonomous Province] Kosovo, then according to the 1978 survey Slovenia has 1.6-fold more available sources per household and 3.4-fold larger resources per household member (because households have fewer members: 3.2 as against 6.8). The distribution of households into farm, mixed and nonfarm is 6.7:25.2:68.1 in Slovenia and 24.6:33.2:42.2 in Kosovo. The share of food in resources used is 27.6 percent in Slovenia (the share of consumption in kind is 19.1 percent), while in Kosovo it is 46.6 percent (the share of consumption in kind is 35.6 percent). These differences are also manifested in the consumption of individual foodstuffs. For example, annual grain consumption per household member is 111.0 kg in Slovenia and 195.5 kg in Kosovo; consumption of meat and processed meat products (converted to fresh meat) is 70.1 kg in Slovenia and 23.1 kg in Kosovo. There are no major differences in total consumption of vegetables and fruits, but there are in the composition, which depends in large part on the pattern of production. The differences are especially great in the production and consumption of corn from one republic or province to another. For example, SAP Vojvodina has the highest per capita corn production, but the lowest production for personal consumption. All these differences should be taken into account in the analysis, and that in

long-term projections, since the rate of development of production and changes in the pattern of consumption of foodstuffs do differ regionally, and there are departures from the general trend in development of the diet.

3. Two Variants of a Projection of the Demand for Foodstuffs

The estimates made in the previous section concerning further changes in the pattern of nutrition need to be quantified if possible. Table 2 gives a projection of demand up to 1985 and 1990 which is a function of the demand for individual foodstuffs and the growth rate of per capita personal income as exogenous variables.* The growth rate of personal consumption was taken in two variants in the projection: in Projection I the annual growth rate was 2, and in Projection II it was 3. These are lower rates than those in the past, but over the period 1980-1985 they are approximately equal to the rate set in the social plan covering the period 1981-1985, which will, however, be revised. Because of the drop in personal consumption in 1981 and 1982, and probably in 1983 as well, a minimum variant would be possible that would begin with a zero rate up to 1985 and would assume a rate of 2 between 1985 and 1990. In that case the growth of total consumption of foodstuffs would be determined in the first period primarily by the growth of population. However, when we examine the change in food consumption as a function of the higher or lower growth rate of personal consumption, we should take several factors into account which were mentioned in the introduction: changes in the pattern of personal consumption toward a reduction of "luxury goods" to the advantage of higher consumption of food and other primary purposes; slower decline of consumption in kind because of limited commodity stocks, and so on, so that ultimately consumption will depend on production, and in the coming period a larger growth of agricultural production is envisaged so as to cover the increased domestic consumption and afford the possibility of larger exports. These factors would indicate a larger growth of consumption of foodstuffs than that assumed on the basis of the low growth rate of per capita personal consumption.

The projection should be viewed as an attempt to show the consequences in the movement of future demand depending on the particular methodological procedure (demand function) and the assumptions made about the trend of personal consumption. This should be taken into account when comparisons are made

* The functions of demand and the elasticity coefficients were computed for individual foodstuffs on the basis of figures on the level of per capita consumption between 1960 and 1980 and per capita personal expenditure over that period in 1972 prices ("SGJ 1982," Tables 102-8). The series over the period 1966-1980 was taken for grain; it offered more reliable correlation coefficients in regression analysis. Tests were made with the semilogarithmic function (PL), the double-log function (DL) and the inverse-log function (LI), but in the projection, with certain exceptions, the semilogarithmic function was used ($y = a + b \log x$; $E = 0.4343b/y$). The coefficients of the income elasticity of demand computed from the time series have provisional value, since they are the result not only of changes in the size of personal consumption, but of other variables as well. This should be taken into account in evaluating the results of the projection.

with other projections, for example, those compiled in connection with the drafting of the social plan, and especially those which assume higher growth rates of income. When we examine the place of domestic consumption, we need the entire balance of production and consumption of foodstuffs (along with figures on reproduction, consumption, export-import and changes of inventories). The author of this analysis does not possess such data. In any case the size of domestic demand cannot be taken arbitrarily. The projection represents only one phase in the complicated process of drafting plans and it is necessary to set it up against other elements in the economic plan.

Table 2. Projection of the Per Capita Demand for Foodstuffs Over the Period 1980-1985 and in the Year 1990, kg

Indicator	Elasticity Coefficients	Base Year 1980	Projection I	
			1985	1990
Grain, total	-0.165	176.3	173.4	170.5
Wheat	-0.127	151.5	149.6	147.7
Corn	-0.368	22.4	21.6	20.8
Potatoes	-0.040	64.6	64.3	64.1
Other vegetables	0.373	97.0	100.5	104.1
Fruit and grapes	0.245	67.0	68.6	70.2
Citrus fruit	0.740	8.4	9.1	9.7
Meat, total	0.580	53.9	57.0	60.1
Beef	0.661	14.2	15.2	16.1
Pork	0.461	20.3	21.2	22.2
Poultry	0.849	12.7	13.7	14.8
Fish	0.680	3.3	3.6	3.8
Lard	0.404	10.2	10.6	11.0
Vegetable oils	0.545	11.7	12.4	13.0
Fresh milk	0.337	101.3	104.6	108.0
Dairy products	0.386	7.6	7.9	8.2
Eggs, number	0.749	195.0	209.0	224.0
Sugar	0.450	35.7	37.3	38.9

	Projection II		Per Capita Index		Total, 1985/1980	
	1985	1990	I	II	I	II
Grain, total	172.0	167.7	98.4	97.6	104.2	103.4
Wheat	148.7	154.8	98.7	98.1	104.6	104.0
Corn	21.2	20.2	96.3	94.6	102.0	100.2
Potatoes	64.2	63.8	99.6	99.4	105.5	105.3
Other vegetables	102.3	107.6	103.7	105.5	109.9	111.8
Fruit and grapes	69.4	71.8	102.4	103.6	108.5	109.8
Citrus fruit	9.4	10.3	107.3	110.9	113.7	117.5
Meat, total	58.6	63.2	105.8	108.6	112.1	115.1
Beef	15.6	17.0	106.5	109.8	112.8	116.3
Pork	21.7	23.1	104.6	106.8	110.8	113.2
Poultry	14.3	15.8	108.4	112.5	114.8	119.2
Fish	3.7	4.0	106.0	110.2	112.3	116.8

Table 2 (continued)

Indicator	Projection II		Per Capita Index		Total, 1985/1980	
	1985	1990	I	II	I	II
Lard	10.8	11.5	104.0	106.0	110.2	112.3
Vegetable oils	12.7	13.6	105.1	108.1	111.4	114.5
Fresh milk	106.3	111.4	103.3	105.0	109.5	111.3
Dairy products	8.0	8.5	103.8	105.7	110.8	112.0
Eggs, number	216.0	238.0	107.4	111.1	113.8	117.7
Sugar	38.1	40.4	104.5	106.6	110.7	113.0

The elasticity coefficients pertain to 1980. The coefficients of determination and correlation coefficients are satisfactory except for potatoes. The base year was taken from the trend of the function, and the differences from statistical data for 1980 are negligible.

The 1985/1980 index numbers were computed from figures on quantities to two decimal points. The index numbers for total demand are based on the actual rather than the permanent population: 21.36 million according to the estimate in 1980, 22.63 million in 1985 and 23.73 million inhabitants in 1990.

We are not giving the second possible variant of the projection, which was based on the figures of the 1978 survey, since this would have required a number of clarifications and comparisons with the projection presented here. Only certain remarks have been made about differences.

Grain consumption would drop little. This applies above all to wheat. In the projection based on the survey wheat consumption would be smaller: 143.5 kg in 1980 and 140.5 kg in 1985 (consumption outside the household has also been added). This is probably the most reliable figure, since in the statistical balances the consumption of wheat as livestock feed is underestimated. In any case we can anticipate an increase in commodity consumption of grain in coming years. Starting with the trend of consumption of white grains (mainly wheat and rye) in the milling industry, consumption in 1985 would be about 3.44 million tons. According to this projection, total domestic wheat consumption would amount to about 4.5 million tons, which means that commodity consumption would amount to 76 percent of total consumption, and at the lower limit of wheat production of 6 million tons, market surpluses would amount to 57 percent of production. There are two problems which are posed in this connection: reducing the consumption of wheat as livestock feed and more optimum consumption of bread as human food.

The projection of vegetables, fruit and grapes shows a growth of demand with certain exceptions (peas, dried fruit). The increase in the demand for citrus fruit was high, but it will probably not come about before 1985. Imports have been dropping off in recent years, and domestic production represents a negligible portion of total consumption. Among the processed products we should also mention wine. Judging by the low elasticity coefficient

(0.224), demand will increase slowly: from 29.8 liters per capita in 1980 to 30.4 liters in 1985 and 30.7 liters in Projection II. One of the reasons for the slower growth of wine consumption is the rising consumption of beer. Wine consumption is largely based on consumption in kind, but commodity consumption is growing much faster, and this will continue in coming years as well.

Among the processed foods of plant origin we should emphasize the growth of demand for sugar and oil. Sugar consumption included indirect consumption in confectionery and other products, which is growing faster than consumption of sugar as such. There is a need for a considerable growth of production of sugar beets, especially if we assume larger exports of sugar. The growth of vegetable oils projected also represents a large growth in the production of oil crops in order to eliminate imports. The growth of the demand for oil also depends on the demand for lard. The projection of lard should nevertheless be taken with reserve in view of the altered manner in which pork is produced (a lower and lower proportion of bacon hogs and the ever larger substitution of vegetable oils for lard.

The trend of meat consumption over the period 1960-1980 was computed by means of the double-log function, which yielded results best adapted to actual consumption, but the projection given in the table was nevertheless computed with elasticity coefficients obtained from the semilogarithmic function, since the initial premise was a milder growth of consumption than in the past period. (The variant of the projection using the double-log function yields a larger growth of the demand for meat because of the higher elasticity coefficients: for example, 61.3 kg in 1985 and 69.7 kg in 1990 according to Projection II.) Total domestic demand in 1985 would be 1.29 and 1.33 million tons, respectively, assuming the actual (rather than permanent) population. The pattern of meat consumption is changing because of differing elasticity coefficients of the demand for various types of meat. The growth of the demand for beef is greater than that for pork, while the highest is for the growth of poultry meat and the lowest is for that of mutton (2.8 and 2.9 kg in 1985). This kind of projected pattern of the demand for meat could change, however. This will depend on the growth rate of the various types of meat, for example, on the faster growth of production of pork in view of the possibilities for reproduction, and it also depends on changes in meat exports and imports, for example, on augmented exports of beef. The demand for poultry meat will continue to rise, but it is approximating the level of saturation; the inverse-log function, which gives a smaller growth of consumption, would be better suited in the projection. Other factors not taken into account in the projection will also have an effect on the domestic demand for meat. Aside from exports, we should single out price relations between livestock and meat on the one hand and livestock feed on the other. If the transition is made toward freer setting of market prices for meat, which under the present relations between supply and demand would signify higher prices, this would tend to moderate the growth of meat consumption and the consumption of livestock feed as well. But over the long run this would have the effect of larger and more optimum production and consumption of meat.

The consumption of fish, both fresh and canned, is also increasing. For it to represent an essential supplement to meat consumption, the production or catch of fish would have to be much larger, and that cannot be anticipated in the period up to 1985.

The projection indicates a growth in the demand for fresh milk and dairy products. The proportionally slower growth of demand for dairy products can to some extent be explained by the fact that consumption in kind is still high, but also in terms of the unreliable data of the time series from which the function of consumption was computed (for example, the elasticity coefficient for butter was negative!). Converted to the equivalent of fresh milk, this would amount to a per capita total of about 185 liters of milk per year in 1985, which is not a high level of consumption. But even then it would require a considerable growth of total milk production and of production for the market. Finally, the demand for eggs continues to grow according to the projection, and it can be achieved on the basis of the present growth trend of production.

The projection covers total demand (for both consumption in kind and commodity consumption). It would, of course, be desirable to have a separate projection of market demand. For that purpose we could compute a time series of commodity consumption (purchases) of foodstuffs from the data of retail and wholesale trade pertaining to large consumers, hostelry and peasant markets. This would be of interest concerning those products for which the percentage of consumption in kind is considerable.

The question still remains of what the projected demand means from the standpoint of the energy and biochemical composition of the diet. Daily calorie consumption in 1985 would be 3,656 according to Projection I and 3,689 according to Projection II; protein consumption would be 107.8 and 108.6 grams per day; and fats 126.6 and 129.4 grams, respectively, while consumption of carbohydrates remains by and large unchanged (560 grams). Actual consumption is less (by at least 10 percent--since all available quantities of processed foods are not being used, but this does not greatly change the fact that the consumption of calories (joules) is high. According to an adjusted projection which assumed a smaller consumption of grain and then of lard and sugar (because alcoholic beverages were not included in the computation), consumption of calories was smaller and amounted to 3,294 in 1980, 3,381 in 1985 and 3,424 in 1990. Protein consumption would increase from 98.1 to 101.1 and 103.6 grams, respectively, on a daily basis. The share of protein of animal origin, though rising, is still low. In actuality, the diet does not undergo essential change, and those remarks made in the preliminary analysis of consumption on the basis of the survey still stand.

The composition of the diet is changing under the influence of market and economic factors, but very little under the influence of deliberate social action, which would tend in the direction of a physiologically balanced diet for the population. Under present conditions it would perhaps be difficult to achieve very dynamic changes in the composition of the diet [original reads "composition of the population"], but there is no doubt that food policy ought to be oriented in that direction to a greater extent.

4. On Adjustment of Production and Consumption (Supply and Demand) of Foodstuffs

The question is what the projected consumption of the population means for the growth of production of raw and processed foods and how production is to be adjusted to consumption and supply to demand?

In order to compute the physical volume of consumption, so as to compare it with production, a computation was made of total quantities of foodstuffs consumed in 1972 purchase prices in which processed foods were converted to agricultural raw materials: flour into grains in the kernel, sugar into sugar beets, meat and lard into weight gain of livestock, and so on. According to this computation, the index number of the growth of consumption over the period 1980-1985 is 110.2 in Projection I, and the average annual growth rate 2.0 percent; in Projection II the index number is 112.2, and the annual rate 2.3. (If we take a variant with a higher meat consumption based on the double-log function, the growth rate would be higher: 2.2 in Projection I and 2.7 in Projection II. This variant is less likely and was not taken into account.) A computation in 1980 prices offers practically the same index numbers and growth rates. We need to emphasize that the computation pertains to products for personal consumption. That is why the growth rate for plant products (1.5 and 1.8) is low, since it does not contain the growth of fodder grains nor other materials for reproduction of agricultural origin. Moreover, the growth of total final consumption ought to contain not only the growth of domestic consumption, but also changes in exports and imports and inventories. According to an estimate, which took into account the need for larger exports and reduction of imports, as much as another 1 percent could be added to these rates so that the rate of final consumption would go to 3.0 and 3.3, respectively, on an annual basis. However, the growth rate of net agricultural production ought to be greater if it is to make up for at least a portion of the imported components contained in consumption in the base year, 1980. The growth of commodity consumption and accordingly of production for the market has to be greater than the average. But we should emphasize that all these numbers, which are larger than the computed growth rate of domestic personal consumption, are nevertheless estimates. They only indicate that a higher growth of production facilitates larger exports and larger reserves and that a much larger growth of production for the market is needed. In the social plan covering the period 1981-1985 the annual growth rate of agricultural production is 4.5 percent (assuming a growth of domestic consumption of 3 percent). For the sake of comparison we ought to have, as already said, all the items in the balance of production and consumption in 1980 and 1985 as a basis for computing the growth of domestic consumption. Of course, a higher growth of production would afford the possibility of larger domestic personal consumption of foodstuffs.

One other method of estimating the growth of aggregate demand and the necessary growth of production according to the formula is also possible (see Footnote 1). Over the period 1980-1985 the growth rate of the actual population (S) is estimated at 1.16, the coefficient of the income elasticity of food expenditures (E) in the base year 1980 0.528--computed on the basis of the semilogarithmic function and reduced by the factor 0.85, and the

elasticity coefficient of the amounts consumed is 0.45. The growth rate of personal income (D) is assumed to be 2 and 3 percent per year. According to the formula the growth rate of aggregate demand is $1.16 + (0.45 \cdot 2) = 2.1$ in Projection I, while in Projection II, computed in the same way, it comes out to 2.5 percent per year. This is approximately equal to the rates given previously. In the formula (in the denominator) we ought to include changes in relative prices of raw and processed foods. This correction was not made because of difficulties in estimating what sort of price relations would prevail in the future. This method of computing aggregate demand and accordingly of the supply as well affords only very approximate results. Yet it can serve for comparative analysis of the principal factors determining the past and future changes of consumption by republics and provinces or smaller regions.

Both methods, however, afford only a global picture. Only an analysis of a projection of consumption and production of the principal foodstuffs affords a real insight.

The projection of production is not a subject matter of this analysis. We can only note that certain methods, linear programming for example, take the size of domestic demand as one of the "constraints" in the model. Likewise, that the consistency of independently compiled projections of agriculture should be verified by means of those projections which include agriculture in overall economic development (projections based on an intersector, output-capital, or other model). This kind of verification is valid even when the point of departure is that agriculture is one of the primary activities, since there is a need to ascertain what consequences that has for the entire economy because of the interdependence of the principal economic quantities.

It is certain that continuation of the past growth trend of agricultural production would not meet the needs of domestic consumption nor the needs for larger exports. It cannot be anticipated that in the short run, up to the year 1985, all the disproportions will be resolved between the production and consumption of raw and processed foods. The figures show that in the first years (all the way up to 1983) there will still be considerable importation of principal foodstuffs, wheat, oil, etc., and that the net balance of exports and imports will still not undergo essential change. Incidentally, elimination of disproportions does not signify autarkic agroindustrial production, but the kind of exchange with other countries which along with expansion of exports presupposes imports when they are economically justified and, of course, the importation of those products which are not produced in our country at all because of the natural conditions.

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PRIVATELY OWNED FARM MACHINERY, REPUBLIC BREAKDOWN

Belgrade EKONOMIKA POLJOPRIVREDE in Serbo-Croatian No 12, Dec 83 (manuscript received 2 Apr 83) pp 771-774

[Article by Ugljesa Pavlovic, Serbian Republic Bureau of Statistics, Belgrade: "Tractors and Combines on Private Farms"]

[Text] Since enactment of the measures of the 1965 economic reform and the 1967 Law on Acquiring the Right of Ownership to Agricultural Implements by Individuals, private farmers in our country have been showing great interest in purchasing tractors and other machinery.

Between 1960 and 1969 the number of tractors on private farms increased from 5,080 to 39,046, at an average annual growth rate of 25.4 percent. The tendency of private farms to equip themselves with tractors has continued, so that in the 1981 census it was established that they possessed 400,747 tractors, which is almost tenfold the number in 1969. In this period the average annual growth rate was 21.4 percent. However, we should state that private farmers have mainly equipped themselves with the less powerful tractors, and a considerable number of these machines had been amortized and scrapped by the socialized sector of agriculture. But regardless of that fact, the increased number of tractors on private farms is contributing to a rise of the overall productivity of labor in agriculture and is mitigating the shortage of traction in the socialized sector of agriculture. That is, in the socialized sector of agriculture we note a decline or stagnation of the total number of tractors and a reorientation toward more powerful tractors, which are not always suitable for the small plots of private farmers. In 1981 the average tractor in the socialized sector in our country had 55 kw/75 HP, while in the private sector it had 28 kw/38 HP, which means that the tractors in the socialized sector are on the average 96 percent more powerful than those in the private sector.

At the present level of economic development private farmers have realized that only mechanized cultivation of the land can guarantee an increased and stable agricultural production. In 1960 the private sector had a share of only 13 percent in the total number of tractors in our country, in 1969 its share was 52 percent, and in 1981 it was 94 percent.

According to the figures in the table, along with the considerable increase in the number of tractors over the last 10 years, there has also been a change in the relative share of the various republics and provinces in the total number of private tractors in Yugoslavia. Thus over the period 1969-1981 the total number of tractors on private farms in our country increased more than 10-fold, but in SAP [Socialist Autonomous Province] Kosovo it grew almost 20-fold, in SR [Socialist Republic] Croatia nearly ninefold, and in SAP Vojvodina sevenfold. As a rule a drop in the relative share was recorded in areas where the socialized sector of agriculture is better developed and where the private producers obtained their equipment considerably earlier.

Aside from the two-axle tractors which private farmers are equipping themselves with, the 1981 census also recorded a considerable number of one-axle tractors and self-propelled combines. Thus almost 30 percent of all the tractors in the private sector of agriculture are one-axle machines (power cultivators, rototillers), whose highest share was recorded in SR Montenegro and SR Bosnia-Hercegovina, the lowest being in SAP Vojvodina.

Nearly two-thirds of all the one-axle tractors in our country are in SR Serbia proper and in SR Croatia. With respect to the number of combines a high share of these regions was also recorded, and SAP Vojvodina should also be added to them. These three areas, then, account for over three-fourths of the total number of private combines in our country.

Table 1. Number of Tractors on Private Farms

SR's/SAP's	Number of Tractors			Structure, %		
	1960	1969	1981*	1960	1969	1981
SFRY	5,080	39,046	400,747	100.0	100.0	100.0
Bosnia-Hercegovina	198	1,594	22,960	3.9	4.1	5.7
Montenegro	87	103	1,399	1.7	0.3	0.4
Croatia	1,292	13,337	114,944	25.4	34.2	28.7
Macedonia	503	1,167	14,934	9.9	2.9	3.7
Slovenia	259	5,156	57,057	5.1	13.2	14.2
Serbia	2,741	17,686	189,453	54.0	45.3	47.3
Serbia proper	1,349	8,721	120,649	26.6	22.3	30.3
Vojvodina	1,302	8,381	57,465	25.6	21.5	14.3
Kosovo	90	583	11,339	1.8	1.5	2.8

* Includes tractors of nonfarm households; their share is only 1.4 percent of all the tractors in Yugoslavia.

Source: In this and the other tables the figures were taken from STATISTICKI BILTEN, Nos 263 and 624, and SAOPSTENJE, No 46, 1983, both publications of the Federal Bureau of Statistics.

As a rule there are more one-axle tractors in hill-and-mountain and coastal areas of our country, while the number of combines is greater, as we would expect, in the plains and grain-growing areas. Thus 72 percent of all the one-axle tractors in SR Croatia are in Dalmatia and Istria, while only 6

percent of all the combines in that republic are located in Dalmatia and Istria. Accordingly, the natural conditions for use of the various agricultural machines affect the distribution of these machines by regions and by republics and provinces. Aside from that, the regional distribution of the various agricultural machines is also influenced considerably by the economic strength of the private producers, by the level of development of the socialized sector, by the number of farm households, etc.

Table 2. Number of One-Axle Tractors and Self-Propelled Combines of Private Farms in 1981*

SR's/SAP's	One-Axle Tractors			Combines of All Types, total	
	Number	Share in Total Number of Tractors, %	%	Number	%
SFRY	167,693	29.5	100.0	14,192	100.0
Bosnia-Hercegovina	18,791	45.0	11.2	990	7.0
Montenegro	1,707	55.0	1.0	--	--
Croatia	50,302	30.4	30.0	2,716	19.1
Macedonia	6,345	29.8	3.8	600	4.2
Slovenia	21,647	27.5	12.9	1,250	8.8
Serbia	68,899	26.7	41.1	8,636	60.9
Serbia proper	58,815	32.8	35.1	5,242	37.0
Vojvodina	5,746	9.1	3.4	2,936	20.7
Kosovo	3,338	27.7	2.6	458	3.2

* Includes both one-axle tractors and combines of nonfarm households; their share is 5.5 and 2.7 percent, respectively, in the total number in Yugoslavia.

Table 3. Number of Farm Households and Relationship Between These Households and the Number of Machines in 1981

SR's/SAP's	Number of Farm Households*			Number of Machines Per 100 Farm Households		
	Total, thousands	Share in Total Number of Households, %	%	One-Axle Tractors	Two-Axle Tractors	Combines
SFRY	2,676	43.2	100.0	6	15	0.5
Bosnia-Hercegovina	540	52.4	20.2	3	4	0.2
Montenegro	59	41.3	2.2	3	2	--
Croatia	569	40.0	21.2	9	20	0.5
Macedonia	176	40.5	6.6	4	8	0.3
Slovenia	192	32.3	7.2	11	30	0.7
Serbia	1,140	44.4	42.6	6	17	0.8
Serbia proper	730	43.9	27.3	8	17	0.7
Vojvodina	290	42.7	10.8	2	20	1.0
Kosovo	119	52.5	4.5	4	9	0.4

Footnote to Table 3:

* Every household is regarded as a farm household if it possesses at least 10 square decameters or if it uses less than 10 decameters of arable land but keeps a certain number of livestock, poultry or beehives.

The smallest proportion of farm households in the total number of households is in SR Slovenia, while that republic has the largest number of farm machines per 100 farm households; this index in the case of tractors is twice as high as the Yugoslav average. Put another way, SR Slovenia has a share of 7.2 percent in all the farm households in the country, while it has a share of 12.9 percent in the total number of one-axle tractors, 14.2 percent of two-axle tractors and 8.8 percent of the combines. SR Bosnia-Hercegovina, on the other hand, has a share of over 20 percent of the country's farm households, 11.2 percent of the one-axle tractors, only 5.7 percent of the two-axle tractors, and 7 percent of the combines. The relationship is similar in SR Montenegro and somewhat more favorable in SR Macedonia and SAP Kosovo, while in SR Serbia proper it is somewhat better than the Yugoslav average, and in SAP Vojvodina it is considerably better with respect to the number of two-axle tractors and combines, and considerably below the average in the number of one-axle tractors. SR Croatia is considerably higher than the average with respect to the number of tractors and below the average in the number of combines. The relatively small landholding of private farms is also compounded by the large number of small and scattered parcels, which has an adverse effect on use of farm machines. According to the 1969 census of agriculture, private farms in Yugoslavia had 16.9 million pieces of land, or an average of 6.5 pieces per farm, and the average size of the piece was 59 square decameters and ranged from 0.13 to 2.72 hectares.

The ratio between the size of the landholding and the number of machines in 1981 was satisfactory on private farms in the case of tractors, while there is still a relatively large area of land for every combine.

Table 4. Average Size of the Landholding of the Private Farm and the Relationship Between Land Area and the Number of Machines on Those Farms in 1981

SR's/SAP's	Size of Landholding, hectares*			Hectares of Stubble Grains Per Combine	Area Per Two-Axle Tractor, hectares	
	Stubble Grains	Plowland	Arable Land		Plowland	Arable Land
SFRY	0.56	2.16	3.08	105	14	21
Bosnia-Hercegovina	0.42	1.85	2.75	228	43	65
Montenegro	0.22	0.94	2.96	--	40	124
Croatia	0.50	2.02	2.93	105	10	14
Macedonia	0.75	2.45	2.91	212	26	32
Slovenia	0.29	1.18	2.99	44	4	10
Serbia	0.69	2.69	3.40	91	16	20
Serbia proper	0.68	2.40	3.49	95	15	21

Table 4 (continued)

SR's/SAP's	Size of Landholding, hectares*			Hectares of Stubble Grain Per Combine	Area Per Two-Axle Tractor, hectare	
	Stubble Grains	Plowland	Arable land		Plowland	Arable Land
Vojvodina	0.64	3.25	3.37	64	16	17
Kosovo	0.88	2.26	2.97	230	24	31

* The computation was made on the basis of current statistics on land area.

The private sector of agriculture in our country, with 14 hectares of plowland per tractor, has pulled even with certain progressive agricultures in the world, on the level of Denmark and England in 1980. However, there are countries with only 5 hectares of plowland per tractor, such as Austria, West Germany and Holland. That is why the tendency to equip itself with tractors may continue even further in the private sector of agriculture in our country, but certainly not at the rate recorded over the last 10 years or so, when it was the fastest in Europe.

As for combines, whose number is obviously not sufficient, we should expect a somewhat faster rate of acquisition. However, we should say at once that under the conditions of the economic stabilization, even the private sector of agriculture is not able to acquire equipment at the desired rate.

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FOOD INDUSTRY PRODUCTION, CAPACITIES SURVEYED

Belgrade GLASNIK POLJOPRIVREDNE PROIZVODNJE, PRERADE I PLASMANA in Serbo-Croatian No 1, Jan 84 pp 30-36

[Article by Milan Milanovic, M.A.: "Certain Problems in Development of Yugoslavia's Food Industry"]

[Excerpt] The agroindustrial complex has always had an important place in our economic structure, but only in recent years has the agroindustrial complex been acknowledged in both the conceptions of economic policy and in its operational terms to have an indisputably large role in stabilizing the overall processes of social reproduction.

Evaluation of the place and importance of an economic sector or branch in the entire economy is usually obtained by analyzing its share in the social product or national income of the entire economy, its share in foreign trade, as well as in employment of the labor force. In the case of agriculture there is a tendency toward a reduced share of its social product in the social product of the entire economy. In agriculture and the food processing industry, that is, in the agrocomplex (both property sectors), about 28.5 percent of the social product was created in the early sixties, and then its share fell to 17.3 percent in 1981.* Since the agrocomplex as a whole has a steady growth tendency (considerably slower than the growth of the overall economy), the shrinking of its share in the social product of the entire economy was above all the result of the slower growth of primary agriculture, especially in the private sector.

In spite of these tendencies, the place of the agrocomplex in our economic structure is fairly important, especially in view of its share in employment of total manpower. The share of the farm labor force in the total labor force exceeds 25 percent even today.** A steady decline is typical of the share of farm exports in the country's total exports. In the early sixties farm exports amounted to all of 35 percent of total Yugoslav exports, while in recent years it dropped to only 12 percent.

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* "SGJ" [Statistical Yearbook of Yugoslavia], 1982, p 157.

** According to the results of the population census, in 1981 the farm population comprised 27.2 percent of the labor force.

The share of the agrocomplex in the structure of the social product, in the structure of the population and in the structure of foreign trade, though it has a declining trend, shows that this segment has a very important place in the overall economy.

Development of the Food Processing Industry

The food processing industry, in the Uniform Classification of Activities, covers three industrial branches: 0130--production of foodstuffs, 0131--production of beverages, and 0132--production of livestock feed. This is a markedly heterogeneous segment. That is why development is presented and analyzed at the level of a branch with rather restricted scope, and for a fuller insight into the problems of the food processing industry's development we need to analyze development by the activities individually.

In recent years, and indeed over a more lengthy period, production in the branches of the food industry has been increasing at a somewhat faster rate than the production of basic agricultural products, and only slightly slower than industrial output as a whole. The growth of production of the individual activities varied over the period from 1960 to 1979 from a very slow growth in the grain milling and hulling industry (1.8 percent) and sugar production (2.9 percent), by way of a somewhat faster growth in production of vegetable oils (5.8 percent), meat processing (6.1 percent) and production of confectionery products (7.6 percent), to a very rapid development in the activities of bread and alimentary paste production (12.1 percent), fruit and vegetable processing (12.3 percent), and especially in milk processing and canning (26.8 percent). This wide range of growth rates from activity to activity indicates pronounced structural changes in the food processing industry.

Because of the very rapid growth of the production of beverages (19.2 percent) and livestock feed production (19.5 percent), within the structure of the food processing industry there has been a growth of the relative share of these branches and a drop in the share of production of foodstuffs.

Within the production of foodstuffs, there has been a rapid development in meat processing and canning, fruit and vegetable processing and milk processing. The production of bread and alimentary paste, coffee processing and coffee product production, and the production of confectionery products has increased in the structure of the food processing industry. The rapid development and increased share of the production of livestock feed has been especially prominent; it also announces radical changes in the mode of production in animal husbandry (Table 1).

Table 1. Structure of the Output of Yugoslavia's Food Processing Industry (%)

Activity (group of products)	1960	1969	1979
1. Grain milling and hulling	17.2	12.2	6.8
2. Sugar production	16.5	14.0	6.1
3. Production of vegetable oils and fats	5.9	5.2	6.0

Table 1 (continued)

Activity (group of products)		1960	1969	1979
I	Cumulative total (Lines 1 + 2 + 3)	39.6	31.4	18.9
4.	Meat processing and canning	17.2	15.3	17.9
5.	Fruit and vegetable processing	7.2	9.3	7.2
6.	Milk processing	2.1	5.7	8.8
7.	Ground pepper production	0.8	0.8	0.4
8.	Production of starch and starch products	2.6	1.0	0.9
II	Cumulative total (Lines 1-8)	69.5	63.5	54.1
9.	Bread and alimentary paste	1.6	4.5	8.4
10.	Fish processing and canning	6.6	2.9	1.4
11.	Processing of coffee, coffee products and miscellaneous	1.7	1.0	2.4
12.	Production of confectionery products	7.3	9.4	6.9
	Production of foodstuffs (Branch 130)	86.7	81.3	73.2
	Beverage production (Branch 131)	13.1	13.3	18.9
	Beer alone	(8.7)	(9.4)	(7.4)
	Livestock feed production (Branch 132)	0.2	5.4	6.9
	Food processing industry (Branches 130, 131 and 132)	100.0	100.0	100.0

Source: "Dugorocni razvoj agroindustrijskog kompleksa Jugoslavije do 1995/2000 godine" [Long-Range Development of Yugoslavia's Agroindustrial Complex up to the Years 1995/2000], Belgrade, 1982.

Over a lengthy time interval we note a cyclical pattern in development of the production of foodstuffs, and this can also be expected in its future development. However, on the basis of development trends to date it is estimated that the possibilities for the growth of the food processing industry range on the average at about 8 percent per year.

Utilization of Capacity and the Principal Development Problems in the Food Processing Industry

One can speak only provisionally about the capacity of the food processing industry and about its utilization, since the capacity for certain activities cannot be given with sufficient precision, and precise determination is impossible because of the great heterogeneity in the product mix and type of production, differences in engineering and technology as well as in the internal and external conditions. In certain groupings there is a very pronounced seasonal pattern of production, and the time the capacity is used can vary within broad limits (fruit and vegetable processing, milk processing, beverages production and sugar production).

If use of capacity is measured by the ratio of output to installed capacity, then the situation is very uneven from grouping to grouping. Even the use of capacity within the same activity is usually uneven both in volume and structure of output and also with respect to the level of utilization. At sugar mills, for example, use of capacity at mills in an individual year (1981) ranged from 31 (Bijeljina) to 115 percent (Belgrade). That same year oil mills operated at only 33 percent of capacity using domestic raw materials. In the dairy industry capacity is 25 percent greater than the average annual milk purchase, which, because of the instability in animal husbandry, shows a declining trend. Livestock feed producers operate one shift on the average, and capacity is very fragmented, so that statistics cannot show it objectively.

One might conclude on the basis of utilization of capacity that the growth of production of domestic raw materials has been one of the factors limiting development of the major portion of the food processing industry. This especially applies to industrial crops (sugar beets and oilseed), but also to a number of other activities (meat and milk processing). It is significant in this connection that the inadequate production of wheat in the country (and also the low ratio of wheat grown for the market to the total wheat harvest) has not affected development of the milling industry (the shortage of wheat in the balance was made up with imports), but it has affected the location of capacity and its utilization from region to region. The low domestic production has been offset by imports in other activities as well, especially tropical fruit (for the production of juices), oilseed and raw oil, beef for processing, fish for canning, and so on.

Fit Between Processing Capacity and the Raw Materials Base in the Groupings of Grain Milling and Bread and Baked Goods Production

The production of wheat and rye has in recent years ranged between 4.3 and 5.6 million tons. About 2.4 million tons of flour have been produced in socialized mills, which, compared to the maximum possible production (according to statistical data) of 2.9 million tons (or 3.8 million tons of wheat) shows that capacity was utilized at about 82 percent. However, when this is expressed by the method of maximum monthly output (Table 2) the level of utilization of milling capacity is still higher and ranges between 87 and 89 percent, and it can be assumed that this capacity has been utilized for all practical purposes. But we should bear in mind that a sizable portion of the flour is produced at mills in the private sector (about 800,000 tons), which, assuming the lower yield from milling, corresponds to about 1.3 million tons of grain. This means about 5.5 million tons of wheat are milled annually in the mills of the public and private sectors, which is considerably greater than the need for flour. That is why the future development of the milling industry should be oriented toward modernization of production (expansion of the product mix) rather than toward enlargement of capacity.

The capacity for production of bread and baked goods (socially owned bakeries) amounts to about 1.5 million tons, and the trend is toward a further growth. Output, however, exceeded 1 million tons only in 1978, and then in 1982 reached 1.2 million tons.

Utilization of capacity on the basis of the maximum possible output ranges at about 77 percent, while on the basis of maximum monthly output it goes even as high as 91 percent (Table 2).

The datum that capacity in bread and baked goods production in the socialized sector can process in a year only slightly more than a third of the flour produced in the country or half of the flour produced in socialized mills suggests the conclusion that development of the baking industry is not restricted by the production of raw materials (wheat, or flour), but above all by the demand for baked goods.

Table 2. Utilization of Capacity in Yugoslavia's Food Processing Industry (computed by the method of the maximum monthly output)

Activity--Products	1981			
	Actual Output	Highest Monthly Output	Possible Output	Utilization of Capacity, % (2:4)
1	2	3	4	5
1. Grain milling--flour (thousands of tons)	2,331	217	2,604	89.5
2. Bread and baked goods production	1,235	114	1,368	90.3
3. Alimentary paste production (tons)	87,216	8,473	101,676	85.8
4. Processed fruit products (tons)	266,186	32,138	385,656	69.0
5. Canned vegetables (tons) (6 months)	143,825	28,950	173,700	82.8
6. Fresh meat	712,734	69,577	834,924	85.4
7. Sausage products (tons)	183,241	18,630	223,560	81.9
8. Canned meat (tons)	103,347	9,728	116,736	88.5
9. Concentrated soups (tons)	12,614	1,285	15,420	81.8
10. Canned fish (tons)	37,235	3,836	46,032	80.9
11. Sugar (thousands of tons) (3.5 months)	791	263	920	85.9
12. Chocolate products (tons)	51,601	4,970	59,640	86.5
13. Soft and hard candy (tons)	54,889	6,425	77,100	71.2
14. Confectionery products using flour (tons)	122,770	12,496	149,952	81.9
15. Edible oil (tons)	243,186	24,397	292,764	83.1
16. Margarine and hydrogenated fats (tons)	61,716	6,111	73,332	84.9
17. Starches (tons)	29,437	2,991	35,892	81.9
18. Refined alcohol (thousands of hectoliters)	45,672	4,846	58,152	78.6
19. Beer (thousands of hectoliters	12,163	1,616	19,392	62.7

Table 2 (continued)

Activity--Products	1981 Actual Output	1981 Highest Monthly Output	1981 Possible Output	1981 Utilization of Capacity, % (2:4)
1	2	3	4	5
20. Complete mixed feed (thousands of tons)	3,374	307	3,684	91.5
21. High-protein mixes (thousands of tons)	57	8	96	59.4

	1982 Actual Output	1982 Highest Monthly Output	1982 Possible Output	1982 Utilization of Capacity, % (6:8)
	6	7	8	9
1. Grain milling--flour (thousands of tons)	2,442	232	2,784	87.6
2. Bread and baked goods production	1,281	117	1,404	91.2
3. Alimentary paste production (tons)	90,311	8,254	99,048	91.2
4. Processed fruit products (tons)	384,772	45,236	542,832	70.9
5. Canned vegetables (tons) (6 months)	163,447	35,440	212,640	76.8
6. Fresh meat	712,772	69,577	834,924	85.4
7. Sausage products (tons)	188,619	18,541	222,492	84.0
8. Canned meat (tons)	99,170	10,598	127,176	78.0
9. Concentrated soups (tons)	13,077	1,204	14,448	90.5
10. Canned fish (tons)	30,329	3,640	43,680	83.2
11. Sugar (thousands of tons) (3.5 months)	683	242	847	80.6
12. Chocolate products (tons)	45,076	4,564	54,768	82.3
13. Soft and hard candy (tons)	60,398	5,811	69,732	86.6
14. Confectionery products using flour (tons)	125,495	11,692	140,304	89.4
15. Edible oil (tons)	223,776	21,893	262,716	85.2
16. Margarine and hydrogenated fats (tons)	58,328	5,800	69,600	83.7
17. Starches (tons)	30,594	2,837	34,044	90.0
18. Refined alcohol (thousands of hectoliters)	50,980	5,945	71,340	71.4
19. Beer (thousands of hectoliters)	13,469	1,830	21,960	61.3

Table 2 (continued)

Activity--Products	1982 Actual Output	1982 Highest Monthly Output	1982 Possible Output	1982 Utilization of Capacity, % (6:8)
1	6	7	8	9
20. Complete mixed feed (thousands of tons)	3,228	301	3,612	89.3
21. High-protein mixes (thousands of tons)	42	7	84	50.0

Source: INDEKS, publication of the Social Accounting Service, relevant issues.

Fit Between Capacity and the Raw Materials Base in the Production of Sugar and Vegetable Oil

Sugar, a product which has strategic importance, is among those foodstuffs which have been scarce through almost the entire postwar period (except in 1977, 1978 and 1979).

Following adoption of the social compacts on sugar prices and the use of funds to augment the capacity for sugar production in 1976, eight new sugar mills were built in addition to the 13 that existed, and there are two under construction. According to the figures recorded by the statistical service, present capacity, assuming maximum utilization, affords an output of 1 million tons, which is about 50 percent more than in 1977.

As capacity has grown, so has production, but considerably more slowly. The trend has been toward a constant drop in the level of utilization of capacity--from 90 percent in 1977 to about 71 percent in 1981. However, expressed by the method of maximum monthly output, and assuming that the processing season lasts 3.5 months (105 days on the average), utilization of capacity is considerably more favorable and reached 85 percent in 1981 and 81 percent in 1982.

If, however, we start with the capacity for daily processing of sugar beets, which in 1981 was 88,300 tons (the old sugar mill in Belgrade with a capacity of 1,800 tons shut down operations in 1982) and assume that the season lasts 80 days, which is thought to be the technological optimum, then in 1981 all of Yugoslavia's sugar mills were capable of processing 7 million tons of beets per day, which, assuming a 13-percent yield, amounts to 918,320 tons of sugar. The level of utilization of capacity computed in this way is all of 88 percent, which, in view of the fact that the processing season lasts considerably longer than 80 days on the average, cannot be taken as realistic enough.

In evaluating the fit between beet processing capacity and the raw materials base, it is obvious that the most favorable estimate is obtained when capacity is evaluated on the basis of an 80-day processing season. However, with the present capacity of 86,500 tons and the new 14,000 tons of daily processing capacity added (Belgrade, Sabac and Pozarevac), it is possible to process about 8 million tons of beets. Since the largest beet production achieved to date was 6.2 million tons, and taking into account that processing capacity will be augmented still more through reconstruction of the old sugar mills, it is clear that there are serious difficulties in supplying sufficient quantities of sugar beets. This is certainly one of the main challenges to attainment of the optimum crop structure in the socialized and private sectors.

Aside from sugar, oil is also a product subject to shortages. There were exceptions in 1978 and 1979, when considerable quantities were exported. The problem of the supply of oil has been becoming more and more acute since 1980.

The production of the raw materials from which oil is obtained had increased up to 1979, when an output of 294,896 tons of raw oil was reached. Oil is produced in 24 mills with a maximum capacity of about 395,000 tons of raw oil and about 327,000 tons of refined vegetable oil. It is clear from the ratio between these quantities that capacity is underutilized; in 1981 utilization of capacity was 51 percent in the production of raw oil, while for the refineries it was 74 percent. Since even in the years with the largest harvest (1979) production was not sufficient for full utilization of capacity, there obviously is a discrepancy between capacity and production of the raw materials. This problem has been extremely acute over the last 3 years. That is why an extraordinary program for oilseed and oil production is now in the process of being adopted; it calls for oilseed production, which in 1983 was 131,000 tons of sunflower seed, 230,000 tons of soybeans and 103,000 tons of rapeseed for oil, to increase to 410,000, 365,000 and 227,000 tons, respectively, in 1986.

Fit Between Capacity and the Raw Materials Base in the Groupings of Livestock Slaughtering and Meat Processing

The production of fresh meat of all types between 1975 and 1979 averaged 642,000 tons a year, and then in the period 1979-1982 it was about 713,000 tons. In 1981 this output was achieved in 178 slaughterhouses, and in 1979 there were 88, so that the trend is for smaller output per producer. At the same time there are significant differences from region to region, which is a consequence of differences in the assortment of fresh meat (beef, pork and mutton) and in the size of the slaughterhouses (in certain republics there are more slaughterhouses with very small capacity). For example, in Vojvodina the average production of fresh meat per slaughterhouse is 6,693 tons a year, while in Montenegro it is one-eighth as great--823 tons.

The total of 1,566 slaughterhouses is registered in Yugoslavia. A third of them are in the socialized sector, while the rest are privately owned slaughter operations. About 60 slaughterhouses are classified as "industrial," where the conditions for slaughtering livestock and for processing the meat

meet the standards of modern technology and meat hygiene, while in a considerably smaller number the production process meets the strict requirements of importing countries.

A sizable part of the output of the slaughterhouse industry consists of dried meat products (dried meat and bacon), sausage products, canned meat and edible animal fat. This production (except for fat) has been growing steadily (Table 3).

Table 3. Production of Dried Meat Products, Sausages, Canned Meat Products and Edible Animal Fat, in thousands of tons

Product	Average 1975-1979	1982	Index
Dried meat products	54	67	124
Sausage products	144	189	132
Canned meat products	86	99	115
Edible animal fat	48	36	75

Use of capacity in the slaughterhouse industry, derived from the ratio between the maximum possible output and actual output, ranges about 75 percent, but there are differences from one group of products to another. Regardless of the methodological problems in establishing and indicating capacity in the slaughterhouse industry, it is certain that this is the activity in the food processing industry where the level of utilization of capacity is lowest. This is the consequence of the following factors: cyclical development and occasional crisis situations in livestock production, the technical and technological outdatedness of facilities, great dependence on the foreign market and frequent insecurity about sales on that market, an inadequate level of organization and linkage in primary production, in processing and in distribution, the lack of division of labor and specialization among slaughterhouses, unstable conditions for the conduct of economic activity and unsuitable price relations between the raw materials and the finished products. Aside from that, in many slaughterhouses there are bottlenecks which prevent fuller utilization of complete production lines.

Table 4. Number of Livestock Slaughtered

Indicator	Average 1975-1977	Average 1978-1980	Average 1975-1981	1981
Cattle				
Total slaughtered (thousands of head)	2,532	2,440	2,335	2,464
Slaughtered in slaughterhouses (thousands of head)	1,959	1,717	1,482	1,787
Share of slaughterhouses, %	77.4	70.4	63.5	72.5
Swine				
Total slaughtered (thousands of head)	12,129	13,662	13,550	12,987

Table 4 (continued)

Indicator	Average 1975-1977	Average 1978-1980	Average 1975-1981	1981
Slaughtered in slaughterhouses (thousands of head)	4,741	5,760	5,461	5,281
Share of slaughterhouses, %	37.1	42.2	40.3	40.7
Sheep				
Total slaughtered (thousands of head)	4,857	4,922	4,763	4,871
Slaughtered in slaughterhouses (thousands of head)	2,169	1,956	1,765	2,020
Share of slaughterhouses, %	44.7	39.7	37.1	41.5

Although the statistics on the capacity of the slaughterhouse industry can be adopted only with reservations, it is interesting to compare the registered slaughterhouse capacity (operating on one shift) with livestock production in the socialized and private sectors. Over the period 1975-1981 about 41 percent of all swine and sheep slaughtered were slaughtered in slaughterhouses. In the case of cattle, the share of the slaughterhouses averaged 72 percent, but there was a declining trend from 76 percent in 1975 to 63 percent in 1981, as can be seen from Table 4.

The low average weights of the swine and sheep slaughtered are also typical. This is not only the consequence of the breeds involved, but also of the slaughtering of young animals. Much the same is true of cattle. About 45 percent of the cattle slaughtered were calves under the age of 6 months; in the slaughterhouses this proportion was about 36 percent, but it was twice as high in households.

If the utilization of the capacity of the slaughterhouse industry is estimated on the basis of a comparison of the capacity of slaughterhouses and the number of animals purchased for slaughter, we arrive at the ratios given in Table 5.

Table 5. Utilization of the Capacity of the Slaughterhouse Industry

Indicator	1977	1978	1979	1980	Average 1977-1980
Cattle (thousands of head)					
(1) Increase*	1,947	1,846	1,725	1,580	1,774
(2) Slaughterhouse capacity**	2,646	2,518	2,252	2,052	2,367
(2:1) Ratio	1.36	1.37	1.30	1.30	1.33
Swine (thousands of head)					
(3) Increase*	5,340	6,501	5,478	5,487	5,701
(4) Slaughterhouse capacity**	7,742	8,392	8,623	7,340	8,024
(4:3) Ratio	1.45	1.29	1.57	1.34	1.41

Footnotes to Table 5:

* Reduced by the number of livestock slaughtered outside slaughterhouses.
** Estimate of the Institute for Agricultural Economics.

It is clear from the ratio of maximum slaughtering capacity (assuming operation on one shift) and the number of livestock purchased for slaughter that the capacity for slaughtering cattle is about one-third greater and that for swine about 40 percent greater than the purchases made. These estimates are incomplete, since they do not take into account other meat processing lines, which are often bottlenecks. Nevertheless, present capacity for slaughtering beef and swine is adequate, especially since most of the plants are used only on one shift, so that by introducing a second shift on certain lines it would be possible to eliminate the "bottlenecks" and thus increase the capacity.

Fit Between Capacity and the Raw Materials Base in Milk Production

Total milk production in the country increased 24.6 percent between 1975 and 1982. In the medium-term planning period 1976-1980 this production increased at an annual rate of 3.4 percent. However, milk purchases, though on the rise, are still low. The percentage purchased increased from 24.2 percent in 1975 to 31.5 percent in 1980. In 1980 and 1982 this percentage dropped, which can be explained by the disrupted parity between the price of milk and price of meat to the disadvantage of milk and the ever larger use of milk to feed livestock.

The physical volume of production in the dairy industry achieved a rapid growth between 1974 and 1979, and the production of milk for the table and dairy products increased 77.3 percent. Since 1980 this production has stayed at the same level, and it has even dropped off for certain groups of products.

Use of capacity in this industry over the period 1977-1981 was relatively favorable. It was about 80 percent in the production of pasteurized and sterilized milk, between 70 and 78 percent in the production of cheeses, 75 percent for the production of fermented-milk products, and least of all, 60 percent, for ice cream. A minor share of this industry's supply of raw materials, fresh milk, powdered milk, butter, etc., is imported, and that has influenced the utilization of capacity.

Fit Between the Capacity and Raw Materials Base in the Industrial Production of Livestock Feed

Industrially produced livestock feed has an important role in swine and poultry raising and to some extent in the rest of animal husbandry as well. With respect to its volume, it by and large covers the needs of the socialized sector, to some extent production under contract, but it meets the needs of the private sector only symbolically. Coverage of the needs of animal husbandry for industrially produced livestock feed ranges about 20 percent.

The physical volume of output of industrially produced livestock feed has recorded a rather high growth rate in recent years. Since 1975 this production

has doubled. This especially applies to the production of complete mixed feeds, which has increased from 1.5 million tons in 1975 to 3.4 million in 1981. However, the production of superconcentrates has been dropping sharply. This output has been dropping steadily since the 224,000 tons in 1976, and in 1981 it was 57,000 tons and shows a further declining trend. The reason is the lack of foreign exchange.

The shortage of superconcentrates has especially affected the production of swine in the private sector, which aside from its own corn also possesses sizable facilities for fattening. That is why production in this sector has dropped off rapidly.

Use of capacity in the livestock feed industry in 1981 was 80.9 percent for complete mixed feeds, 61.3 percent for superconcentrates and 70.2 percent for premixes. At present this capacity is being used by and large on one shift, and that incomplete, which means that far greater production could be achieved by introducing a second shift.

This industry lacks storage facilities for the raw materials--corn and other grains. At harvest time the storage capacities can take up raw materials for 4 months of operation, but the rest of the purchases are made during the year, mainly under unfavorable conditions. Aside from that, although most silo facilities do have driers, there are structures which do not have driers, so that problems arise in taking raw materials with a high moisture content.

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DATA ON SUGAR BEET PRODUCTION, 1951-1982

Belgrade GLASNIK POLJOPRIVREDNE PROIZVODNJE, PRERADE I PLASMANA in Serbo-Croatian No 1, Jan 84 p 36

[Text] Yugoslavia had a harvest of sugar beets exceeding 6 million tons for the first time in 1981, and record sugar production was also achieved, which went further than ever before in satisfying the domestic demand. Production of the raw material is one of the basic tasks in the policy of economic stabilization, and it is being implemented ever more successfully. The production of sugar beets has also been on the rise. Over the last several years it has exceeded 5 million tons. Here is this balance.

Year	Hectares of Area	Production, thousands of tons	Yield, tons per hectare	Sugar Production, thousands of tons
1951	100,000	1,940	19.3	201
1961	80,500	1,730	21.5	214
1974	104,354	4,300	41.2	462
1975	107,464	4,213	39.2	534
1976	106,606	4,711	44.2	577
1977	122,491	5,287	43.2	667
1978	126,351	5,157	40.8	693
1979	140,106	5,924	42.3	783
1980	128,098	5,213	40.7	758
1981	147,226	6,224	42.3	791
1982	139,000	5,671	40.7	683

The record production of sugar beets in 1981 also brought a record production of sugar. With reserves and some imports, normal supply of sugar to the population and large consumers was ensured to the greatest degree. Of all the sugar beets produced in 1982, agricultural organizations produced 4,375,000 tons, and private farms 1,296,000 tons.

Sugar beets are mainly produced in Serbia and Croatia, to a lesser extent in other regions, as can be seen from the following table (production in thousands of tons):

Region	1979	1980	1981	1982
Yugoslavia	5,924	5,213	6,224	5,671
Bosnia-Hercegovina	77	59	70	73
Croatia	1,130	959	1,202	1,171
Macedonia	116	74	104	110
Slovenia	69	123	162	187
Serbia	4,532	3,998	4,686	4,130
Serbia proper	493	349	321	365
Kosovo	57	35	79	55
Vojvodina	3,982	3,614	4,286	3,710

In certain areas (Bosnia-Hercegovina, Macedonia and Kosovo) production has remained at the same level showing a tendency toward a slight increase or decrease. Over the last 4 years a trend toward steady growth of production has been recorded only in Slovenia, while in the other regions it has been uneven.

Total sugar production in 1982 was 683,000 tons (791,000 tons in 1981). The largest amounts of sugar in 1981 came from sugar mills in SR [Socialist Republic] Serbia--594,000 tons (within that amount Vojvodina alone produced 546,000 tons), and then 153,000 tons in Croatia, 25,000 tons in Slovenia, 11,000 tons in Macedonia and 8,400 tons in Bosnia-Hercegovina. Sugar mills in Serbia proper produced 38,000 tons and those in Kosovo 9,500 tons of sugar.

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BRIEFS

CROATIAN AGRICULTURAL EXPORTS--In 1984 the agro-industrial complex of Croatia plans to export about $360 million worth of agricultural produce, or 50 percent more than last year, in order to cover imported needs estimated at $333.82 million. This increased export plan is based on estimated exports of 200,000 tons of wheat and 370,000 tons of corn, valued at $93.5 million; 82.4 percent of these planned deliveries are to be to the convertible-currency market. Croatia's share in total Yugoslav agricultural exports was 23 percent in 1982 and 20.9 percent in 1983; Croatia's agricultural exports declined by 6 percent last year compared to 1982. [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 28 Feb 84 p 12]

IMPORTS FROM USSR--According to facts reported last week at the meeting of the section for the USSR in the Yugoslav Economic Chamber, almost 92 percent of the imports planned from the USSR this year will be raw materials and producer goods, while 38 percent of Yugoslav exports to the USSR will be machinebuilding products. Yugoslavia should import 5.5 million tons of oil, 2.6 million tons of coking coal, 800,000 tons of mazut, 320,000 tons of iron ore, and certain amounts of steel, cotton and synthetic rubber. The USSR has also approved some additional amounts of these exports to Yugoslavia (the most important being mazut and gas), as well as a commodity credit for the Smederevo ironworks to purchase 200,000 tons of iron ore. Yugoslav exports to the USSR will consist largely of nonferrous metals, equipment, ships, agricultural and food products, consumer goods, and construction services. [Excerpt] [Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 6 Feb 84 p 30]

INCREASE IN SHIPBUILDING--Good employment at shipyards will continue to the end of 1985 and orders are being taken for 1986. By then our shipyards will have delivered about 110 ocean-going and river ships [to foreign buyers]. Our shipyards are very pleased with the number of orders being taken now when shipyards in the world are very often without work. This year our shipyards are expected to deliver about $600 million worth of ships, or considerably more than last year when the figure was about $365 million. These ships will carry cargo such as gas, chemical products, railroad cars, containers, etc. [Excerpt] [Belgrade BORBA in Serbo-Croatian 9 Feb 84 p 5]

FUTURE FOR SOYBEANS--Soybeans are becoming one of the key products of Yugoslav agriculture. In 1982 about 200,000 tons were produced, and in 1983, about 240,000 tons. Soybean production must be expanded even faster, because we have a favorable climate and good soil for this (yields of 25 metric centners per hectare are attained, and the demand is increasing). If we produced about 500,000 tons of soybeans, we could get about 400,000 tons of crushed soybeans which is what Yugoslavia now imports to meet its needs. If per-hectare yields of 25 metric centners can be maintained, 200,000 hectares in this crop would be adequate to meet needs. It is also good that soybeans can be grown as a stubble crop (after wheat and barley), and that they enrich the soil at the same time. [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 8 Mar 84 p 6]

PRIVATE ENTERPRISE IN KOSOVO--At the beginning of 1983 there were 7,708 private businesses in Kosovo, employing a total of 9,785 persons including the owners. There are 102 types of economic activity for private business, or 42 percent of that which would be possible. Of the 5,193 private businesses, 658 are in the lodging and restraurant sector, 346 in retail trade, and 1,511 in private transport. Such business has increased 6.7 percent since 1976, yet in certain opstinas private shops are closing, even there where they are most needed, such as Pristina, Titova Mitrovica, and Djakovica. [Excerpt] [Belgrade BORBA in Serbo-Croatian 25-26 Feb 84 p 8]

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