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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

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EAST EUROPE REPORT

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CONTENTS

CEMA'S ADJUSTMENT TO WORLD ECONOMY DISCUSSED

Budapest OTLET in Hungarian No 32, 9 Aug 84 p 4

[Interview with Laszlo Csaba, Research Fellow, Institute of World Economy, Hungarian Academy of Sciences, by R. G.: "Bilateral Questions"]

[Text] At present CEMA [Council for Mutual Economic Aid] has an 8-percent share in world trade, half of which is trade among its member countries. Thus the problem of global economic adjustment is a pressing requisite in Hungary's case as well. What kind of factors will create possible solutions? And how will these variations create conditions for further development of Hungary's economic reform? These were the questions we asked Laszlo Csaba, Research Fellow of the Institute of World Economy, Hungarian Academy of Sciences, whose book, entitled "Eastern Europe in World Economy; Adjustment and Economic Mechanism" will soon be published.

[Question] Along with the enumeration of the successes, various CEMA documents also make mention of certain shortcomings. Among the tasks to be resolved are, for example, the appropriate coordination of the plan and the market, institutional and legal restrictions on cooperation of member countries and impediment in the financial and accounting system. Can the decrease of CEMA's proportion in world trade be explained with these shortcomings?

[Answer] Partly yes. Responding late to the changes in world economy which started in the 70's, the answer came out wrong. We ourselves made it known that the crisis "does not ring about." For 30 years CEMA has meant economic protection, guaranteed secure market and the recovery of "fallen enterprises." This made it possible that in the second half of the 70's we were already carrying out a policy of growth-oriented, material and energy-intensive industry (the latter meant 30-50 percent more in processing industry), so to speak, with unchanged directive and cooperative methods, which, however, are not favorable either to demands for speedy adjustment or technical development. That is to say, these hothouse circumstances have not made it possible to prepare for adjustment, but have postponed it.

[Question] Are changes to be expected on the basis of these diagnoses?

[Answer] In the economic cooperation of the CEMA countries there are three factors--resulting from earlier periods--that we have to reckon with, none of which could be said to aid speedy and effective adjustment to world economy.

In economic relations cooperation of central planning agencies is the determining factor and that of enterprises the subordinate factor. The bilateral forms (bilateralism) are prevalent. And the specifications in kind are growing at the expense of those in money. At the same time every country is experiencing problems and looking for proper answers. This shows in different economic mechanisms as well. However, while a fundamentally new situation is taking shape under the real-economic conditions, there is no reason to count on qualitative changes in the system of economic means.

[Question] What kind of role do commodity and financial conditions play in the shaping of economic relations among member countries?

[Answer] They are of little significance. And this serves as an explanation to a number of phenomena, for example, the incommensurability of economic achievements, difficulties in creating interest in technical development, or even in making economic decisions. Unfortunately, this way competition and specialization cannot develop to the desired degree. Consequently in various areas parallel capacities are developing, and the member countries are competing with each other on foreign markets. The degree of monetization is, in fact, the condensed expression of economic mechanism, and at present 95 percent of the dealings of the CEMA countries, in the course of reconciling their national economic plans, concerns decisions on the quantity and variety of mutual shipments.

[Question] It has already been said that there is no single model of socialist economic mechanism to be followed. Compared to the launch of the 1968 reform, what kind of support can the further development of the Hungarian reform expect today?

[Answer] The differences among the economic mechanisms of member countries are much greater than 16 years ago. In terms of realization of our reform ideas, compared to the circumstances then, the situation today is reversed. That is to say, now it is favorable politically but unfavorable economically. The latter has already been mentioned. Here I will only emphasize that tensions appear in 3 areas: in the very position of the various member countries, in their mutual relationships, and in CEMA's relationship to world economy, the contrast to the 1960's is justified. As to the political conditions, we can take into consideration the statement that at this time we are living we are learning from each other, that is, some countries' experiences and some of their elements can be used and are to be used. From our point of view the past 16 years have brought numerous results and world recognition. As we deliberate on the direction and scope of our further development we can refer to them with good reasons.

[Question] Where is the place of the "Hungarian model"? To what extent can it find partners on its way?

[Answer] In terms of the frame of reference concerning market conditions and plan directions, I must start with Yugoslavia that is following a self-governing fashion, unlike the earlier one. Instead of instructions of local political and social organizations, it aims at introducing authentic market economy. Then we would follow, and then Polish and Bulgarian attempts, which, in terms of direction and principles, are very close to the 1968 Hungarian reform. In Czechoslovakia, the Soviet Union, Cuba and Vietnam--though there has been no fundamental changes in the economic direction--there are debates over the way of further development, and besides the direct plan directives efforts are being made to give greater scope to economic means. Last I would mention Romania and German Democratic Republic, where there is an economic mechanism with plan directives, and where they attempt to overcome difficulties by increasing direct governmental and operational control and by tightening mandatory plan indexes.

[Question] Almost half of the Hungarian export accounts are in rubles. How can the reform ideas that are based on enterprise independence and market conditions adjust to the cooperation practice of the socialist countries?

[Answer] They are not incongruous factors. However, we must find the way to enhance competition between domestic enterprises. Although there is no doubt that thinking of contingencies contains, in itself, the need for operational intervention and the danger that weak domestic enterprises would get further extension, but this is only one side of the question. In order for us to reach a good position within the CEMA, we must keep our standards at world level, and from the viewpoint of production structure reorganization, we must also find our latitude with the compass of world market. In other words, we should not develop in the direction of least resistance! This is the strategy, even though not at the level of central decisions, which is present as a constant danger in the CEMA relationships. The least resistance points to the direction of self-sufficiency, the autarchy, which would result in total regression and sharp decline in living standards--in a very short time.

12200
CSO: 2500/548

BRIEFS

SULFURIC ACID PLANT FOR USSR--Working through the POLIMEX-CEKOP foreign trade enterprise, the Industrial Systems Plant in Nysa, which is famous for manufacturing complete sulfuric acid factories, has signed its 50th contract for delivery to the USSR of a complete sulfuric acid plant with an annual output capacity of 500,000 tons. The terms of the contract will be carried out over the period 1986-1988 in the Lithuanian SSR. The contract is valued at 27 million rubles. [Text] [Warsaw TRYBUNA LUDU in Polish 10 Aug 84 p 2]

CSO: 2600/1217

DURABLES OWNERSHIP BY HOUSEHOLDS ANALYZED

Prague PLANOVANE HOSPODARSTVI in Czech No 4, 1984 pp 36-41

[Article by Eng Vlasta Stepova, ScC, Trade Research Institute]

[Text] Objects that fill man's microworld--the system of goods that make housework easier and enrich leisure time--have now become an unusually timely issue, pertaining not only to an environment for the regeneration of work forces but also a micro-climate which shares in a comprehensive development of socialist man.

What should be the optimum assemblage of objects among which man lives in an advanced socialist society in the eighth decade of the 20th century, in the current situation of R&D? Are quantophrenia of needs and the interest in their full satisfaction the truly ideal way?

Marx pointed out that growing material consumption could not be regarded as a purpose in itself but only as a means for comprehensive liberation of the individual and society. Thus, the volume of manufactured and consumed values only facilitates and influences human life, but does not create it by itself.

"The wealth of life in socialism is in its total contents, primarily in work and in general, in all activities that develop human skills and expand the opportunities for man's reaching his potential not only for his own benefit but for the benefit of all society."*

The report by the Presidium of the CPCZ Central Committee on the fulfillment of the resolutions of the 15th Congress, presented at the Seventh Plenum of the CPCZ Central Committee in May 1977, stressed: "We reject any growth of consumption that results in senseless hoarding of material goods and leads to fetishization of things. For that reason we oppose consumption for consumption's sake and the bourgeois concept of the so-called consumer society."

The 16th CPCZ Congress also focused particular attention on the issues of the living standard. In the "Report on the Main Directions of the Economic and Social Development of the CSSR in 1981-1985," Comrade Strougal stated that "by

*Report of the Presidium of the CPCZ Central Committee on the fulfillment of the resolutions of the 15th Congress presented by Comrade Strougal at the Seventh CPCZ, Central Committee Plenum, Prague, May 1977.

satisfying material and cultural needs of our population we intend, in accordance with the comprehensive development of our national economy, to safeguard the already achieved level of our living standard and--if we provide the conditions for it--to improve it further... Our domestic trade, which represents the consumers and their interests vis-a-vis production, must use market research to influence more effectively and with greater expertise the structure of the production of consumer goods and their distribution in our commercial network."

Such theses in important party documents emphasize the proportionality of consumption and its qualitative aspects, and thus they turn attention to the optimum amount and structure of consumption. By the same token, they underscore the extraordinary task of our domestic market not only in influencing the consumer but also in its repercussion on the structure of our production with demands on efficiency in both directions. In this context awareness of consumers' demands is especially important.

In the framework of research of consumer areas (as groups of goods in consumption that may be regarded as fundamental and dynamic and which decisively affect the drawing from our population's disposal income and the satisfaction of consumers' demands), the Trade Research Institute also systematically follows and analyzes ownership of durables. This is one of the most dynamic consumer areas, characterized by increasing sales and by its growing impact on the structure of spending. Durables represent roughly one-fifth of all retail sales and more than one-third of all sales of products other than food.

Durables are an important component of our living standard and an easily gauged factor, an explicit indicator, a yardstick for comparison and a measure expressing the level of various strata of the population as well as international comparison.

In order to analyze comprehensively the microclimate of living, the Trade Research Institute studied the following items:

--goods related to furnishing and equipment of housing units as living space (particularly furniture as well as interior accessories, lighting fixtures, wall covering, upholstery and drapery textiles);

--work-saving household appliances, namely,

  --appliances for food preparation and protection (for example, ranges, stoves, grills, refrigerators, electric kitchen appliances),

  --appliances facilitating housework (sewing and knitting machines, washing machines, irons, vacuum cleaners, lawn mowers, etc),

  --home management appliances (typewriters, minicalculators),

--appliances for heating of apartments and of utility water (stoves, [floor heating units], boilers);

--appliances for video and audio reproduction for leisure entertainment (television and radio sets, phonographs...);

--vehicles for personal transportation (automobiles, motorcycles, bicycles);

--second housing--recreational cabins or cottages and their furnishing with durables.

This system of objects forms a framework for individual and collective activities taking place in human microworld. The housing standard, created and influenced by those factors, is assessed on the basis of a common criterion for evaluation of the extent to which this environment contributes toward the all-around physical and mental development of socialist man. After all, an important repercussion cannot be ignored: that man the consumer is also man the creator, that he is one of the factors in the process of production and that he influences the creation of resources and the method of utilizing social production.

Durables play a significant part in forming the way the family lives. Their consumption is very closely linked with the running of the whole household and in most cases it satisfies the needs of all family members. On the other hand, the use of appliances is more or less determined by the way of living and by the operation of the whole household. Related daily activities and common aspects of the way of life in various families lead to relative homogenization of standard household furnishings. Conversely, differences in daily activities and in the way of life, in the extent and forms of the leisure time, lead to the differentiation of other needs.

For methodological reasons, in view of the accessibility and descriptive capacity of primary and secondary information, the group of goods related to household furnishings and the group of products of the machine engineering type have been studied separately; however, their problems share many analogical specifices.

The source of primary information in the system of products of the engineering type stems from six factographic research programs conducted in regular 3-year intervals from 1967 to 1982. The level to which households in the CSSR, CSR and SSR are equipped with more than 60 durables was ascertained according to their functional division by the method of inquiry and the technique of standardized personal conversation of the interviewers with the respondents in selected households. A system of about 2,500-3,000 households was selected at random for individual research programs.

The Development of the Level of Ownership in the CSSR from 1967 to 1982

In the following assessment of the development I shall use certain concepts that are not uniformly applied in theory and economic practice and, therefore, I consider it necessary to define them.

The level of ownership is understood as the share of households (in percent) which own at least one specific appliance; however, they may own more appliances of the same type. The level of ownership may reach a maximum of 100 percent--

when absolutely all households are furnished with a particular appliance. This is a quantitative indicator.

Multiple ownership means the level of equipment with a second or additional appliance.

The standard of ownership refers to a quantitatively qualitative concept. In addition to the level of ownership, it also expresses the quality of ownership, the so-called structure of the appliances in possession.

The limit of saturation refers to the limit of the level of ownership which the ownership approaches. Absolutely, it cannot exceed 100 percent, but it reaches lower values depending on the maximum level of ownership achieved by households. That value is relative in view of the whole complex of current conditions affecting the consumer, his attitudes, views, intentions and preferences. With a chronological factor the value of the limit of saturation may change according to the development of the factors by which it is affected. Its significance is theoretical, chronologically limited to a certain period of time, and cannot be regarded as an invariable value.

The analysis of the data from 1967 to 1982 demonstrates that the trends in the process of furnishing households with durables have continued and still continue, which means that in the overall survey, ownership of Czechoslovak households continues to increase.

--In case of the appliances as standard household equipment, the level of ownership has approached or already reached the limit of saturation. In 1982 a total of 95 percent of households owned a refrigerator, 94 percent a washing machine, 95 percent a radio (while, for example, 32 percent of households owned 2 radios and 22 percent more than 2 radios); the same share of households owned a television set and as many as 99 percent had an electric iron. The number of those appliances increased very slightly over that period: from 1979 to 1982 refrigerators by 3 percent and washing machines by 2 percent. Stationary black-and-white television sets declined by 5 percent in the 3-year interval between the last two polls, balanced to some extent by an increase in portable black-and-white television sets (5 percent). The level of ownership (87 percent) may include vacuum cleaners among standard household equipment. Sewing machines are a stagnating item (about 68 percent).

--A group of nonstandard appliances demonstrated a lower level of ownership. Examples of appliances which are dramatic latecomers in the process of ownership are tape-recorders (the share of their owners increased from 11 percent in 1970 to 37 percent in 1982) and automatic washing machines (which increased from 4 percent to 37 percent during the 1973-1982 period).

--Passenger automobiles and weekend cabins or cottages were studied as particularly expensive possessions whose ownership significantly affects leisure activities. In 1982 a total of 48 percent of households in the CSSR owned an automobile. The rate of ownership [of automobiles] is rising steeply (in 1967 only 12 percent). Ownership of second housing has been followed since 1973; in recent years its level has remained approximately the same--10 to 11 percent.

Cabins and weekend cottages are becoming places of the "second ownership process": 40-50 percent of them are permanently furnished with electric or gas stoves and refrigerators and more than 30 percent with irons, black-and-white televisions, portable radios and more than 20 percent with electric frying pans, lawn mowers, bicycles, etc.

--Among the very latest products one may follow the advance of the process of ownership only of color television sets (12 percent in 1982). All other "new" goods, such as electric ironers, drum clothes dryers, carpet beaters, dishwashers, trash compressors, are still in the initial stage of ownership. Some advance has been noted in case of freezers.

The share of ownership of individual appliances by households is presented in Table 1.

The structural development in functional groups of appliances confirmed a rising level of ownership and consumer preference for the latest, more advanced appliances with superior utility characteristics, in a situation where the product offering is not exceedingly attractive and where it hampers both the process of acquisition as well as the process of replacement.

--As for the method of heating in housing units, the number of housing units supplied from a central heating source has risen along with modernization of housing and with new housing construction. The share of housing units heated from remote, central or [floor heating] sources has more than doubled from 1970 to 1982 (from 27 percent to 65 percent). With the growing share of modern hygienic and efficient heating systems which expand the use of the entire housing unit, the share of locally heated housing units has declined from 70 percent in 1970 to 34 percent in 1982.

Table 1

Development of ownership of selected durables by households in the CSSR in 1967-1982

1. Appliance	1967	1970	1973	1976	1979	1982
2. Coal stove	69.7	43.7	41.2	32.4	26.2	20.-
3. Electric stove	15.9	8.2	10.3	19.3	16.6	18.6
4. Gas stove	27.1	30.3	29.7	36.8	47.-	47.4
5. Electric blender	x	27.2	29.4	36.1	45.7	49.6
6. Electric food processor	8.8	10.6	12.4	15.-	14.5	18.5
7. Refrigerator	47.4	70.1	78.9	87.-	91.8	95.1
8. Freezer	x	x	x	1.3	2.8	4.5
9. Electric boiler	7.8	12.-	20.7	30.8	31.4	38.-
10. Gas through-flow heater	10.6	13.7	12.6	14.-	14.9	18.8
11. Nonautomatic washing machine	80.1	85.4	88.2	77.8	73.7	70.8
12. Automatic washing machine	x	x	4.-	16.8	28.6	36.5
13. Washing machines--total	80.1	85.4	89.2	90.8	92.4	93.7
14. Vacuum cleaner	51.9	64.4	64.6	75.-	82.2	87.2
15. Lawn mower	x	x	x	3.5	6.-	11.2
16. Knitting machine	x	3.3	5.8	10.2	14.1	12.1
17. Treadle sewing machine	64.1	62.3	59.3	46.3	43.3	43.4
18. Electric sewing machine	2.6	5.-	8.9	17.8	23.5	26.7
19. Typewriter	x	x	x	x	19.5	21.2
20. Electric minicalculator	x	x	x	x	14.4	21.6
21. Automobile	12.4	19.-	24.9	37.1	44.5	48.3
22. Motorcycle	16.-	18.8	18.7	13.4	13.-	9.9
23. Adult-size bicycle	51.2	49.8	51.8	56.2	59.2	61.2
24. Children's bicycle	12.4	16.7	17.3	21.5	25.-	29.8
25. Black-and-white television	66.4	83.8	85.5	91.7	91.8	86.5
26. Color television	x	x	0.8	0.8	5.9	12.3
27. Table radio	91.6	64.9	55.8	54.7	53.2	50.9
28. Portable radio		32.2	43.1	59.7	64.9	68.2
29. Tape-recorder	x	11.2	16.8	27.8	34.-	37.3
30. Cabin, weekend cottage	x	x	6.3	9.7	9.9	11.4

31. x = Not investigated in pertinent year

In accordance with the increase in housing units with central or [floor] heating, the share of households supplied with hot utility water from a remote, central or [floor] heating source has increased; in 1982 such housing units numbered 27 precent, as compared with 20 percent in 1970. Furthermore, the use of boilers or through-flow heaters for the same purpose has also expanded (54 percent in 1982). Nevertheless, the share of households without hot utility water in that year still was 20 percent.

From a general perspective the development of ownership by households in the CSSR may be regarded as satisfactory, as confirmed also by a comparison with some European states. As for standard appliances, whether refrigerators, washing machines, vacuum cleaners, television or radio sets, the situation of Czechoslovak households is very good. Ownership of automobiles in the CSSR is higher than in other CEMA countries but considerably lower than in the capitalist states.

The offer factor is also significantly reflected in the age of the appliance in use. It should be noted that in terms of their volume and structure the offer of very many groups of products for a long time could not be regarded as the best; certain goods have been in short supply over an extended period and their utility characteristics have been lagging behind the worldwide progress (for example, consumer electronic appliances). Those facts are adversely projected in the age structure of the appliances in use.

The average age of goods increases with the chronological factor, which applies to all appliances under study--with a few exceptions where the data remain constant. Ranges, electric ovens and cookers, nonautomatic washing machines, separate centrifugal extractors, sewing machines, [one-stop] motor vehicles and adult-size bicycles, table radios, radiophonographs and typewriters have exceeded the 10-year mark of average age. Another large group of appliances nearing the 10-year mark consists of food processors, refrigerators, all washing machines and vacuum cleaners. Between 1970 and 1982, the average age of refrigerators rose by 3.6 years and that of stationary black-and-white television sets by 2.6 years, etc.

Less expensive appliances for conventional equipment were most often replaced several times, above all irons, bicycles, table radios as well as televisions (15 percent of families own their third or additional appliance of the same type) and automobiles (11 percent).

Among appliances which have already been replaced (the household is using its second, third or additional appliance of the same type), irons (69 percent) are in first place, followed by televisions (59 percent), adult-size bicycles, electric cookers, washing machines, table radios, automobiles (38 percent), portable radios, refrigerators, vacuum cleaners (32 percent), and motorcycles.

Naturally, the purpose of the production and marketing program is not to initiate artificial replacement drives, purchases of unnecessary appliances and consumption for consumption's sake, but [to encourage] sensible consumption according to the level of the development of our society. The use of obsolete and worn-out appliances is uneconomic, makes heavy demands on repair services, wastes power, time and effort--and affects the mood of the household.

Replacement is determined by several considerations--economic (the price of the appliance), functional (frequency of its use in relation to the utility life of the appliance), sociological (stratification of the market for a specific product, willingness and ability to replace it by the carrying consumer group) and marketing (variety of offer in view of the preferred consumer properties), and furthermore by the marketing tradition of the product and its popularity.

From the analysis of the level of ownership of durables in the 1967-1982 period we may specify certain positive trends of ownership:

--The level of ownership of the engineering type of appliances is very high and in case of standard appliances, it is comparable with--or even higher than--advanced European states;

--Because of the beneficial effect of economic factors, ownership continues to increase with the progression of time;

--The quality of ownership is improving. In all groups of products where the situation in the market makes qualitative substitution possible appliances with superior consumer properties are clearly preferred.

Nonetheless, some negative trends are also in evidence;

--The contentual aspect of the group of appliances at the disposal of a household is in some instances behind European development and does not correspond with the advances of R&D;

--Ownership of certain goods which signify major advances in the mechanization of housework is at a low level, for which the process of information, which is not coordinated with the introduction of goods in the market, in particular must bear the blame;

--Ownership of certain appliances means a return to those chores that used to be done outside (heavy laundry, sewing). Moreover, they are not done comprehensively--their mechanization is only partial (automatic washing machine--clothes dryer--iron);

--The extent of the acquired appliances is in certain conflict with the size of the apartments in current mass housing construction;

--The fact that some household appliances are being used only occasionally or not at all points to the continuous great effect of irrational motivation for their acquisition;

--The advancing age of the appliances as well as their unsuitable type structure may be economically disadvantageous and reflects the inadequacy of marketing programs and the tardy process of innovation.

Despite the very promising and rapid development of ownership, its high level and favorable structural advances, the process of ownership by our households cannot be described as absolutely positive. The debt of the market is evident from the low ownership level of new appliances and from the limited substitution of conventional appliances with more advantageous utility features that are desirable from the consumer's and society's point of view. In this respect it is imperative to raise dramatically the effect of factors that may have a positive effect on the situation.

9004
CSO: 2400/393

INVESTORS SEEN AS WEAKEST LINK IN CAPITAL INVESTMENT PROCESS

Prague HOSPODARSKE NOVINY in Slovak 29 Jun 84 p 5

[Article by Eng Vasil Ivanov of Chempik Design Engineering Organization, Bratislava: "The Investor -- The Weakest Link?"]

[Text] Decree No 105/1981, ZBIERKA ZAKONU FMTIR, of the former FMTIR on construction documentation defines the investor as "the organization...which prepares and supports the construction." Behind this laconic sentence is hidden the enormous scope of investor operations and the great responsibility of direct investors in the planning and implementation of investments. And we immediately run into a paradox, which is that the organization which is responsible for the quality and timely progression of the individual phases of the investment project from issuing the investment intentions to achieving the design parameters is the weakest link in the familiar triangle of participants in the investment process, the investor, the general contractor, and the supplier.

While the supply organizations and the design institutes continually perform their authorized tasks at a high professional level, for investors who do not have ongoing and extensive capital construction in the plan (and there are more and more of them) it will be something that they are only occasionally involved in. This logically means that they cannot form and maintain at the necessary level any unit which would be an equal partner with the other participants in the investment process. We have even created a category of "less experienced investor," but we do not speak of less experienced general contractors or suppliers.

In connection with assigning personnel to special units of construction participants, I would like to cite Paragraph 45 of Law No 50/1976, ZBIERKA ZAKONU: "Work connected with the planning, design, execution or verification of construction and which has decisive importance for the protection of society's interests in the construction process can be performed only by persons who have shown personal capabilities for it. Personal capability is understood to be that aggregate of theoretical knowledge, practical experience and skill which is required to perform the activity. The personal capability of individuals is officially confirmed and attested to by issuing personal certification. An

organization which does not have workers with the prescribed certification of personal capability for performing given work activities cannot perform those operations as of the date set in the executory regulations."

Responsibility in the Hands of Amateurs?

Unfortunately, with the passage of time we must state that we were not able to implement an executory regulation for certifying personal capability. This forces us to the logical conclusion that one of the most important sectors of our economy is being handled by workers without the desired personal capabilities, that is, by amateurs.

The main subjective problem which the investor has in relationship with the other participants in a construction project is that he does not always have available a unit to take care of executing the individual stages of the investment process at the desired level of skill.

So far we have not raised the function of the capital construction worker to a profession. Let me give a brief example. A capital construction unit needs to be staffed in the function of the investor's technical overseer for electrician's work. If, for example, we get a young graduate of a higher electrotechnical school, there is no problem with accepting him since he meets the prerequisites as a graduate of a higher school of the desired technical field. So it should not bother us that our new coworker never ran into even the basic ideas of capital construction at school. And so he starts to carry out a very responsible and demanding function without showing personal capability. It thus sounds a little sad to hear the familiar "He will learn with time..."

We often run into the attitude that investment operations cannot be taught in school and that the best school is practice. I do not agree with this view. It is unthinkable that schools train graduates for planning and carrying out capital construction so that they know each individual legal regulation perfectly. Legislative modifications are a reflection of society's needs and where our society is constantly evolving, the legal regulations must often also change. But schools must teach their graduates to think in the necessary terms for capital construction.

In my opinion, a worker in the investment sector should be a technician who thinks in terms of economics and knows the legal regulations. Some might object that every worker, not just in the investment field, must think in terms of economics. There is, however, a difference in the economic thoughts of, for example, a designer and a capital construction worker. The investment process takes in an uncompromising factor, time, which affects the dynamics and complexity of the investment project.

Conscious Neglect

On the basis of the above facts, I now want also to take a look at cooperation of the suppliers and importers in supporting the pre-design

and design planning of construction from another viewpoint. I do not want to bring up the obligation of suppliers and importers to cooperate at this stage of the investment process, but I do want to emphasize the basic duties of the investors in requesting and ensuring this cooperation. Unfortunately, many investors, consciously or partially through ignorance of their basic obligations, neglect this, which results in a noticeable superiority for the other participants in the investment process.

For the direct investor, investment preparations start with the issuance of an investment intention and are completed by an authorizing order. The planning preparations for central investors in cooperation with the other central organs is not the subject of this article.

Within the framework of investment preparations for construction, the investor takes care of:

--planning preparations,

--groundwork preparations,

--preparation of documentation, and

--organizational preparations, that is, cooperation with the general contractor and with direct suppliers in taking care of project preparations, discussions with involved organs and organizations, and ensuring that conditions are met for carrying out the construction and removing future obstacles.

It is not possible to judge the individual parts of investment preparations in isolation since they overlap in time (location and material). For example, in taking care of preparatory documentation, that is, project tasks or a study of a group of construction projects (again only project tasks), the investor has the obligation at the conclusion of his work to discuss the project task with the direct supplier and any important importers. The investor also has a similar duty in taking careof planning preparations, which is to discuss supplier-user relationships. Paragraph 20 of the decree on construction documentation therefore makes it possible to effectively combine these discussions.

Within the framework of investor preparations, the investor makes sure that the optimum solution is found to technical, technological, economic, social and other requirements which are expressed in the preparatory and project documentation.

The investor, in cooperation with participants in the construction project and other organs and organizations, takes care of working out project tasks returned for necessary research and study.

The decree on documentation of construction projects places obligations on the investor in Paragraph 16, Section 2, as follows: "...before

starting work on the project task, he must contact the supplying organization, or importer where appropriate, with whom he plans to work during construction and discuss and reach agreement with him on the type and extent of cooperative work in working out the project tasks and initial (first-stage) project work according to the appropriate regulations." In this case, the appropriate regulation is the decree by the State Planning Commission and the State Arbitration Organ of the CSSR No 48/1980, ZBIERKA ZAKONU on material accounting and discussion of supplier-customer relationships in the planning process. Paragraph 25, Section 6 of this decree assigns to the investor the obligation, before starting work on the project task, to seek out suppliers coming under consideration, he has the right for construction projects specifically included in the State Plan to request of his central organs that they designate suppliers and the central organs of the suppliers are obligated to designate suppliers with no unnecessary delays.

What we are talking about here is the basic duty of the investor whose performance affects the progress of work on the project task and successful discussions of the project task at the end of the work.

Unfortunately, not every investor organization meets this obligation, and we often see that the investors (and not just the "less experienced" ones) have already worked out the project task without having sought out suppliers to be considered before starting work on the project task, and they start expending enormous efforts directed at creating a supplier system. But it is already too late. Conscious or unconscious neglect of the investor's duties creates a situation which gives the supplier the upper hand.

When the Law Does Not Help

But in ensuring cooperation by importers, investors run into considerable problems. The decree on documentation of construction places on importers the obligation of offering the necessary submissions to work out the preparatory and project documentation. The importers are also obliged to discuss supplier-customer relationships in the planning process.

All of the hopes of the general contractor and the investor that the importer will provide data and information and project submission from abroad to help in working out the project task and the initial project are dashed logically by Paragraph 27, Section 3 of the decree on documentation of construction, which states: "Project submissions provided by the importer are binding only after the foreign contract has been signed."

Since data and information necessary for working out the project task and project submissions cannot be acquired from abroad free, the investor must take timely action to cover the hard currency charges and freight charges by the importers in the sense of Paragraph 73, Section 6, of the decree on documentation of construction. In cases of importation

of entire investment entities, Paragraph 8 of Federal Ministry of Foreign Trade Decree No 104/1983, ZBIERKA ZAKONU, is applicable where the customer queries the importer only after approval of the initial project.

In terms of the project task, the general contractor must clearly include the extent and time limits for providing the essential project submissions from abroad as required to work out the initial project.

On the basis of this data, the investor requests the Federal Commission for Research and Development and Investment Planning, on the basis of the announcement of 19 March 1980 by the former Federal Ministry for Technical and Investment Planning, for exceptions for independent contract negotiations for delivery of project submissions or, in extreme cases, actual deliveries before approval of the initial project. Even in such cases, the importation of machinery and equipment must be contracted in a way to ensure that it is not delivered sooner than called for in the plan for organizing the construction project. The Federal Commission for Research and Development and Investment Planning can grant exceptions only by agreement of the organ authorized to release hard currency.

As soon as the investor organizations meet their obligations in ensuring cooperation of the suppliers and importers in pre-project studies and project preparation of construction, the number of construction projects which the appropriate central organs rate as pre-project or unprepared projects will decrease.

6285
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SIGNIFICANCE OF INDUSTRIAL WASTE AS RAW MATERIAL

Prague STATISTIKA in Czech No 5, 1984 pp 229-235

[Article by Jaroslav Vrchota]

[Text] The Eighth Plenum of the CPCZ Central Committee* pointed out the basic and decisive directions for continued socioeconomic development. As the key task was specified "a high level of utilization of all raw and processed material resources, particularly metals, with gradual implementation of structural changes in metallurgy, a high degree of utilization of the base of raw and secondary raw materials, including application of technologies producing no waste in production" and the task of "protecting and improving the environment." Care for the environment was emphasized also by the Ninth Plenum of the CPCZ Central Committee in 1983.

The proceedings of the Eighth Plenum pointed out that organic linkage between science and technology with problems pertaining to improving the environment represents a categorical requirement for the present time.

A high degree of industrialization and its dynamism calls for ever-increasing encroachment upon nature. Billions tons of minerals are annually taken away from nature only to be returned in approximately the same volume as waste that changes natural components, water, the atmosphere, and soil.

Water occupies a special position among the components of the natural environment, because from the biological viewpoint it cannot be substituted by anything else. It not only forms a part of the amenities of life and habitat, but is also the basic raw material in many production sectors.

For all practical purposes, the only source of water in our country is atmospheric water. Since in per capital recomputation, we have annually less water at our disposal than many industrially advanced countries,

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*Report of the Presidium of the CPCZ Central Committee delivered by Comrade M. Jakes on 15 June 1983.

we built many valley reservoirs* to balance the deficit in water supply.

Our annual per capita consumption ranges around 350 cubic meters. Production of drinking water per capita per year is approximately 105 cubic meters. In the CSSR we annually draw more than 4 billion cubic meters from streams and les than 1 billion is obtained from subterranean sources.

We turn out approximately 1.5 billion cubic meters of drinking water per year and feed it into the public water distribution system. Losses in the latter amount to approximately 24 percent, mainly in the pipeline network. The remaining water is supplied to households (42 percent), industry (22 percent) and other sectors (12 percent).

Waste waters from the public sewage system are cleaned in 670 sewage treatment plants, which clean 71 percent of the waste waters discharged into the public sewage system and approximately 1 billion cubic meters (including waste water from precipitation). Almost 400 enterprises are connected into the public sewage system, of which 2,500 [sic] have their own waste water processing plant.

The pollution of our water streams is due approximately 45 percent to industry, 30 percent to agriculture, 15 percent to the populace and 10 percent to other sources.

Soil and Vegetation

The share of agricultural acreage in our country's territory (12,790,000 hectares) is approximately 53 percent. The remaining nonagricultural acreage is formed primarily by forests (some 77 percent), approximately 4 percent are built-up areas and the remainder is formed by other areas, including water areas.

The structure of our agricultural land resources is constantly changing at the expense of agricultural acreage, and the arable soil acreage is dwindling along with it. This development can be characterized by per capital acreage in ares:

Ares per capita of	1950	1960	1970	1980	1982
agricultural acreage	64.8	53.5	49.5	44.7	44.5
arable soil acreage	46.7	37.5	34.8	31.4	31.3

*The largest are: Lipno, Orava, Orlik, Slapy, Vranov, Jesenice and Nimice; the area of these reservoirs exceeds 500 hectares. The largest is the Lipno Reservoir, measuring 4,870 hectares in area. The total volume of all dams and reservoirs in the CSSR amounts to 4.4 billion cubic meters.

The share of arable soil in total agricultural acreage is approximately 70 percent, meadows and pastures from roughly 25 percent. The remainder is area covered by gardens, orchards, vineyards and hopfields. Reductions in productive soil are due to a considerable degree to mining and construction (public and residential, industrial, agricultural, communications, etc.) and it permanently poses the problem of increasing the productivity of soil resources.

The significance of forests and vegetation is multiplied by the fact that their 1 hectare cleans from the atmosphere 40-50 tons of dust per year, a forest absorbs as much as 80 percent of noise, etc. Just to give an example, it can be stated that the estimated damage caused by noise in the capital of Prague amounted to almost Kcs 200 million in 1981, without even taking into consideration the damage caused by vibration.

The atmosphere is polluted primarily by industry and transportation. Operation of motor vehicles alone represents 12-20 percent of all atmospheric pollution. The flight of a single aircraft over a distance of 6,000 km translates into a consumption of approximately 35 tons of oxygen, which represents its per capita consumption for a man's entire life. Similarly, a single automobile consumes in covering 1,000 km an amount of oxygen that is used by a man for respiration in an entire year. The atmosphere is being polluted by dust and oxides of carbon, sulfur, nitrogen, and other pollutants (lead, mercury). The key share of pollution in cities understandably accrues to transportation. In the capital of Prague, e.g., it represents 60 percent of gaseous emissions, the rest is produced mainly by heat generators.

Dust in the countryside and gaseous emissions produce a significant social and economic impact. Sulfur dioxide and other pollutants cause damage primarily by an increased rate of morbidity, in forest management and in agriculture. The following losses caused by an increased rate of morbidity were computed on the basis of Soviet methodology for the capital city of Prague:

--sulfur dioxide causes damage amounting to approximately Kcs 538 million,

--carbon monoxide causes Kcs 45 million worth of damage,

--dust fallout Kcs 154 million.

In addition, forested parks in Prague annually sustain Kcs 6.5 million of damage, and parks Kcs 3.8 million. Damage to agricultural production amounts to Kcs 33 million. The damage inflicted on fixed assets in Prague by corrosion was approximately Kcs 1.3 billion.

Approximately 75 percent of atmospheric pollution is the result of the most varied combustion processes. The share in the total volume of solid pollutants accrues by approximately 46 percent to thermal power plants, some 31 percent to cement mills and other industrial plants, 17 percent to household heaters and boilers and 7 percent to transportation.

The gravest pollution of the atmosphere is caused by sulfur oxides. The Presidium of the CSSR Government decided in 1981 to build an experimental desulfurization system based on a Soviet technical project for one 200-megawatt block of the Tusimice power plant. Budgeted expenses exceed Kcs 1 billion. However, the envisioned efficiency of the desulfurization process is 90 percent and, thus, interception of some 40,000 tons of sulfur dioxide which will be used to produce approximately 60,000 to 70,000 tons of sulfuric acid. The relatively high cost of the desulfurization system only servs to underscore the necessity for saving every single ton of coal. Saving 1 ton of coal represents at the same time a saving of 35.5 kg of sulfur dioxide which would deteriorate our environment.

In the course of the Seventh 5-Year Plan obligatory tasks for overhauling existing traps, separators and collectors on 14 blocks of four electric power plants were adopted. The discharge of solid pollutants will thus be reduced by more than 80,000 tons annually at a cost of approximately Kcs 200 million. Some 40 percent of forest acreage in the CSR is currently affected by industrial pollutants primarily under adverse weather conditions. Pollution of our atmosphere represents annual losses on the order of Kcs 30 to 40 billion as the result of morbidity, lower crop yields, losses in forest management, corrosion, etc. It is primarily for the protection of human health that a system was put into operation in 1981 in the North Bohemian lignite basin to signal the state of the atmosphere, and a nationwide signaling system is under preparation in the CSR.

Nevertheless, despite the many measures, gaseous, solid and liquid wastes and other pollutants are increasingly adversely affecting our environment and keep creating more and more problems. Some of them, however, can be solved expediently and within the framework of our economy.

In addition to obligatory legislative modifications of waste management as secondary raw materials, there is an increasing need for a general understanding of the changed position of secondary raw materials within total volume of sources of materials and energy. Waste reduction and its improved use as a raw material solves both the shortage of raw materials as well as the problem of damaging environment by landfills or liquidation of waste.

The important task of reducing the occurrence of waste with a simultaneously increasing utilization of waste as a secondary source of raw material concerns every citizen. The objective is the attainment of comprehensive utilization of the components contained in primary raw materials, transition to technologies that do not produce waste and to recycling of waste wherever such technologies cannot be introduced for the time being. A decisive role in the attainment of that objective will be played by the application of scientific and technological knowledge in the area of the technology, collection and utilization of waste.

Many measures pertaining to improved utilization of secondary raw materials have already been worked out for the period of the seventh and eighth

5-year plans. For example, in the remaining years of the Seventh 5-Year Plan, recycling of scrap glass will save around 33,000 tons of sand for glass melting, approximately 10,000 tons of soda and limestone and other raw materials.

In the CSSR paper industry, groundwood pulp will be replaced by waste paper that will result in savings of more than 25,000 tons of groundwood pulp and 17,000 tons of cellulose.

A more than fivefold increase in the recycling of textile wastes in the textile industry will produce savings of natural raw materials from both domestic sources and imports.

Recycling of waste will also increase in the woodworking industry. For example, the SSR woodworking industry will increase utilization of waste for technological and power generation purposes from today's approximately 70 percent to more than 90 percent.

Public collection of many waste raw materials has been increasing lately. After all, collected scrap plastics alone amounted in 1983 to almost 9,000 tons, showing an 8 percent increase over 1980 and an almost fourfold increase over 1975. Scrap glass collection produced over 59,000 tons last year, showing an almost 70 percent increase in collection over 1980.

The Waste Raw Material enterprises procured over 460,000 tons of waste paper, an there occurred a significant increase in the collection of rabbit pelts, including pelts from wild hares. On the other hand, there was a mild increase in steel scrap collection (to 579,000 tons in 1983), cast-iron scrap (over 7,000 tons in 1983) and waste textiles (22,000 tons in 1983).

These positive trends must find their reflection in production. Technological and technical support must be provided for circulation in production of both production-related and other wastes, their recycling for renewed use in production. Processing scrap from production, and also waste and refuse from households and nonproductive activities, increasingly represents one of the main sources for continued increases in production, while natural deposits are more and more playing the role of economic backup resources.

The necessity for gaining a clear view of the volume of industrial waste and scrap generated and utilized nationwide led to the carrying out of a singular statistical survey in all CSSR industrial enterprises, which was undertaken by the Federal Bureau of Statistics in cooperation with industrial sectors, the CSU [Czech Bureau of Statistics] and SSU [Slovak Bureau of Statistics].

This survey of the wastes and scraps generated and used in Czechoslovak industry yielded the basic quantitative data toward the end of 1982 with an outlook to 1985. The shortage of statistical documentation made it necessary in the past to work with estimates which tended to be low.

For example, the monitored data (from 1982, SPK [State Planning Commision]) indicated that the CSSR generated 75 million tons of solid waste annually, of which some 20 million tons accrued to flue ashes, slag, etc. (wastes from power generation), 35 million tons of wastes and scrap generated outside the power-generation industry, 3 to 3.5 million tons of communal refuse and 15 to 18 million tons in agriculture and the food industry. Use after recycling was estimated at 25 million tons of all waste annually, with a value of about Kcs 20 to 25 billion.

Estimates of waste generation and consumption differed considerably. For example, in 1983 (HOSPODARSKE NOVINY NO 31/1983), the total (not only industrial) generation of waste was estimated to be 25 million tons and waste disposed off in landfills at 300 million tons, taking up an area of over 8,000 hectares.

Statistical surveys in industrial sectors (per industrial enterprise, including concern enterprises) made it possible to upgrade the qualification of wastes from industrial production and the measure of their utilization.

Czechoslovak industry generated in 1982 520 million tons of solid wastes (103 million tons without overburden), over 1 billion cubic meters of liquid wastes and approximately 46 billion cubic meters of gaseous wastes. Industry utilized 18.2 million tons of the solid waste it generated and 29.2 million tons of waste were sold or turned over for use without payment. Thus, the total (without overburden) of solid waste generated by industrial operations (45 percent) that is reused amounts to over 47 million tons. Industrial scrapyards which are still active, of which there are 608, hold a total of over 600 million tons of waste and take up an area of 5,000 hectares.

In 1982 the CSSR per capita share in solid industrial waste was 33.9 tons, including 27.2 tons of overburden in lignite strip mines and 6.7 tons of other industrial waste. The 1982 per capital share of liquid wastes was 66.1 and that of gaseous wastes 3,000 cubic meters.

The share per square meter of territory in 1982 was 4.1 kg of solid waste including overburden (0.8 kg without overburden), 7.9 liters of liquid wastes and 0.4 cubic meters of gaseous wastes that originated in industrial enterprises. International comparison in this area is partially facilitated by published competent estimates for countries of the European Economic Community, according to which the annual volume of waste is increasing by approximately 3-5 percent; in per capita recomputation it amounts to 5.8-7.0 tons of waste per year, i.e., roughly the same amount of solid waste (without overburden) as the per capita share in the CSSR (6.7 tons). The annual share per square kilometer of territory in the EEC countries is 1.0-1.2 kg of all waste, in our country 0.8 kg of industrial waste (without overburdening).

From the viewpoint of the degree of utilization of the generated industrial waste it is solid waste (without overburden) that is most widely utilized. Overburden, the share of which in generated solid waste

is 80 percent, is practically not used at all, even though it contains brick-clay, clays, sintering clays, diatomaceous earth, bentonite, kaolin, sands and gravel sands. Dumping on spoil banks leads to random mixing of these raw materials, making them practically useless. A low degree of utilization also applies to flue ashes from electric power plants (almost 90 percent destroyed), cinders (almost 70 percent destroyed) and other mineral wastes of solid consistency.

An overall outline of the survey data is provided in the following table:

Table 1. Occurrence and utilization of waste in CSSR industrial enterprises in 1982

Consistency (of waste and byproducts)	Unit of Measure	Occurrence in 1982	Liquidation in 1982	Use of 1982 occurrence (percent)
Solid waste incl. overburden	mil.t	520.4	473.0	9.1
of which solid waste without overburden	mil.t	103.0	55.7	45.9
Liquid waste	mil.m^3	1016.0	950.9	6.4
Gaseous waste	bil.m^3	46.0	37.1	19.3

Processing of the results of the first survey of secondary raw materials in Czechoslovak industry yielded an adequate amount of information in the requisite detail. The overall regional outline of the occurrence of solid and liquid industrial waste appears in Table 2. The data set is published in CESKOSLOVENSKA STATISTIKA, Ref No 2656/83, Series Prumysl, Serial No. 3.

Table 2. Occurrence of industrial waste by regions (in percent)

Region (Area)	Solid waste incl. overburden	Solid waste without overburden	Liquid Substances
Capital city of Prague	0.2	1.2	1.5
Central Bohemian Region	2.2	11.2	5.6
South Bohemian Region	0.7	3.5	3.1
West Bohemian Region	16.1	5.5	6.4
North Bohemian Region	68.2	16.8	14.4
East Bohemian Region	0.8	4.0	8.4
South Moravian Region	1.3	6.5	5.0
North Moravian Region	6.5	32.8	8.2
SSR capital of Bratislava	0.5	2.7	22.8
West Slovak Region	0.5	2.5	6.7
Central Slovak Region	1.3	4.7	10.4
East Slovak Region	1.7	8.6	7.5
CSSR total	100	100	100
of which: CSR	96.0	81.5	52.5
SSR	4.0	18.5	47.5

With regard to the outlook of industrial enterprises, it can be envisioned that the generation of solid waste will show in 1985 an overall increase by 9.3 percent in comparison to 1982. This is due primarily to increases in the generation of lignite overburden. While the extraction of 1 ton of lignite in 1970 called for disposing of 2.1 tons of soil, in 1983 it calls for as much as 2.6 tons. Industrial enterprises estimate a 4 percent decrease in the occurrence of liquid waste and almost a stagnation in the generation of gaseous waste. Changes are also expected by industrial enterprises to occur in the recycling of waste. Among quantified waste a more conspicuous shift will be achieved in the utilization of generated solid waste (index 112) (see Table 3).

Table 3. Occurrence, liquidation and percentage of use of solid industrial waste in the CSSR in 1982

Item	Occurrence	Unused and liquidated	Percentage of use
Total scrap iron	6,940	56	99.9
of which:			
--unalloyed steel scrap	5,174	22	
--alloyed steel scrap	340	1	
--cast-iron scrap	554	2	almost 100
--other util. steel scrap	339	3	
--iron scale	482	8	98.3
--discharged iron	21	20	4.8
Total nonferrous metal scrap	176	0	
of which:			
--aluminum scrap	79	0	
--copper and alloy scrap	76	0	almost 100
--zinc scrap	7	0	
--lead scrap	6	0	
Total nonmetallic waste	17,502	6,440	63.2
of which:			
--from wood processing	5,257	883	83.2
--from food industry	4,597	897	80.5
--waste sludge	4,025	3,325	17.4
--from chemical production	2,842	1,012	64.4
Total mineral waste	512,364	475,172	7.3
of which:			
--overburden	417,378	417,268	almost 0.0
--other waste from coal and ore mining	34,982	18,779	46.3
--waste from power and heat generation	23,840	19,903	16.5
--waste from production of construct. materials and from indust. const.	25,339	15,812	37.6
--waste from metals prod. (metallurgy)	10,331	3,314	67.9

Potential utilization of solid waste that used to be eliminated up to now is envisioned by enterprises particularly in the construction industry (55.0 million tons), in other industrial enterprises outside of economic production units (5.3 million tons) and agriculture (5.7 tons). The share of waste which in the opinion of enterprises is suitable for power gneration purposes is very low. However, with regard to 73 percent of liquid and 90 percent of gaseous liquidated waste, the enterprises do not know their areas of potential applications; the share of this waste in solid waste (without overburden) is only 31.2 percent (85.3 percent including overburden).

Enterprises estimate that the recycling of liquid waste will increase by 5 percent and that of gaseous by 15 percent. However, in view of the above-mentioned degree of utilization in 1982 this dynamism can be considered low. The reason (advanced by enterprises) for the low utilization of liquid and gaseous waste is the lack of knowledge of a technology for obtaining a high-value raw material and unprofitable production. However, this latter factor is assuming a new dimension month by month. After all, it is time for use to realize with Marx that "neither the entire society, a nation, nor all contemporary societies together are not the earth's owners. They are merely its keepers--they are only provided its use and, as boni patres familias, should leave it improved to future generations."

8204
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ROBOTIZATION ACCELERATION URGED, PROBLEMS VIEWED

Prague RUDE PRAVO in Czech 1 Aug 84 p 3

[Interview prepared by Vaclav Marek: "Accelerate Progress of Robotization"]

[Text] Robotization has ceased to become the object of the work of think tanks and has started to be directly implemented in practice. But are enterprises prepared for this? Experiences to date with the implementation of robots are far from unanimous. We discussed the areas that need more attention with Eng Vladimir Cop, CSC, vice-chairman of the State Commission for Scientific-Technical and Investment Development; Eng Jan Zan, CSC, director of the Research Institute for the Metal Industry in Presov; Eng Milan Strojny, CSC, from this same institute; Eng Milos Fibiger, chairman of the commission of the Czech Council of the Czechoslovak Scientific and Technological Society for Automation and Robotization; Borivoj Havlicek, forging line operator at Velesin Jihostroj; and Eng Michal Vaskovic, senior technologist of the Martin ZTS [not further identified] general directorate.

[Question] The development of robots in this country is very widespread, with 12 enterprises involved in production in some way. Despite this, the path to the utilization of robots remains very complex. Is this not the result of the fragmentation of development and production facilities?

[Answer] [Zan] When in 1975 we initiated at our institute the state program for the development of science and technology, the objective of which was to develop from our own component base a number of prototypes of industrial robots, we lagged at least 10 years behind certain industrially advanced countries. For this reason production had to follow development as closely as possible. The conditions, however, had not been created for this concentrated production, i.e., there was no factory to produce just robots. The most rapid and acceptable solution was to initiate their production in those plants which produced the major components. This is why the production was decentralized, but I think that given the circumstances this was the proper solution.

[Strojny] There is no reason to fear that the current system of organization might in some way retard the development of robotization. Under the state program robots or robotized workplaces are being developed at the Research Insitute for Machine Building Technology and Economy, in the Czechoslovak Motorcycle Works, and elsewhere. The development is being coordinated by the Presov Research Institute for the Metals Industry [VUKOV]. The development and production of special purpose robots at individual enterprises as a part of sectoral or enterprise tasks is another matter. In these instances the possibilities for coordination are somewhat more complex, and it is necessary on a case by case basis to decide whether or not we really are duplicating efforts at two different lovations.

[Fibiger] Comrade Zan mentioned the assignment of production to those producers who already had some experience with certain components. This was certainly the proper idea. The only problem was that the hydraulic, pneumatic and electrotechnical component industries are among those with the worst availability problems. And on top of this, these enterprises were now to assure the production of robots as well.

It is no wonder that they had neither the facilities nor much of an interest in doing this. Now we are producing the same type of robots at several places. For each producer it is a peripheral program, so there are understandably problems with the production price and with quality. I think that we do not have to be content with the current structure of the production base. Today we have, for instance, six types of welding robots, but not a single one is fully operational. Does this kind of competition make sense? Would it not be more sensible to concentrate our efforts, complete and begin to produce successfully at least one model?

[Question] In the future we should choose producers who will concern themselves with robots alone and their associated peripherals. At the Detva ZTS a new factory, called Robot, was to be built, but it took 3 years to submit the investment plan. Was this the main reason why construction was delayed?

[Answer] [Vaskovic] I think that there are more reasons for the construction delays at Detva. I would not put all the blame on the economic production unit (VHJ). We are trying to eliminate the shortfall and provide for the production of the PR 32E robot at other locations. So far we are succeeding, even though the production is in the form of piece work. But regarding the fragmentation of effort, in our VHJ we produce robots according to VUKOV documentation, but we do our own development work as well. Why? We need robots, and when they are not available as finished goods we must initiate our own development effort, and I think the same is true of other enterprises.

[Cop] We must bear in mind that we are evaluating just 3 years of the start of the large-scale production of robots in Czechoslovakia. I have had the opportunity to tour numerous factories worldwide, and in the first 3 years no firm has been able to produce more than 50 robots.

We are pursuing two objectives in the construction of the production base. We are locating production at or near where the components are manufactured. There are also enterprises whose output will not be saleable without robots. For instance, Snina Vihorlat manufactures pressure presses for which it requires manipulators. Without them it would not sell a single machine. It must be in the interest of this enterprise to develop the conditions for robot production. In other words, we do not care who produces robots, but only what sort of final output is provided. We have heard how new facilities have fallen 2 and 3 years behind schedule. This is not a failure of the conception but of its application. The second issue is that in Czechoslovakia there is too much production of special purpose robots, the number of which now exceeds our objectives by 600 units. We should develop a line of robots, not only for this country but within CEMA as well. The upshot is that there are problems with the production base and we want to deal organizationally with them during the Eighth 5-Year Plan. Consideration is being given to the possibility of creating new VHJ or research-production associations which would provide assistance precisely in the area of modules.

But currently there is quite another problem. The fact of the matter is that there is often no market for the production. The users are not ready. We have not even been successful in introducing robots on a group basis at new capital facilities. For instance, an enterprise such as Koprivnice Tatra actually has no robots. It must be openly stated that this is to some extent the fault of unsophisticated management. After all, past directives have worked against this type of thing by forbidding employees to design unproven technology. For this reason, a new investment decree is being drafted which should provide greater opportunities.

[Question] Why are enterprises reluctant to introduce robots? Can their low reliability be one of the reasons?

[Strojny] It is not a problem to produce a quality robot, once one has at his disposal quality component parts. But they must be of higher quality than those currently being offered by our suppliers. We cannot increase reliability over that of the component parts. At the development level, when a designer is making calculations from information about drives and electronics to determine a theoretical reliability figure, we are recording only 50-70 percent of the mean time between breakdowns of state-of-the-art machines. Some control systems are performing at only 40-60 percent of their calculated reliability.

[Zan] So far our development of robots has had to depend on components that have not been designed especially for robots but for computers or numerically controlled machines. At the same time priority development of bearings, drives for pneumatic components, dampers, etc., was initiated. This development has not yet been completed elsewhere, but in the near future the investment we made in the component base should begin to pay off. The CEMA objective for the 1987-1990 period is to achieve control system reliability in the range of several thousand hours. The component base is not the only sector we will have to prepare

for this. It has been our experience that a robot of the same type can work in one location for 400 hours without major repairs while the owners are looking for service on the same machine in another location after only 200 hours. It is our opinion that this is due to failure to comply with technical discipline in the production of robots and control systems.

[Havlicek] This has also been our experience. At Jihostroj we have a lot of robots by Czechoslovak standards. The new forging line is still only in test operation, but I can confirm that we are having a lot of problems with certain PR 16 robots, whereas the same model serves us very well at a different location. Analysis has shown that breakdowns are caused to a large extent by production imprecision, steamming from the fact that some groups have been well trained in machine building practice while others have not been. The quality of production has not yet been stablized.

[Fibiger] There is quite disparate information available about quality. At the Mlada Boleslav Automobile Works national enterprise [AZNP] a PR 16 robot of the type mentioned by Comrade Havlicek already worked 15,000 hours. Conflicting information comes from the fact that we have really not been successful in maintaining quality at a high level. The other side of the story is that there are often not enough personnel at the user's operation who are qualified to learn how to operate a robot.

[Havlicek] That is a good point, but the producers are going to have to make allowances for this. They are the ones who know the machine best. And by the way, the maintenance manual we received from the producer was inadequate. We should be consulting with them more on this issue, as it has not been well enough worked out as yet.

[Vaskovic] I think that a lot can be done in the area of reliability through contact between the user, producer and designer. We had trouble with the PR 16 robot initially as well but were able to resolve it through close contacts with Presov VUKOV, which took care of the necessary repairs. Designers should make more frequent visits to users to inquire about their experiences. We had the most difficulty with the control systems which were supplied by Presov Dukla Machinery and Automation Plants [ZPA]. This caused us to set up a brigade to deal with reliability problems, and it has proved to be a good decision for us.

[Strojny] Control systems and sensors will dominate robotics in the future. I have said that in terms of reliability we are sometimes at the lower limit of the acceptable. At present developmental efforts are proceeding very slowly and concurrently at many locations. Whoever has undertaken to produce a robot has also gotten involved in developing control systems. There are almost no experiences from one work site that can be transferred to another. Everyone basically duplicates the same process, with the same components, with the same level of reliability, so we should not be surprised that there are no substantial differences in reliability. What then should be done? We have adopted the concept

agreed upon by the Design Council of CEMA and will be developing and producing primarily individual terminals and modules especially for robots, which then will give other organizations the possiblility of assembling what they need from this inventory.

[Cop] Reliability is one of the weaknesses generally in the development of our products. One-time measures do not help us, the matter must be dealt with comprehensively. We, of course, will demand from the producers an improved component base, but we should also be aware that greater expenditures will have to be incurred for technology, materials and other testing equipment. Why do robots sometimes function for 100 hours and sometimes for 300? This is not a matter of the components. We have numerous examples where reliability has improved by the simple reprogramming of the robot. The comrade from Jihostro has also rightly brought up maintenance. This is also an area that is not taken care of in all instances.

It makes sense that quality control systems should also be introduced by central agencies. In cooperation with the Federal Ministry of the Electronics Industry and the Council for Normalization and Measurement, we have developed a program for increasing the quality of electronics industry products, and will have to expand it to cover a portion of machine building output. This will mean that a number of plants will have to get used to a higher level of state testing while simultaneously improving their equipment, diagnostic techniques and their testing methodology.

[Question] A robot must be profitable for an enterprise, yet at current prices this is not the case for users. Do you think, perhaps, that an expensive robot is attractive?

[Answer] [Vaskovic] An M63 manipulator which we produce costs about Kcs 400,000, depending on how it is set up. The PR 32 robot is more expensive than this. It is a lot of money. But the control system itself accounts for more than half of this final price. In comparison with imported robots, this is way too much. Robotized worksites for welding come in at Kcs 1.2 million which, making sensible economic assumptions, means that the payback period is 8-9 years, or longer than the life expectancy of the robot itself in many instances.

[Strojny] At Detva ZTS we are now paying more than half of the overall price for one item -- the control system. Why is this so? Is not this kind of a price for the control system out of line? After all, the price of electronics components has declined, has it not? We have concluded that while the components have gone down in price the modules into which they are installed have not declined that much themselves. The overhead for module production remains high. For instance, a single-panel microcomputer costs Kcs 20,000, but the components do not cost more than 25 percent of this total. Where, then, can further price reductions come from? When there is a lot of labor involved, the components do

not contribute much to the final price. It is therefore necessary to concentrate production, and to specialize specific terminals.

[Zan] It must be stated that the state agencies have been supporting the objective of economic stimuation for robotization development. The options of dual pricing, accelerated depreciation and favorable credit terms are offered. It is unfortunate that the producers themselves have improperly understood this objective. The difference between production costs and selling price is very low, fluctuating between 7 and 20 percent, depending on the drafts that were presented to the Federal Price Office. It would be in the interest of the users to reduce these prices by 25-40 percent. This clearly reflects a fear that after 4 years the producers must reduce their costs to the level of the sale price.

[Cop] It is very difficult to evaluate the economics of an issue based on only a few dozen units. Today, for instance, subsidies fluctuate around the 8 million koruna level. The problem is that the subsidies are for robots only, but a robot without its auxiliary equipment is not good for anything. We must amend the decree of the Federal Price Office, then, to grant subsidies for entire work sites, not just for the robots. But there is another matter that, as been mentioned by Comrade Zan, namely that after 4 years the producers must lower their costs because we are not in a position to subsidize them indefinitely. By the same token, the user, if he has received a subsidized modern workplace, must commit himself to using it for at least two shifts. But producers have been reluctant to agree to this completely understandable condition. The result is that we are losing the opportunities offered by this decree.

[Question] I still have the impression that many difficulties come about because the technicians are inadequately prepared to deal with robotization. What training is given to senior managers?

[Zan] I would stop at the experts. It is not uncommon to hear criticism of the poor level of assurance of design on activities. At present a user must to a large extent fend for himself. Until 1980 we had only 30 employees at the institute engaged in design work. Now there are 150-160, but this is still too few to meet the need. The idea was broached of creating an association, Robotech. It's purpose? To coordinate design work, make optimal use of technical documentation, to avoid the duplicate development of something that had already been produced and tested. There are currently about 20 organizations and 210 workers in this volunary association. To be sure, our first objectives for development have not been met as we had hoped. The problem does not lie so much in a lack of workers but in funds to carry out the work plan. It sometimes happens that a specific VHJ will set aside space in the work plan, but will use only about 30 percent of it.

[Havlicek] We had personnel who were for the most part trained on digitally controlled machines. We had some problems with machinery maintenance which required a lot of effort on our part to straighten out,

and which might have led to problems with the proper adjustments and the like. We received no training in these areas from Presov VUKOV.

[Fibiger] Most managers, in my opinion, underestimate the difficulties of automation. At one time a program was adopted that provided for the retraining of 5,000 designers by 1985, but the provisions were never made for it. At the same time, experiences indicate that a number of projects are ineffective for the simple reason that the designers are incompetent. And who today takes care of advisory services? Basically only Presov VUKOV, although it has not been successful in building branch offices in Prague and Brno with the necessary capacity.

[Zan] In Prague there are currently 12 people at the branch office. This is too few. Next year we should have about twice this number, but will be running up against work force regulations. We will need to have the understanding of the appropriate organs on this matter.

[Fibiger] The situation in Prague is truly unsatisfactory. It is not only a question of increasing the numbers but also of the proper utilization of the people who are there. If we are able to set up a joint Soviet-Czechoslovak design and planning office, why have we not been able to set up an associated workplace in Prague? To be sure, the Research Institute for Machine Building Technology and Economics is there, as are the Czech College of Technology, Kovoprojekt, Inpro, Pikaz, Hutni Projekt, all of which have experience with robots, but each in their own field exclusively. I have encountered a situation in which two organizations in the same building were engaged in robotization, but did not know of the existence of the other.

[Conclusion] How then to answer the initial question? This discussion has shown that only the first steps have been taken in the development of robotization, but that today without robotization it is impossible to conceive either of the further development of the production base or of the increased productivity and humanization of work. The level of success, at the same time, will depend not only on "cheerleading", but above all on the thorough, material fulfillment of specific research and development and production plans.

9276
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PRINCIPLES, PRACTICES OF CREDIT POLICY

Budapest SZAKSZERVEZETI SZEMLE in Hungarian Jul 84 pp 14-21

[Article by Dr Laszlo Body, managing director of the Hungarian National Bank: "Principles and Practices of Our Credit Policies"]

[Text] The credit policy is a tool which helps in reaching the general economic policy goals, supports and at the same time also controls it from the financial side, and is the practical implementation of the monetary policy. From this definition follows that formation of the credit policy (development of the credit policy concept, then definition of the credit policy guidelines) is done simultaneously with the national economic plan, as part of the financial planning.

Financial planning is an important area of the national economic planning work. It analyzes the harmony of the economic policy goals from the financial angle, creates the foundation for and supports the projected development. Financial planning is an expression of growth and change projected in the material processes (expressed in terms of natural products, that is, in utility values) in terms of money (value), in other words, it is the measure of the tools needed to implement the plan, of the utility values and of their utilization, in terms of value.

The credit policy defines the guidelines to be followed in the given plan period from the side of the financial processes as part of the financial planning. By evaluating the sources of credit for the given plan period, and by considering the amount of credit which can be spent on developing the national economy, it has an important role in preserving and reestablishing the national economy's financial equilibrium.

Development of the credit policy concept and on the basis of this the development of credit policy guidelines are done parallel with the medium-range national economic planning. With knowledge of the economic policy concept which forms the foundation of the national economic plan, the Hungarian National Bank [MNB] develops its ideas concerning the financial policy and credit policy concept, and then the credit policy guidelines.

The guidelines--unlike the credit policy concept which designates the main directions, the strategy of "politicizing with credit"--also contain concrete behavioral standards (identification of the goals to be supported and the ones to be held back, detailed listing of requirements and conditions) as well as numerical proposals for the credit budget.

The credit policy guidelines specify mandatory rules of behavior for the entire banking system. Therefore the president of the Hungarian National Bank--for the purpose of uniform and full implementation of the guidelines--specifies the rules to be mandatorily observed also for the other financial institutions.

Structure and Contents of the Credit Policy Guidelines

Structurally the credit policy guidelines can be divided into three main parts:

1. Mandatory rules of behavior for the banking system (the actual "guidelines");

2. Credit budget which can be awarded for investments during the given plan period;

3. The national credit balance plan which shows the changes in the amounts of credit awarded and the sources of credit.

The mandatory behavioral rules for the banking system, that is, the guidelines

--determine those most important economic policy goals which the banking system helps implement by extending credit (these are, for example, transformation of the production and product structures, improvement of the balance of payments, rationalization of energy utilization, etc.), as well as the goals which cannot be supported with credit;

--generally and specifically define the credit granting behavior to be followed in the area of financing the developments (investments and accumulation of revolving assets), the subsidies (preferences) and limitations (restrictions);

--the system of requirements for "politicizing" with revolving asset credit which can be issued for the purpose of financing production and sales; the general and specific conditions for granting credit;

--the system of conditions for loans to be made to the population;

--the sizes of interests which can be charged and paid for loans and deposits (the interest rates).

Implementation of the goals of the Sixth 5-Year Plan, and within this the 1984 annual plan--improvement of the national economy's equilibrium position and the preservation or improvement of the domestic supply level--require

efficient use of the production factors and significant growth of the foreign trade performance capability. In the interest of reaching these goals the Hungarian National Bank--in accordance with the credit policy guidelines approved by the Council of Ministers--proceeds as follows during the course of extending credit:

1. It extends credit to creditworthy economic operating organizations and for the purposes of those economic activities which assure efficient utilization of the production factors and manpower--expressed in terms of profitability.

2. In financing developments and current production it gives preference to those credit applications which are aimed at increasing the export merchandise base and improving the balance of payments equilibrium.

3. In addition to own funds and other resources of the same consideration, it considers the bank credit as the primary financing source for investments made by the economic operating organizations.

4. It applies credit lending restrictions--specified in a separate procedural order--toward enterprises classified as having low efficiencies.

In the interest of implementing the credit policy guidelines the Hungarian National Bank supports the work of organizations performing the activity of financial institutions by advice and suggestions, and keeps informed to the necessary extent about their activity.

The chapter entitled 'Development Loans' in the credit policy guidelines summarizes those mandatory principles which are to be implemented during the course of evaluating all loans for development purposes. For example, the bank makes loans only for efficient and profitable developments, to supplement the enterprise's own money resources, making advances for the development funds to be formed in the future.

It can be considered as the general condition for development loans that the bank can make loans only for the purpose of implementing well prepared investments which satisfy the requirements of economic development. The investment must assure the efficiency and profitability specified for the given branch; in evaluating the loan applications, etc., it gives preference to certain selected enterprise goals (energy saving, production and sale of export-oriented complex production and service systems).

Profitability is specified by the so-called means-proportional profit indices broken down to the depth of sub-branches in the credit policy guidelines. The means-proportional profit is the index which expresses how many percent profit the total invested means value will produce when the investment becomes operational.

The banks help with preferential credit conditions those development goals which coincide with the national economy's and the economic policy's emphasized goals, and by advertising the preferences, they encourage the investors to implement such goals.

Among others, improvement or assurance of the equilibrium of the balance of payments is an investment goal supported by the giving of preferences. In the interest of this the bank by preferential loan conditions encourages those investments which result in expanding the production of merchandise funds which can be sold advantageously (profitably) on all markets (the so-called convertible merchandise funds), and in expanding the services which earn foreign currency. In the same way it also supports those investments which make long-range and profitable savings of import possible.

The bank ties the preferences applying to the loans to strict conditions. Thus, for example, during the loan's lifetime the investment must every year produce the promised (pledged) additional foreign currency income. The expenditures incurred during the course of implementation (the so-called execution costs of the investment) must be recovered within 3 years from the net foreign currency yield. (Net foreign currency yield: the foreign currency income achieved by the investment, less the foreign currency and foreign currency-type expenses incurred during the course of implementation and operation.) It must be achieved that the products produced also be profitable in terms of foreign currency.

In the cases of many kinds of (preferred) investments which can be given preference this preference can in part be the repayment from interest, and in part a longer than general repayment time for the loan.

The credit policy guidelines also list those goals and circumstances in which cases the bank must limit making investment loans. Thus, for example, investment loans cannot be made in Budapest and its vicinity for manpower-intensive investments. At this time it is impermissible to make loans for building office buildings, headquarters buildings and all other objects under prohibition, as well as for computers purchased for capitalist foreign currency.

Credit Policy in 1984

The goal of the 1984 credit policy continues to be implementation of the domestic and foreign equilibrium goals. In the interest of fulfilling the national economic plan--further solidification of our international liquidity--it is necessary to decrease the amount of debt. Because of this we must achieve a trade surplus of $700-800 million in the convertibly accounted relationship under conditions when the effect of last year's drought can still be felt, and at the same time we can not expect significant improvement in our sales opportunities either. In the ruble accounted dealings the basic goal is implementation of an equalized payment balance.

It is very important that during the course of the year the imported materials and parts be available in the necessary quantity and on time, making continuous production, export and domestic supply possible. Full implementation of the production and distribution goals, decreasing domestic utilization (primarily by means of holding back investments, while consumption is maintained at level), and maintaining the ratio between domestic production

and utilization are essential tasks. This year--due to meeting the equilibrium requirement--we must continue to maintain the regulation of purchasing power, and the requirement of making payments after the enterprise development funds (sequestration).

The limitations within which the credit policy must operate represent an even more difficult task to the bank than before. Since investments in the socialist sector must decrease this year by 2-3 percent compared to the 1983 plan and by 10 percent compared to the actual volume, the bank's investment loan opportunities cannot increase. The volume of investment loans can increase by 1 billion forints as the difference between 22 billion forints of funding and 21 billion forints of payments. This lending opportunity is tied up by the already accepted obligations and known credit needs. In the interest of creating a minimal opportunity for movement the bank is reviewing the credit contracts made earlier and wherever possible it will take steps to cancel a portion of the loans or reschedule them for a later time.

In 1984 the support for developments which promote the foreign trade balance stands in the focal point of making investment loans--thus, primarily those which promote the increase of export and economical replacement of import, as well as decrease the national economy's material and energy consumption, contribute to the production structure's transformation and to the fulfillment of our international obligations.

Because of the narrow credit opportunities preference is given nowadays in making investment loans, during the course of competitive evaluation of loan applications to those smaller developments of supplementary and reconstructive character--even among the profitable investments--which can be implemented quickly, recovered quickly and make repayment of the loan possible in as short a time as possible.

It is a national economic interest to use the loan opportunities provided by the international financial institutions to as great an extent as possible, in properly prepared development programs. The bank is paying special attention to such developments financeable by the World Bank as the development of grain production and storage, the energy rationalization program, and more recently the export expansion and industry modernization program. The opportunity has opened up for taking out significant amounts of loans for all three programs.

This year--in the interest of implementing our goals--we are planning to take on additional loans. The World Bank loans are advantageous to us because the programs supported by the World Bank coincide with the national economy's development goals, we can expect loans for these with certainty, the loans are long-range (15 years), and their interest conditions are relatively favorable. Beyond this, by virtue of our membership in the World Bank the Hungarian enterprises can participate in the tender-negotiations of investments financed by the World Bank. In relation with this the MNB has introduced a new computerized service under the name "Bankinform." Through this the economic operating organizations--for a

a certain cover fee--receive those informations about facilities financed by the World Bank which can prove important to their successful preparation for the competitive negotiations.

During the course of issuing revolving asset loans the bank endeavors to improve the level of economic operation of the enterprises, strengthen the financial discipline and collect the demands by stimulating strict behavior in the use of credit. The bank takes particular care to promote improvement of inventory management through its practice of making loans for revolving assets.

Within the framework of making short-range loans for revolving assets the bank, by giving consideration to the requirement of national economic balance, insures the money requirements for handling production, inventory building and sales, and financing inventories which are needed for seasonal reasons. Through the expiration of credit it stimulates the decrease of unnecessarily accumulated inventories and acceleration of the collection of demands, makes it possible to exploit the business cycle advantages of import and export, encourages cutbacks of unprofitable production and promotes the strengthening of contract discipline.

This year in the interest of supporting efforts aimed at improving inventory management--for those production equipment and foreign trade enterprises which accept unneeded supplies from the enterprises to use and sell--the bank offers medium-range loans which can be repaid without the use of the development funds (from sales income).

The planned change in the amount of revolving asset loans--related to the economy's growth rate--is 15 billion forints in 1984. This means that in accordance with the general practice of making loans for revolving assets, continued narrow liquidity can be expected since the Bank consistently evaluates the enterprise loan applications and seasonal fluctuations and will satisfy them in a differentiated manner according to the enterprises.

Last year the large number of the enterprises lining up [for loans] represented a special problem for the bank. This year the bank is making every effort to reduce standing in line. It endeavors to prevent the spiraling effect of standing in line by issuing short-term loans. Naturally the bank does not encourage with loans any standing in line which resulted from economic operation at a loss, for lack of funds or inefficiency.

In the interest of promoting the growth of credit's regulatory role and developing more flexible market relations the bank will during 1984 develop a system of extending commercial credit (commercial draft) refinancing principles and make a proposal for its introduction.

Interest Policy, Interest Mechanism

The loan interest, which is the cost of using the money lent, as regulatory tool defines a minimum efficiency requirement. Besides this the interest

rate must also fulfill a role of regulating the business cycle. This means that the note bank stimulates or limits the economic activity through the central interest rate in harmony with the economic policy's goals, the note bank interest rate.

Recently implemented changes in the interest system, the interest mechanism promoted the growth of interest's regulatory role.

Interest rates have increased significantly during the last two years and together with this the interest rate on term deposits has also increased. In mid-1983 the MNB standardized the interest rates for medium- and long-term loans, that is, raised the interest rates on lower interest loans made earlier to the interest level in effect today, and at the same time decreased by 1 percent the interest on revolving asset loans. Studies show that the interest rate level thus developed--though it is very high--is in harmony with the interest the Hungarian economy pays for foreign resources and at the same time also illustrates the central intentions aimed at moderating domestic utilization as well as investments.

At the same time the standardization of interest rates has created the preconditions for the functioning of a flexible interest system--similar to the international practice--where changes in the interest rates on deposits and loans can follow faster the changes occurring in the cost of using the credit resources, and makes flexible the modifications justified from the viewpoint of regulating the domestic business cycle.

One of the main factors of determining the note bank's interest rates is the cost of using the foreign credit sources, that is, the magnitude of credit interest rates applied to Hungary. (Lenders in the world today usually specify flexible interest rates which change as needed, but in the international relations between banks the interest rate is corrected quarterly or semiannually.)

The other factor is the viewpoint deriving from regulating the domestic purchasing power, the investment and in general the economic processes, that is, whether in the given time period it is justified to stimulate or hold down the economic activity or certain areas of it. (This viewpoint always requires concrete evaluation, but obviously the interest policy measures which can be taken on the basis of this cannot ignore the costs of using the foreign resources.)

And finally the domestic pricing policy and the concrete price inflation must be taken into consideration in order that the interest paid on enterprise deposits and that charged by the note bank result in positive real interest.

By taking these viewpoints as foundation, as of 1 January 1984 the bank determines the size of loan interest rates as the combined sum of the note bank's all-time interest rate and the interest gap specified in the credit (loan) contract.

The note bank interest rate is at the same time also the interest rate paid on deposits placed for one or two years on the basis of free choice by the economic operating organizations.

Interest will in the future have to fulfill primarily a role of regulating the business cycle. Low or high interest (on loans as well as deposits) will have to place a decision alternative before the investor in correlation with the given profit which can be achieved: he can either put his money resources in the bank at lower risk and lower income--corresponding to the interest paid on deposits--or invest it in enterprises at higher risk and in the interest of achieving higher income.

The economic operating organizations must weigh whether at the given profitability using foreign resources for some enterprise is worth it, that is, whether over the interest paid on the loan the enterprise promises the appropriate additional income.

Our Foreign Credit Relations

Last year, development of the country's international credit relations was characterized by improvement. Credit for this result is due to successful implementation of the economic policy which gave priority to the foreign trade balance.

Among the foreign factors of consolidating our international credit relations the cooperation with Western banks deserves attention. Our economic policy results have created the basis for receiving loans from the ENSZ's [United Nations Organization] two international financial institutions, the International Monetary Fund (IMF) and the International Reconstruction and Development Bank (World Bank). Through these loans last year--besides meeting our payment obligations--we were able to improve our liquidity situation; international evaluation of our creditworthiness became more favorable.

However, in order to be able to meet our payment obligations again this year, to maintain our creditworthiness and also to receive the planned foreign loans, first of all we need to increase our economic performance and fully implement our plans.

The exchange rate policy must this year again promote the planned development of the financial processes. Like the other elements of the regulatory system it must flexibly adjust to the changing circumstances, promote improvement of our foreign trade balance.

Further Development of the Banking System

Based on the position taken by the Central Committee the further development of the economic management system is in progress, which is aimed at increasing the national economy's performance ability. Raising the efficiency of economic work must be promoted by decreasing central intervention, increasing enterprise independence and increasing the role of the market and competition.

The idea of modernizing the banking system also came up within the framework of developing the institutional system. This further development is aimed at adjusting the banking system to the new circumstances of economic management, strengthening the note bank function and improving the commercial banking activity.

In the interest of this in 1985 within the Hungarian National Bank we will organizationally separate the areas which handle the note-banking and credit-banking functions, and the tools of note-banking type management will prevail in the relationship of the two organizations. As an institution of economic management the note bank will develop the money and credit policies and as part of the central management it will operate those monetary tools which ensure their implementation.

In the course of developing the note bank's regulatory tools the viewpoint is that monetary guidance should gain strength in the economy and emphasis be placed on regulating the liquidity of the lending areas. Implementation of the efficiency, recovery and profitability viewpoints must be improved in the lending work. Lending must be increasingly made to acquire a business character.

In recent years--besides the existing specialized banks--other organizations and enterprise funds performing the activity of financial institutions also came into existence, and their operation and expansion of their activity must also be supported in the future. At the same time it is necessary to extend the note bank's guidance and control over these institutions as well.

Further development of the banking system and transformation of its organizational system and system of tools is a continuous task. Its goal is to strengthen the flow of means and capital in harmony with the further development of the economic guidance system, their more efficient utilization, and to improve the efficiency of enterprise activity more vigorously than today by exploiting the role of money.

8584
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WAGE INCREASES IN SOCIALIST SECTOR NOTED

Budapest NEPSZABADSAG in Hungarian 28 Aug 84 p 5

[Text] The 1984 plan anticipated a 4.8-5 percent growth in average wages and earnings and a total wage and earning increase of 4.3 percent in the socialist sector. The plans of the business units themselves were more modest: they expected an average increase of 4.2 percent in the economy as a whole, including 4.0 percent in industry, 3.4 in the construction industry and 3.0 in transportation. This underplanning is an annual phenomenon due primarily to the caution of the enterprises which prefer to exceed rather than underfulfill the plan.

The sum spent on wages and earnings during the first half of 1984 in the material branches exceeded plans for the entire year by 0.8; total average wages and earnings exceeded calculations by 1.3-1.5 percent.

Growth in average earnings was below the national average in agriculture, forestry, transportation and communications, but above average in construction, water management and foreign trade. Within industry, wage growth was most rapid in metallurgy and the chemical industry; least in mining.

Greater than planned increase in wages was due to a number of factors: most important and favorable of these was that production increased more rapidly than expected so that in most places it was possible to establish performance commensurate with wage outlays. Wage increases initiated last year also have had a carryover effect; at that time business units, taking the interests of the national economy into account, postponed most wage increases until the second half year. The statistics also reflect central wage measures implemented in April, also the effects of higher shift supplements and introduction of allowances for those employed in hot workplaces. These contributed to wage increases primarily in the case of persons continuously employed or working multiple shifts in metallurgy, the chemical and light industries. At the same time the increases resulted in a diminution of manpower turnover. The number of enterprises using experimental wage regulation has increased, and the well-above average wages paid by them have contributed to the greater than planned wage outlow. However, heed should be taken of the fact that some of the enterprises participating in the experiment were unable to establish performance commensurate with the higher wages. According to a sampling study of the Government Office of Wages and Labor Affairs, 90 percent of the wage increase

planned for 1984 was realized during the first half of the year. About 80-90 percent of the workers were given a raise. The study revealed that most wages came in the form of material incentives, and an effort was made to use them to improve wage ratios. A two-12-fold difference exists between the lowest and highest wage increases, depending on performance and job categories. Most raises were applied to groups working under unfavorable circumstances, multiple shifts, to those employed in areas of crucial importance to the enterprises and to persons in managerial positions.

Many enterprises changed their system of internal interestedness to provide greater incentives. In general, individual production units were given greater autonomy, and a system of independent accounting was introduced. Pay according to performance was adopted in a broader area, and wages were more closely aligned to profit. Although systems aimed at improving quality, encouraging thrift and increasing exports are spreading, progress is impeded in many places by setting low performance standards and the rigidity of the wage regulating system.

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BIOLOGICAL RESOURCES OF AGRICULTURE ASSESSED

Budapest STATISZTIKAI SZEMLE in Hungarian Jul 84 pp 677-685

[Article by Dr Albert Kiss: "Biological Resources of Hungarian Agriculture"; lecture delivered to the plenary session of "Agriculture Science Days" at the Godollo University of Agricultural Sciences, 2-3 February 1984. The original title of the lecture was "Main Economic Problems in the Development of the Use of Biological Resources in Our Agriculture."]

[Text] In the nearly 25 years that have passed since the socialist reorganization, our agriculture has developed at a rapid pace, and from the viewpoint of the role it fulfills in the economy of the country and its rank by international comparison it can claim for itself a respected position. On the basis of socialist, large-scale farming we have created an agriculture of as level--with an organic link to small farming--that is capable of producing a significant and growing commodity base for export in addition to meeting an increasingly more modern level of domestic demand.

Despite a decrease in agricultural area and manpower, we were able to achieve this development by the further expansion of biological resources and in such a way that their utilization passed into practice, and production increased significantly. The increase in the production potential was organically linked with a broad-scale building up of the technical base (including the development of the infrastructure) and with farm organization work of a rising level that made good use of expertise. In the two decades between 1960 and 1980, total agricultural production increased by more than 70 percent. Among the more important products, grain and meat production doubled, egg production increased one and one-half times, and the development of garden products was also outstanding.

One of the important characteristics of the development was its accompaniment by important structural changes. The increase in livestock breeding was more rapid than that of crop production, and the ratio of these two main sub-branches in total production increased over 20 years from 41 percent to 48 percent. The transformation was accompanied almost everywhere by tye use of a radical change in types and previously unknown technology. The broad-scale implementation in practice of the achievements

of science and technique also radically transformed the structure of producer consumption. In 1980 only 36 percent of the total producer consumption was of agricultural origin, as compared to 75 percent 20 years ago. All this brought in its wake a significant expansion in commodity production, which was contributed to by two other sources besides the rise in specific yields: the decline in self-production, personal consumption and the release of land necessary for maintaining draught animal power for the benefit of commodity production. These extremely characteristic indications of the transformation illuminate the resolution of the closed nature of the old production system when every important element (hauling power and farmyard manure) of reproduction was produced by agriculture itself, and it also consumed an important share of its own products.

The most striking characteristic of this two-decade-old development is that the developed grain production and the meat production based on it for the most part became the chief sub-branch of our agriculture. In recent years almost one half (about 43 to 45 percent) of the production value of total crop production came from grains, while two thirds of livestock breeding was for the production of slaughter meat within which the share of feed-consuming pigs and poultry was about 80 percent. This grain-meat vertical is in harmony with our natural endowments, and the roots of its development go back to the second half of the 19th century.

A Look Back into the Past

We can be aware of the great importance of the change which has occurred in the past two decades--a change which besides bringing great results has also brought new tensions with development--if we take a look at the history of our new agrarian production.

The two graphs show, on one hand, changes in the use of land area and, on the other hand, the development process in the composition of our animal stocks or its main trends since the freeing of the serfs, that is, from the beginning of the period of capitalist production to the present.

In both Graphs 1 and 2, the parts before the break include data preceding World War I when the present area of the country was part of a much larger economy, and therefore for the sake of comparability we have isolated the data pertinent to the present land area. Graph 1 illustrates the use of the land area, and in addition to the areas used for certain cultivation branches it presents also the main crops in the arable land, or the ratio of the area used for the production of crop groups.

In the second half of the past century a structural change of basic importance occurred. This was started, through intensifying the demand for grain, by the already important industrialization and urbanization in Western countries. An increasingly greater arable land area was necessary for grain production.

If we leave out of account important elements of the then prevailing three-course rotation system and the area allowed to lie fallow, the sown area in the middle of the 19th century in Hungary occupied a ratio equal to that of grasslands (about 30-30 percent).

Land use changed rapidly. On one hand, important improvement works (large-scale river regulation, flood prevention, draining of marshes) were carried out in significant area not yet used for production (in 1853 about 12 percent). The grain boom also increasingly extended land cultivation to areas endangered by floods in the reform era. The recovered producer area and the length of the dams that were built exceeded those in the Netherlands by the turn of the century. On the other hand, the natural grassland areas, the pastures and meadows were broken up and converted into arable land, and in fact a significant portion of the forests also fell victim to the transformation. Following this, fodder production was transferred from grass to arable lands. Livestock breeding, on the other hand, was converted from the grazing to the stable system, which was linked to the gradual but radical change in animal types and advances with animals of greater productivity. This also altered the system for replenishing the producer capacity of the soil; instead of allowing land to lie fallow farmyard fertilizers were used.

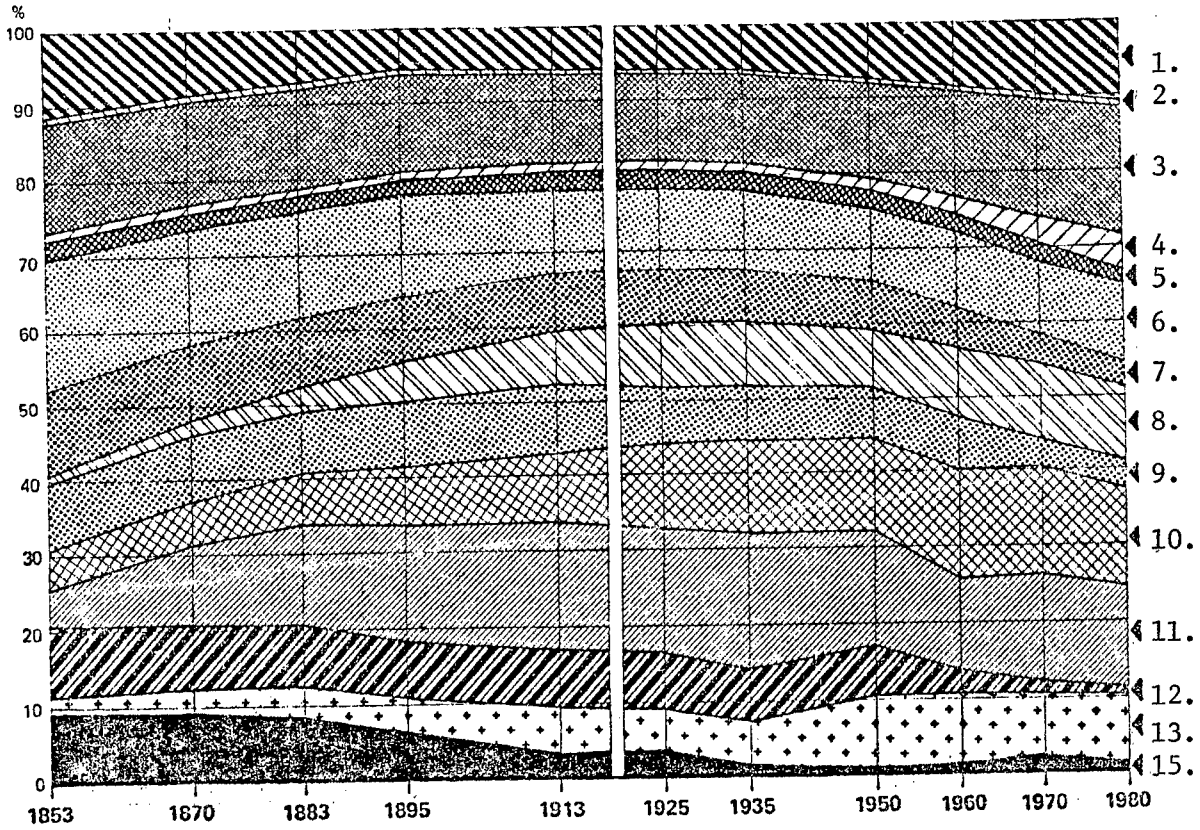
Beginning particularly in 1890, we can observe the rapid reduction in fallow areas, and in addition to grain--as related also to the expansion of farmyard fertilization--hoed plants, mostly corn but including potatoes, industrial crops and vegetables also received an increasingly greater area.

Unlike rye, wheat had a significant role with its greater export capability, whereas among the feed-grains corn began to squeeze out the fodder cereals, chiefly oats. As a modest compensation for the divided meadows and pastures, the production of arable-land peas and beans, and other rough and succulent fodder increased.

By World War I, the expansion of arable land had reached its maximum, that is, 60 percent of the country's total land area. The agricultural area also had its biggest share at this time, or 80 percent. (Today it is 71.3 percent, that is, it has fallen back to the ratio of the 1850's. Following the phylloxera disease at the end of the century, the vineyards also regained their former size, but with the well-known regional re-distribution. The area registered for gardens of miscellaneous use also increased.

The extensive and intensive elements of development were mixed. The decline in pasture lands which accelerated beginning in the 1870's reduced primarily the once important sheep stocks. Corn production increased, and as a reflection of this there was also an increase in pig and poultry breeding. Although to a more modest extent, there was also an increase in cattle--but only to the beginning of the 20th century--and horse stocks. Their feed had to be produced in increasingly greater ratio on arable land.

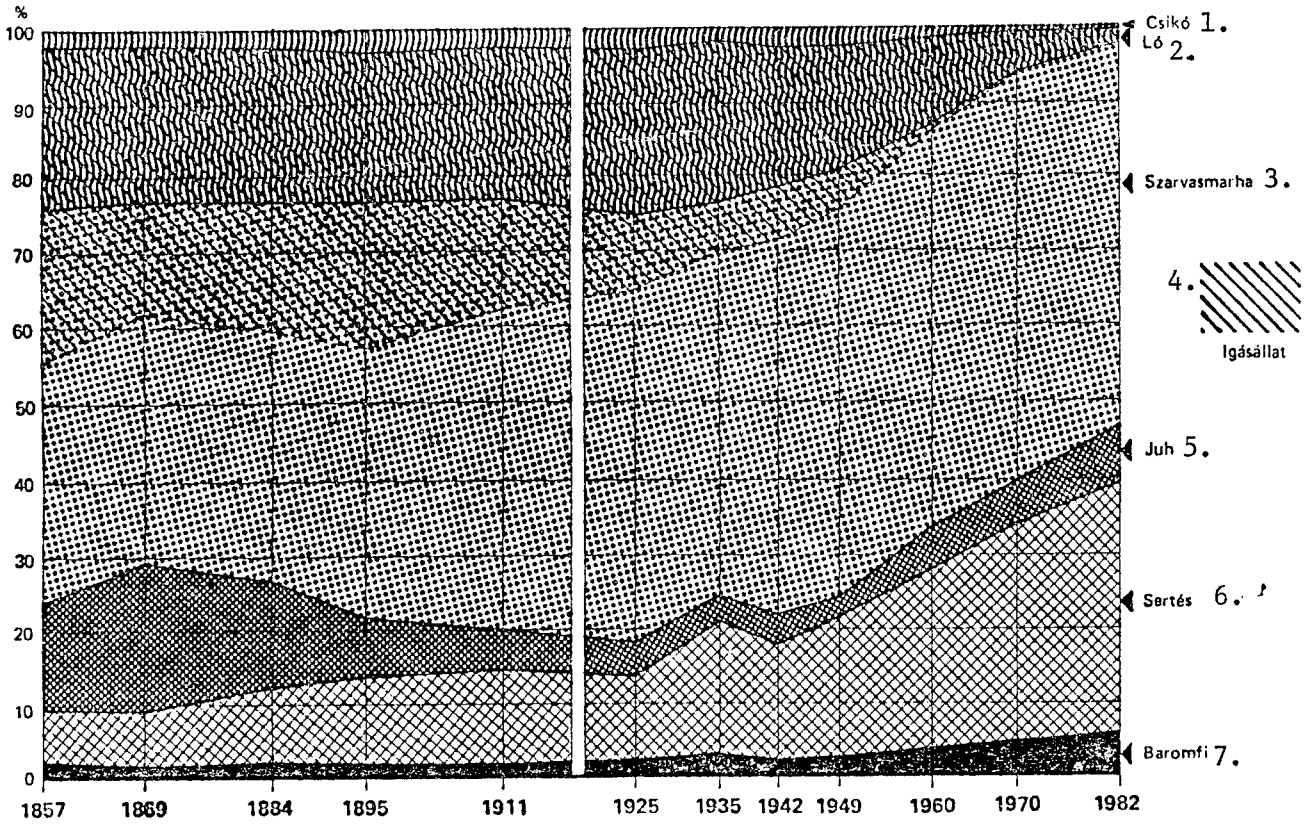
Graph 1. Use of Land Area, 1853 - 1980 *



* A jelenlegi országterületre vonatkozó adatok alapján. 15.

Key:
1. Not used for production
2. Reedland, fish ponds
3. Forests
4. Gardens, orchards
5. Vineyards
6. Pastures
7. Meadows
8. Arable-land rough and succulent fodder
9. Barley, oats
10. Corn
11. Wheat
12. Rye (and mixtures)
13. Potatoes, industrial crops, vegetables, legumes, other
14. Fallow, unsown
15. On basis of data for the present area of the country

Graph 2. Composition of Animal Stocks (in standard animals), 1857-1982*



* A jelenlegi országterületre vonatkozó adatok alapján. 8.

Key:
1. Colt
2. Horse
3. Cattle
4. Draught animal
5. Sheep
6. Pigs
7. Poultry
8. On basis of data for the present area of the country

As compared to the large-scale transformation of the production structure, however, the level of production scarcely improved. The combined average yield of grains increased up to World War I during a six decade period by about 80-90 percent (on the present area of the country from 0.85 to 1.56 tons per hectare) without any technical development. Among the major work processes of agriculture, only the mechanization of threshing was begun. Social conditions had no compelling effect on technical development, not even the large holdings, since there was plenty of cheap labor available. But in a differentiated way, the technical development of large holdings was begun. As a whole, agriculture developed rather in a work intensive direction (arable-land hoed crops, vineyards).

But the development of the infrastructure was rapid. The railroad system was developed, important river regulation works were carried out, promoting grain deliveries. In the interior of the country the more important railroad lines built in the 1850's--in a characteristic way--led to the grain-producing region of the Alfold in order to assure in this way also the conditions for an increasingly greater export, which was the domestic condition for the country's capital development, and the accumulation of capital. The profits from the grain prosperity were enjoyed chiefly, of course, by the large farms and the corn trade. This capital accumulation made possible--together, of course, with foreign capital--the development of industry, which gradually also increased the demands of domestic consumption parallel with the increase in population. Technique continued to be based essentially on animal tractive power. This meant that within the areas used for production a significant portion of the land had to be used for the production of animal fodder rather than for commodity production. Between 1850 and 1890 about 40 percent of the standard animal stocks were yoke-oxen and horses, and about the same ratio was also used to maintain the tractive power's fodder base. (We must add to this the yoking of about 150,000-200,000 cows.) Immediately before the conclusion of the socialist transformation, at the end of the 1950's, draught animal power made up almost one fourth of the standard animal stock.

Between the two world wars there was no basic change in structure, but there was some development in crop production and livestock breeding. Tractors and artificial fertilizers appeared on the scene, but their effective, large-scale use was not realized. The products of the research institutions which were established beginning at the end of the 19th century, enhancement work and other respectable scientific results could be realized only to a small degree in practice given the preponderance of the large-estate system and the technical conditions that hardly changed.

In respect to the substantive structure of production, the development was in a direction appropriate to the country's endowments and its natural-environmental conditions. It is evident from the graphs that with the reorganization which occurred in the latter half of the 19th century the process started which is still the most important characteristic of our production structure, namely, increasing meat production based on grain.

With the second half of the 19th century corn became the most important fodder, establishing the basis for meat production by means of fodder-consuming animal types. It must not be forgotten that down to recent decades corn was a hoe-crop requiring a significant amount of manual work, and even with the modest average yields of the times it offered the most energy production per unit of land. Since it is grown in the greatest volume, it is no wonder that corn did not have--and still does not have--a competitor because with 5 tons of corn production 1 hectare of grain will produce enough energy to meet the annual calorie needs of 16 people. It is unfortunate that the accompanying protein content is modest. It is

also worth adding that formerly corn was grown together with companion crops on peasant farms where they raised beans on about one third of the corn areas and on almost the same amount also pumpkins for fodder, while sunflowers were grown on the margins. This meant that in addition to corn production about 80-90 kilograms of beans and 6-8 quintals of fodder pumpkins were produced on every hectare of corn area in the country. Almost all the corn stalks were used for the foddering of ruminants and draught animals. In this way corn served all the animal types, pigs and poultry in addition to others.

Socialist Agrarian Production

The past two decades, the period of the strengthening of cooperative organization, brought also the transformation of the production structure. Unfortunately, the arable-land area declined significantly. But the development of large-scale orchards, the forestation of areas that could not be used otherwise, and the development of our forest and wood economy were welcomed. The extension of the land area devoted to industrial crops and vegetables has also been an important new feature in the past two decades. The grain area shrank a bit as compared to former times and is strongly polarized with corn and grain remaining truly important and only barley a third factor. Rough fodder production on arable lands has been expanded, essentially to the extent that grasslands were reduced. Draught animals were steadily reduced in number, and thus all of the fodder could be used for the production of animal products. The ratio of feed-lrain consumers in standard animals came to 40 percent by 1980 (in fact on 31 December 1983, it rose to 42 percent with a pig stock of almost 10 million). The estimate, however, was based on year-end figures, and in the case of poultry only adult stocks were included. Furthermore, it does not take into account that multiples of year-end stock are slaughtered. Therefore, the importance of the pig and poultry sub-branch is much greater than the figures indicate, making up two thirds of the total animal production and four fifths of the slaughter animals. Outside of the feed-grain consuming animal types, more grain than justified is fed to ruminants. Uniquely in the world today, there are five pigs for every head of cattle. It would be justified to improve the equilibrium in the international ratios of animal stocks by increasing the ruminant role.

Our Present and Future Tasks

In the recent years of development our agriculture has reached a phase where a smaller and declining ratio of the production increment is required for the domestic supply, and an increasingly greater share has to be exported, largely in processed form. It follows from this that more and more emphasis is placed on quality, cost level and efficiency. From this point of view the fodder-animal vertical is the most important in the production process. It is also here that our most important tasks appear. Given the fact that a great part, or two thirds, of the primary crop production is utilized as fodder in livestock breeding, the basic importance of the degree of efficiency in animal transformation follows. At the same time the grain-wheat transformation provides a large source of employment.

Meat production based increasingly on feed grain at the same time increased tensions and asymmetries in two directions: on one hand, it increased protein problems, and on the other, grain production brought the tasks of greatly increased grain byproducts, which are now consumed by a decreased ratio of ruminants. But also the question of rough fodder production and grass use is pertinent here.

Because of the low protein content of our feed-grain types, our protein problems keep increasing, and can be used only with significant protein enrichment. This solution, however, is unavoidable because if the consumed fodder has less protein than necessary, we will only be wasting feed grain. We have to strive to decrease protein fodder imports, by using every method possible for domestic production (increased areas for soybean, peas, white lupine, or the utilization of animal waste, the production of industrial protein, and so forth) which can be classified as an acceptable economic solution.

The economic use of grain byproducts is a problem which requires various approaches. As I have indicated, the animal composition in traditional agriculture was less polarized, and hay and corn stalks were used in their entirety. With the doubling of grain production as compared to 1938, the volume of grain byproducts also doubled, but the combined number of the reminants which consume these byproducts (cattle and sheep) and horses amounts to only three fourths of the former stocks (in standard animals). In 1980 only a surprisingly small share of the byproducts--16.5 percent--went for littering, foddering, fuel and industrial processing. This is a great reserve for the breeding of various kinds of ruminants, but it is also a large source for other uses.

Deliberate methods of utilizing grain byproducts are extremely varied depending on the conditions at the farms. It is less expensive if the area of production is close to the site of utilization, but if the area is distant (particularly in the case of corn) to the byproducts it is more advisable to drive the animals (beef cattle, sheep) to the consumption site. Cutting up the byproducts in the fields and returning them to the soil may also be economized and provide a substitute for fertilizers. There are also hopes of using some of the byproducts for the production of thermal energy and biogas. A broad-scale use, however, can be definite only after the stable development of a profitable economic base.

Appropriate to the new situation, we must also find a realistic, differentiated solution for the increasing of grass yields. We are speaking here of a considerable part of our land area. Grasslands have increasingly been restricted to the poorer soils, and decades of neglect have increased their deterioration. The grassland areas amount to 1.3 million hectares, about as large as that devoted to the cultivation of corn. But the yield ratios have diverged to a great extent in the course of time. While in 1934-1938, grasslands yielded about one-half the starch value provided by corn and two-thirds of protein content on one hectare, at present one hectare of grain production (not even counting the corn stalks) is almost 10 times as great as that of grass in energy, and about 6 times as great in proteins. Among other things, for this reason

ruminants are also fed feed grains instead of hay. This characterizes, of course, the country's average situation. It is well known that the development of intensive grass cultivation has started, but this is still narrow in scope and costly. Butonly the programming of grasses that can be profitably improved is realistic, and for the time being we cannot consider their role in soil conservation. The grass problem is closely linked to improvements in complex area systems.

Today we can be proud of a greater number of animals than ever before, but it is a question whether we can judge the system for utilizing and handling animal fertilizer as being in proportion with the great number of animals. With the increased use of artificial fertilizers we have unjustifiably neglected the use of farmyard manure and we have not as yet developed a system of using it in broad scope suitable to the new conditions. The soil evaluation system which is soon to be put into use will hopefully help with more rational soil management.

The main structural ratios of production, the important nature of the grain-meat vertical, and the manifold sub-branch structure and sector distribution as it has developed in general is hardly being modified in any essential way, but in certain sub-branches--mainly those exposed to fluctuations in demand on foreign markets--we must count on more or less considerable changes adjusting to requirements, to which the affected sub-branches of the food industry must also adapt.

Exports also significantly affect the gardening sub-branches from the viewpoint of adjusting to foreign market requirements. In grape, wine and fruit production this requires well-considered structural modifications. In recent times there also have been welcome export developments in important sub-branches (rabbits, pigeons and fur animals), and there are also such small sub-branches--not as yet properly exploited--in crop production (medicinal plants, spices, fine seeds and so forth).

In addition to the already mentioned importance of soil conservation, improvement and recultivation in putting suitable land into cultivation, good selection of the producer site is of outstanding importance. Development in the enterprise production structure both in the regional setting of adjustment to the producer-site endowments for crops and the related livestock breeding is one of the most important requirements and one of the most essential factors of efficiency in rational land use.

The appropriate utilization of new types with greater productivity, other advantageous qualities, and their genetic results can be achieved only under conditions where harmonious technical solutions are applied. Here we must include mechanization, technical-engineering conditions, the use of chemical materials; in livestock breeding, foddering and the technology of breeding, and in the assurance of animal health conditions. In realizing all this, great tasks also fall on industry, otherwise the realization of the biological potential cannot be assured.

But it is not enough to produce more, the surplus product must also be produced efficiently. In addition to consumption (for example, foddering) within agriculture, the protection of the final product in the factory phase is as important as in the phase when it is leaving agriculture, in the course of processing, delivery, trade and distribution. Therefore, with the storage and handling of products and the assurance of food-industry processing requirements, this interconnected chain must be given great attention both in domestic consumption and at the time of selling on foreign markets. Otherwise damages may occur in the consumption phase which will frustrate the high hopes afforded by the biological potential. It is also pertinent here that the interest of the agricultural processing and trading organizations operating in the individual verticals should be in harmony.

Of no less importance in the development of the organizational and associational forms for the producer enterprises is the strengthening of the integration ties linking small production to large plants. All this must be helped by an economic regulatory system purposefully assuring an increasing producer capacity use as well as interest and incentive.

The new and modern results of science and technology can become material resources only if the enterprise organization and in fact the organization of the individual work processes are at a higher level. In this phase, biotechnology is an important ally along with electronics and the computer in a bidirectional way: in addition to providing information-serving analyses that are being prepared for the enterprise leadership and management, it will have a great role also in the guidance, regulation and control of the producer processes. It is important that broad groups of those cooperating in the producer processes should acquire the knowledge necessary for these new tasks. Otherwise I see the best security for the expansion of resources and their better utilization in the mutual collaboration of science and practice and in raising to a more effective level their effect on each other, something which was one of the very important factors in the results of the past quarter of a century.

6691
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PITFALLS OF OVER-REGULATION ANALYZED

Budapest FIGYELO in Hungarian 26 Jul 84 pp 1, 4

[Article by Vilmos Falubiro: "The Pitfalls of Over-Regulation"]

[Text] The degree of mutual confidence existing between the enterprises and the economic policy-making authorities is reflected by the nature and quantity of legal control existing at any given time. Nowadays, it is said, we are living under the conditions of over-regulation, even though in recent times several simplifing measures have been introduced in order to alleviate moderate conditions. (For example: agreements between the competent ministries and the enterprises took the place of regulations; a system of depreciation was introduced to provide broader possibilities for enterprise-level decision-making; it became possible to form mini-enterprises; and in 1983 the number of fiscal regulations, and not just those pertaining to the Ministry of Finance, were reduced.) These, however, did not in the least alter the basic tendency, the expansion of regulation.

This trend is reflected in the increasing number of statutory provisions issued to be used in completing the balance sheet reports.

(1) A mérlegbeszámoló kitöltéséhez előírt jogszabályok számának alakulása (1976 = 100)*

(2) Jogszabály jellege	1968	1971	1980	1983
(3) 1. Rendelet és ennél magasabb jogszabály	18	60	111	129
(4) 2. Végrehajtási rendelkezés (utasítás, közlemény stb.)	42	47	124	118
(5) 3. Együtt	25	56	117	126

(6) * Az ipari mérlegbeszámoló alapul vételével, a kötelező kitöltési utasítás szerint. 1976-ban a rendeletek száma 159, a végrehajtási utasítások száma 77 volt.

Key:

1. The trend in the number of statutory provisions prescribed for use in completing the balance sheet reports (1967 = 100)

[Key continued on following page]

2. The nature of statutory provisions

3. Decree or statutory provision of higher rank

4. Executive order (command, memorandum, etc.)

5. Combination of the above two

6. Using the industrial balance sheet report as a base, in accordance with the compulsory method of completing the forms, in 1976 the number of decrees was 159, while that of executive orders was 77.

During the past decade and a half the body of legal matter applicable to the economic sphere has increased, and this trend has not changed to this day. This is in spite of the fact that after 1976 the growth in the number of effective regulations has slowed, and in most recent years a similar process has taken place in the number of executive orders.

Many people explain the trend by referring to the present economic difficulties, even though this process has its roots in the broadening re-production of the process which would use concrete details in the application of the general principles of regulation and in regulation of an administrative nature.

Details As Well

As one result of striving to control details as completely as possible, the enterprises enlarged their administrative staff, and bureaucracy grew. To remain at the example of the balance sheet report, this means, among other things, that the frequency of balance sheet congruencies is increasing (for example, for the years 1981, 1982 and 1983, 106, 126 and 133 such occurrences were cited.) The time period during which to adjust to the already quickly changing regulations became even shorter. For example, between 1980 and 1983 the average "life expectancy" of decrees issued by the Ministry of Finance was reduced from 5.8 to 4.5 years.

The great number and frequent change of regulations, statutory provisions and decrees are especially conducive to the growing personnel and budgetary demands of bookkeeping, fiscal, tax and accounting functions.

Over-regulation may, willy-nilly, bring on the threat of haphazardness. There is not enough time to evaluate execution. As a consequence, the unavoidable and interrelated modifications are often implemented not in one step, but gradually. For example, the subsequent attachment of an earlier decreed 290 forint wage supplement caused repeated complications (the modification of wage development programs, the alteration of several regulations, the execution of basis corrections, etc.). On top of everything else, this insignificantly small portion of the total wage expenditure is still an "irregular" item, it is still "flagged." The final clarification requires another, third administrative measure.

Recently the desirable reduction in the development resources was realized, which required even more attempts; in order to achieve this, the rate of curtailment was modified four times, and the continuous corrections weakened enterprisal responsibility for exceeding the limits of developmental funds. For, under these circumstances, it is difficult to separate from among the reasons causing basic shortages those which can be attributed to regulation. Enterprises explained their "F" type surplus expenses by referring to the unpredictable tightening of "the rules of the game." At the same time, it was possible to plan the management of the allotment funds, since similar tensions were avoidable.

The many statutory provisions are not distributed evenly and proportionately among the functions to be regulated. At times, disproportionate "overdosing" occurs in certain areas.

This is in spite of the fact that the overly detailed regulation of insignificant issues usually misses the point. For example, one of the decrees issued by the Ministry of Finance delved, among other matters, into the question of travel expenses and how to account for the reimbursable amount if an employee of the enterprise's central office uses a guestroom during his visit to one of the branches. As an aside, it should be mentioned that at the time of settling accounts the home office repays this amount as travelling expense, thus, the matter involves mutually compensating money transfers, that is, unnecessary administrative activity.

The regulators are not free of contradictions. For example, the outstanding debts on exports are financed by the bank at the time of the signing of the letter of credit in accordance with the prevailing rates, which, due to a policy of discounting, is lower. On the other hand, at the time the balance sheet report is completed, the same item must be accounted for in accordance with the December 31 price, which is usually higher. In order to cover the taxes applicable on the profits thus increased, a liquidity credit can be obtained. However, the interest rate on this is 5-6 percent higher than that of a refinancing credit.

In other cases, enterprises encounter disadvantages as "by-products" of the administrative measures. In accordance with the "logic" of regulation, the basis for the one-time 22 percent curtailment of the developmental funds was based on the profit development fund and the depreciation, while the basis for the actual projection is higher. (For example, the portion of disbursement from the government funds which is to be reimbursed from the tax on profits is also considered into the basis of the curtailment.) Similar in effect is the above mentioned 290 forint wage supplement, which is figured into the wage expenditure in the amount of 310 forints. There is no correction for the 20 forint difference, and this automatically damages the perspectives of wage development.

A similar critical point is the penalty for non-performance, which increases the tax basis on profits. When the fulfillment of contractual responsibilities becomes uncertain, due to limitations placed on imports, curtailment in developmental funds, etc., this measure also hurts those who renounced their

contracts by referring to curtailments in the "F" type funds. They are required to pay the penalties for non-performance and, more importantly, suffer its consequences applied to their taxes, because they heeded the regulations.

Defensive Reactions

The proliferation of administrative measures which can be rightfully questioned by the enterprise unavoidably has its effect on managerial behavior. First of all, it encourages the "taking back" of unusual curtailments and the "preparation" for surprising turns of events. This can be surmised, for example, from the fact that each year the number of tax deficits discovered in the course of fiscal inspections exceed that of tax surpluses, and the number of resolutions reducing funds is in fact higher than that of statements in favor of increasing funds.

A pénzügyi revízió során végrehajtott módosítások az eredményben, az adókötelezettségben és az alapokban, százalék (1)

(2) Időszak*	Eredménynövelés az eredm. csökkentéséhez viszonyítva (3)	Adóhiány az adótöbblethez viszonyítva (3)	Alapcsökkentés az alapcsökkenéshez (4)	Megjegyzés (5)
1981	98,0	1[illegible],8	146,4	Páros évek
1982	120,1	169,2	119,0	
1979	108,5	232,4	136,9	Páratlan évek (6)
1981	104,2	384,6	128,2	
1983	111,2	178,9	120,6	

* A szakaszos vizsgálati rendszer következtében páratlan év csak páratlannal, páros csak parossal hasonlítható össze! (7)

Key:

1. Modifications implemented in the course of fiscal inspections, [as indicated] in the results, in the tax liabilities, and in the funds (in percents)

2. Time period

3. Increase in results — decrease in results
   as related to
   Tax deficit — tax surplus

4. Curtailment of funds as related to spontaneous reduction in funds

5. Remark

6. Even-numbered years; odd-numbered years

7. Due to the specialized system of examination, odd-numbered years can only be compared with odd-numbered years, and even-numbered ones with even-numbered ones!

The three "one-way streets" reflect, in a condensed manner, enterprisal behavior leaning toward skillful manipulation. Even the increasing penalties do not deter the reoccurring attempts at "breaking out," though their moderating effect is undoubtable. The lessening of disproportions between tax deficits and tax surpluses, as well as between fund reductions and fund increases, may be in part attributable to the tightening of controls.

The strongest "stimulus" to get around the regulations may be observed in the cases of investments which could be considered to involve maintenance or repair. In this area, a puzzling "thicket" of regulations makes explication difficult.

Defensive reactions are usually evident in hoarding behavior. It has been generally the case that after every major price adjustment the profits of an enterprise curiously exceed those estimated before the adjustment.

The "counter-play" expressed in the reaction of the enterprises, as well as the general relationship between the economic policy-makers and the establishments of management, bear signs of a certain type of competitive match. While attempting to gain information about each other's intentions, the participants strive to gain advantages at the expense of their opponents. What is more, they even consider the countermeasures of their opponents in making their moves.

The relationship between economic policy-makers and managers will never be free of bargaining. However, if enterprisal behavior patterns not in accordance with, or even opposed to the logic of regulation become overly frequent, then the reasons for this should be sought in the system of institutions as well. This effort could be significantly aided by the increased democratization in the planning of regulation, and the more intensive involvement of representative institutions in the process of planning.

12588
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CHEMICAL INDUSTRY PLAYS MAJOR ROLE IN AGRICULTURE

Budapest NEPSZABADSAG in Hungarian 2 Aug 84 p 3

[Article by Istvan Kortvelyes, deputy minister of industry: "Our Chemical Industry's Role in Agriculture"]

[Excerpt] Building on Each Other

To illustrate the role agriculture plays in industry's development: the agriculture purchases about 15 percent of the domestic chemical industry's production. Among other things the state farms, producer cooperatives and small producers use more than 10 billion forints' worth of chemical fertilizers, 6.5 billion forints' worth of plant protection chemicals, in addition to large volumes of veterinarian chemicals, vitamins, feed additives, plastic products--agricultural foils, irrigation pipes, packaging materials--and other chemical products. At the same time the agriculture supplies industry with various raw materials--for example, medicinal plants for producing pharmaceuticals and tallow for soap production. Thus very many kinds of ties bond the two branches together.

The relationship is mutual also in the sense that just as agriculture's present level could not be imagined without agricultural chemistry, among other things the very growth of agriculture and the new quantitative and qualitative demands which appear together with this represent the attractive forces for the chemical industry and provide a foundation for growth.

This is how advanced chemical fertilizer production was built up in Hungary, for example. By means of the plants being built one after the other, the present nitrogen fertilizer production calculated in terms of active ingredient is 130 times as high as the 1938 production, and we are producing 33 times as much phosphorous fertilizer as in the years prior to World War II. As a consequence of all this, in per capita production of active ingredient we occupied seventh place on the world list in 1981, and we stood in the 11th place in utilization per hectare.

But the growth data also reflect a certain lack of proportion: as a consequence of uneven growth at the present time we have a surplus of nitrogen fertilizer built on domestic raw materials, thus we can also

export some of it, the value of which last year reached $100 million. This export covers the import needed for phosphorous fertilizer production. That is, we can cover only about one-half of agriculture's need of this product.

In order to supplement domestic production, in 1976 we negotiated a long range agrochemical agreement with the Soviet Union on the basis of which we are importing chemical fertilizer in exchange for plant protection chemicals. By means of the rapidly growing domestic production and import the agriculture's active ingredient consumption per hectare increased from 5 kilograms in 1950 to 282 kilograms in 1982 which is a more than 40-fold increase.

Spectacular Growth

According to preliminary estimates agriculture in comparison with the present 1.65 million tons by the turn of the millenium will use 2.3-2.5 million tons of active ingredients, and this will also define the future of production. Primarily we must further expand the production of chemical fertilizers containing phosphorous, and this must also be coupled with significant quality improvements. And in addition to all this the modern chemical fertilizers, for example the ones in liquid form will receive a greater role. It is also worth mentioning--since in most recent years it caused many problems--that agriculture and the industry are jointly seeking the solution for counteracting the soil acidifying effect of urea. The spreading of lime carbamide, a new product developed in the interest of this within a very short time, is expected to solve this problem.

Plant protective chemical production is the other very important support industry of agricultural production and an indispensible condition for intensive crop production. This production branch, in harmony with agriculture's growth--and following the tendencies experienced in the world--also developed extremely rapidly.

According to the international statistics the Hungarian agriculture today is the world's eight-to-tenth user of plant protective chemicals with a control and application technology network representing the world standard. The world's largest producers are always present on this market. Through the close relationship with agriculture our industry has been forced into competition with these large worldwide firms and has been able to successfully follow the pace they dictate.

All this has led to quantitative as well as qualitative growth. As far as the growth of production is concerned: in 1960 the domestic industry produced a total of 350 million forints' worth of plant protective chemicals, twenty times that much in 1980, and in 1983--through further accelerating growth in the most recent years--almost 30 times that much. Today the value of production exceeds 11 billion forints. With this the domestic industry satisfies 60-65 percent of the domestic need for finished plant protective chemicals, and if we add to this the finishing of imported active ingredients, this ratio increases to 75-80 percent.

Beyond quantitative growth quality changes have also taken place: the growth of plant protection chemical production began with the processing, finishing of purchased active ingredients, continued with the significant expansion of active ingredient production, and since the early 1980s the research of original Hungarian plant protective chemicals has gained strength and simultaneously with this the export-oriented development of the branch has accelerated. Mainly the Hungarian-Soviet agrochemical agreement creates the opportunity for export, but we are also selling increasing quantities of plant protection chemicals to the United States, England, China and other countries. Today this industrial branch exports about 40 percent of its production, and according to the plans in 1990 the export will reach 60 percent of production.

As a consequence of this significant growth the production of plant protection chemicals has reached even much more distinguished positions than what is known in the circles of the trade's public opinion: the various weed killers, insect killers and other preparations today make up 4.8 percent of the total chemical industry production. It is no small achievement either that this year total export of this industrial branch exceeds the total import.

New Domestic Preparations

What could the branch's future be like? According to the international data the value of all plant protection chemicals used in the world today is $11-12 billion, thus the Hungarian chemical industry produces about 2 percent of this. According to calculations the world's total consumption will increase to $18 billion by 1990, thus we can count on a significant market expansion. It depends exclusively on us to what extent we can share in this growth.

The opportunities are favorable. For example, the results of domestic research and development represent a promising foundation. In addition to several new production processes mainly in the most recent times the original Hungarian plant protective chemicals have also appeared. Besides the traditional fungicides, insecticides and other chemicals the preparations which regulate the growth of plants will also have a larger and larger role. For example, it can be achieved with a single spraying that the roots rather than stalks of the plants would grow, and thus they will better tolerate the drought. The production of preparations which increase tolerance against frost has also begun. And as long as we are talking about the new products let us mention a development related to livestock raising: we have begun production of Vitamin U, which beyond its effects as livestock medicine also promotes the growth of the meat yield. Great interest is seen also abroad in the original Hungarian products.

These outstanding research and development results could be produced and can be produced also in the future only through the very close and good cooperation of the chemical industry and pharmaceutical industry enterprises, research institutions, university departments, agricultural experts, chemists, biologists and agronomists.

Our financial tools will not significantly expand in the coming years either. Our most important reserve therefore is the knowledge and ability of the Hungarian chemist society. The agrochemical industry's development can continue to accelerate if this is utilized to the fullest.

This is important for two reasons. The agrochemical industry generates products in which the most important ingredient is not the material and energy but the brain, the knowledge; and coming up with such products is one of our main industrial policy goals. Furthermore, the new, modern chemical industry items may greatly contribute to agriculture's further growth.

8584
CSO: 2500/538

PROFIT ALONE NO MEASURE OF ENTERPRISE SUCCESS

Budapest OTLET in Hungarian 19 Jul 84 p 4

[Article by Sandor Kopatsy: "The Value of Losses"]

[Text] "The important prerequisite for improving competitiveness is that efficiency and technical development play a determining role in every enterprise's and cooperative's work. This calls for the redressing and elimination of uneconomic activities." (Excerpt from the April 17th statement by the Central Committee of Hungarian Socialist Workers' Party)

In the course of the past two decades progressive economists all agreed that profit is the best indicator of an enterprise's activity. Thanks to increased profit in the enterprise area of our economy work improved and attitude even more. Today we have come to the point where business profit has more prestige than its actual weight. The general conviction is that we should stop manufacturing losing products and weed out the losses out of the enterprises. It does not occur to us, however, that these severe demands can be put forward only under certain circumstances, and these circumstances do not exist here yet. The following is addressed mainly to those who tend to judge purely on the basis of business gains, those who firmly grade enterprises merely on the basis of their achievement, and to those who believe that what is losing must have been misdirected.

Hungary's material resources and per capita national income, on the basis of its size, solve a fair number of social missions through the budget. Thus, from the outset, the burdens of taxes are great. An abnormally large proportion of these tax burdens weighs heavily on the enterprises. While in developed capitalist countries 10-20 percent of budgetary withholdings, on top of social security, comes from enterprise taxes, it is about 70 percent in Hungary. The tax burdens of Hungarian enterprises are about 7 times greater than those of North-American enterprises and 4 times those of the Common Market countries. It is often mentioned that here the labor is so much cheaper, but much less is mentioned about how much greater the tax burdens are. Although international competitiveness must be based on the fact that the price and expense of labor as well as tax burden, be proportionate to per capita

national income. When labor is relatively cheap, as a result, interest in technical development is lost. However, tax burdens are abnormally heavy, consequently the financial situation of enterprises depends much more on how they can possibly get away from taxes borne by them, rather than on the technical standard of the production. This is one of the reasons why the enterprise leadership is not very concerned about the improvement of productivity, but more concerned with modification of tax conditions, which is largely promoted by the fact that our taxes, in actual fact, are not normative, and great tax burdens are not proportionately distributed.

It is well known that an enterprise's achievements depend, within quite wide limits, on what kind of tax exemptions or budget supports an enterprise can get. Thus, almost unified is the contention that we reduce budget supports and tax exemptions. However, little mention is made that this cannot be done while taxes falling on enterprises are abnormally hith. The higher the average tax is, inevitably there will be more enterprises that are unable to pay the taxes. We will demonstrate the connection of high enterprise taxes with the existence of so many losing enterprises with a simple taxation example.

Let us suppose that we impose the present taxes in the form of charges for use of machinery. As a result, only the enterprises with before-taxes profit rates that are higher than these charges would gain profits. The higher these charges are, the fewer paying businesses there will be; and the lower the charges, the more paying businesses. With high charges for use of machinery so many enterprises would be losing that we could not possibly close them down, therefore, we would have to support these enterprises. The amount of support could only be covered by increasing charges for use of machinery, consequently the number of losing enterprises would increase, so would the volume of support. This way, the number of losing enterprises will accelerate, so will the amount of state support to ensure their operation. The reality is much worse than this schematic example, because today we cannot even ascertain what an enterprise's results would be if it would bear the regular burdens of taxation.

It makes sense only if business gains are used as index defined in relation to business property. Even good business achievement statement means nothing if there is nothing to compare it with. The old machinery, compared to the average, is abnormally underrated, while the new is abnormally overrated. This not only results in unreliable gains, but also in that the new machinery compared to the old, proves to be less profitable, and the introduction of new technology will, in general bring worsening results. Thus, the present profit policy means just contrary interests, considering what is required to keep in step with technical development. Business gains depend, in many respects, on how much investment support they obtained in the past. If an enterprise had a hard time getting to the investment sources, it will produce weak results, struggling with bottle-necks, backward technological equipment, even when the possibilities are optimally utilized. If investment sources are provided for the enterprises not

on the basis of competition in capital market, but with the intervention of the authorities, then their achievements, from the outset, cannot be reliable standards of measuring how a certain enterprise makes the best of its possibilities.

The interests of the people's economy would require that enterprises be concerned about building as little as possible, but acquiring as many modern machines, especially instruments, as possible. Here at home we make the enterprises do just the opposite. If they invest in buildings, their amortization withholdings are equivalent to an annual 0.8 percent charge for use of instruments. If they acquire instruments to be written off in 5 years, then the withholdings are about 8 percent, that is, ten times as great. Generally, we impose on machine investments 5 times more tax than on investments in buildings.

It would be a mistake if we only took the reforms in the direction of steadier commodity market and greater business profit orientation without stressing that the biggest shortfall results exactly from lack of capital market and an unsuitable tax system. Therefore, until we take fundamental steps in that direction the profit orientation should not precede the reliability of profits. The totally unreliable profits most hurt the good cause which is represented by the progress towards profit-oriented, independent enterprises.

Let us not go on the only good road with a totally unreliable compass!

12200
CSO: 2500/544

MINISTRY OFFICIAL ON WEAKNESSES OF ENTERPRISE MANAGEMENT

Budapest NEPSZABADSAG in Hungarian 1 Aug 84 p 3

[Article by Dezso Suto, director general of Control of the Ministry of Finance]

[Text] The Main Directorate of Control of the Ministry of Finance methodically and completely regulates the financial and economic condition of enterprises and cooperatives...

It is undoubtedly true that the negative incidents of distorted income distribution and various forms of unlawful material benefits have become more frequent in economic processes. Both the interest and expectations of the authorities and public opinion concerning national, public and internal control have grown. Many maintain that without increasing the effectiveness, consistency and strictness of regulation, these incidents cannot be eliminated.

The results of regulation prove that negative incidents in an enterprise depend directly upon the links between interest and settlement of accounts, upon insensitivity to costs and profits and upon the low level and unsystematic nature of internal control.

Based on the above the question arises: is it possible to eliminate or prevent the above-mentioned negative incidents with the instruments of regulation?

When Independence Is Formal

Our experiences show that investigations--no matter how frequent or strict--cannot replace the rationality stemming from economic processes, the objective rigor of regulation. Investigations should help the diagnosis and enforcement of economic rationality by guaranteeing that the financial rules and the system of accountancy will be upheld. That is, the economic authorities and managing collective should receive real information concerning economic accomplishments. At the same time regulations should make public experiences concerning the impact of political-economic decisions, summarizing all the facts which are known about delicate, sensitive points of management. The parallel task of

regulation is also to provide information about measures taken after the investigation, experiences, possibilities for utilizing the lesson and calling people to account.

If we dip into the reports of the investigators it soon strikes the eye that the unsatisfactory level of the relationship of interest, accountancy and decisionmaking in management organs is one of the major problems of our economy. Many large enterprises and trusts still see the coordination of and realization of management ideas for their factories and separated, more precisely separable units and the realization of government strategies, in the concentration of management and decisionmaking. That is they see the role of the subordinate factory as unambiguously fulfilling directives from headquarters. This attitude frequently results in excessive, centralized administration, in the dependency of rural factories (on headquarters) and in slow, ponderous economic activity.

There are numerous positive results from the decentralization processes already started. After establishing independence economic results have improved measurably; factories even moderated the retarding effects of the recession while accelerating innovation.

Current experiences indicate that it is not sufficient to interest only a few of the directors in management in results (of course in certain cases one cannot forget about risk), but it is also necessary that the members of the collective take on greater burdens precisely for the purpose of more recognition. Only then, when the methods of selfaccountancy will be improved and the workers, engineers and economists receive the opportunity to measure the results of their work and of entrepreneurial performance, can the attitude of ownership be expected from every employee.

There are good methods, which encourage initiative which should be adopted, strengthened and spread. Enterprise directors and employees do well to prepare themselves already for the changes coming shortly in enterprise regulation so that in certain cases they will be able to adjust to the new opportunities without delay.

In the course of our review we have become convinced that the cost sensitivity of enterprises is unsatisfactory. The links between managers and profits are loose and there is a noticeable lack of concern about the growtn of expenditures. One group of enterprises has not realized that in a situation where increases in sales meet with difficulties, the importance of cost management becomes striking.

Accounts, Waste, Management

In the interest of improving cost management directors, of course, have to undertake painful, sometimes unpopular tasks involving numerous small jobs. They often, however, do not think it worthwhile to undertake them. In many places cost management is simply not built into the incentive system, the organization of work is inefficient, bills

are paid without checking, maintenance costs are squandered, and costs analysis spreads very slowly. There are few enterprises in Hungary today which consistently, completely and continuously apply this proven method. Most of the enterprises are only beginning to create systems of cost accountability, but even this does not function correctly.

There are also things which should be done by the supervising authorities. Further shifting of costs--especially in connection with price setting--make it possible tof poorly-managed enterprises to survive without making changes. These enterprises have asked, received and are getting various central preferences. At the same time, well-managed enterprises in particular claim that profit taxes are too high.

Financial-economic investigations also showed those conspicuous phenomena which offend officially accepted methods of profitmaking and which consequently lead to unjustified excess profits and unearned incomes.

During our investigations we noticed that the methods of evasion of regulations or rather the spirit of the rules are more and more varied. The authors of the rules have assumed that enterprise directors will live reasonably and in accordance with socialist morality within the balanced circle of the law. On the contrary, in our experience many managing units treat various monetary and natural allotments which they count as financial burdens as if they are paid by no one. I am not thinking only of refunds for the use of a private car or laxness in paying the costs of outside workers, but also of a greater variety of abuses.

For example, according to the rules, public institutions can also rent property from private persons. We often find surprinsingly large rent charges and payments. There have been enterprises which agreed to annual fees of more than half a million forints for property of very little work, overpaying the acceptable amount many times over. Clever speculators--taking advantage of the demand--make their living--and not a small one--by buying various properties and leasing them to public institutions, charging unrealistically high fees. We have also met with a case where an enterprise director bought a plot of land for 20,000 forints and leased it to an economic work group (GMK) for 30,000 forints a month. Of course, the director "earned" this great fee by putting at the disposal of the GMK expensive equipment and materials for free, naturally not from his own pocket, but from the state's. I need to relate the abuses of this circle of activities primarily in the interest of useful, honestly working small businesses and small businessmen.

Small businesses are built with individual work and initiative. Naturally, this form of business gives great freedom and independence. It is not natural, however, that this economic form should give rise to corruption. Our experience shows that small businesses which produce for direct public consumption, supply or services have fewer opportunities for dishonest management. Profits flow much more abundantly, however, from the state sector and, not in one case only, after invisible accomplishments.

For example, there is a cas- where high officials in a state organ handling state money formed a GMK and they became employees of an executor whose work they supervised at their office. Our investigations showed that the employees who were entrusted with the honest management of state funds--apparently--do not know accounting, since they accidentally made several mistakes in addition and multiplication, as long as they received millions in unearned incomes as members of the GMK. It is also characteristic of this affair that the mistakenly prepared bills were accepted by the main enterprise's executor, as well as by the responsible authority, without batting an eyelid.

In the Interest of Entrepreneurs

Obviously corruption is not a characteristic of the overwhelming majority of small businesses. In spite of this it is to be feared that public opinion reacts to these occurrences in such a way that they cast a shadow on the honest majority. The financial investigators have found that every new economic form becomes a center for get-rich-quick artists. This phenomenon was also noticed in previous years in the activities of various agricultural joint enterprises and supplementary factories. At that time it became possible and it is not possible to guarantee the legal form of these activities given appropriate professional directions, control and social collaboration.

For a long time after small businesses were organized, the Chief Directorate of Control of the Ministry of Finance showed patience and offered considerable help, when calling people to account. We knew a large share of the violations originated from lack of practice and misunderstanding and could be eliminated by mutual effort. The time of patience, is however, sloely drawing to a close. In the interest of the healthy development of small businesses in the future we will stand more strongly against every occurence reacting to immoral or dishonest acquisition of benefits, of unearned incomes and of every form of corruption. In the interest of strengthening order and discipline we will employ not only sanctions stemming from our tax revenue jurisdiction, but--working together with criminal authorities--tougher measures.

We ask for the support and understanding of the public in this task. I would like to stress that guaranteeing stricter order and discipline is not directed against independent entrepreneurs, but is necessary for the interest of independent entrepreneurs. It would be good if businessmen remembered and applied in their work the old maxim: "In business relationships the best tool for maintaining a friendship is exact and rigorous accounting between the two parties."

12647
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DISTRIBUTION OF SOCIAL CONSUMPTION FUNDS DISCUSSED

Bucharest REVISTA ECONOMICA in Romanian No 24, 15 Jun 84; No 27, 6 Jul 84

/Article by Grigore Valceanu and Maria Molnar, Institute of Socialist Economics: "The Distribution of the Social Consumption Funds"; Parts I and II; passages enclosed in slantlines printed in boldface/

/15 Jun 84 pp 19, 24/

/Text/ Deriving from the necessity of efficient fulfillment of the functions of the social consumption funds under the conditions of a limited volume of resources that can be devoted to this goal, the theoretical and practical problems of their distribution are grouped mostly around distribution according to main purposes--that is, according to the main categories of social needs of the population--and around the principles, criteria and forms of distribution of the social consumption funds within each purpose.

Characteristic Elements of the Distribution of the Social Consumption Funds

In tackling the problems of the distribution of the social consumption funds according to main purposes, we start from two of the coordinates of the general framework of their formation and distribution. On the one hand, this is determined by the system of the population's social needs, which indicate the main directions and objectives of this form of distribution in the socialist society. The objectives in raising the standard of living and the quality of life in each stage of development, the exigencies that technical, economic and social progress sets before the process of forming and developing all members of society, and the social-human desires of socialism determine the socially necessary degree of satisfaction of all of the population's social needs, marking also the objectively necessary size of the flow of resources that must be oriented toward each of the directions and objectives of the utilization of the social consumption funds. On the other hand, the degree and rate of development of the national economy restrict the possibilities of satisfying at this socially necessary level all of the population's social needs, either due to the limited character of the material, financial and manpower resources needed to develop social and cultural services or through the influence that they have on the dynamics of the correlation between distribution from labor and through the social consumption funds.

The matter of establishing the sequence for the resolution of social problems and determining in each stage the hierarchy for satisfying the respective needs, with a view to distributing the increase in resources that society can allocate for the social consumption funds in the direction of these priority objectives, thus constitutes the main problem in the distribution of the social consumption funds according to purposes.

The correct determination of the sequence for resolving the different social problems, the selection of the priority objectives of the distribution of the social consumption funds, and the determination of the degree of coverage, from these funds, of the population's social needs, corresponding to the different directions of this form of distribution, are done on the basis of evaluating their importance for the development of society in the light of the economic and social policy's main objectives and the subjective perception of them by the members of society. The evaluation of the implications that the resolution of one problem or another can have for other fields of social and economic life also constitutes another element that is taken into consideration in establishing the hierarchy for satisfying the population's social needs.

In connection with distributing the social consumption funds, with selecting the long-term strategy for the attainment of their objectives and functions in accordance with the possibilities offered by social and economic development, two viewpoints are encountered in the literature in the socialist countries.* A number of economists and sociologists feel that the distribution of the social consumption funds must be done up to the level of a guaranteed social norm of satisfaction of the population's social needs (beyond which the satisfaction of them at a higher level would involve the mobilization of the population's personal incomes), under the conditions of the expansion of this form of distribution over /a wider and wider range of fields of human existence/, from health care and education to the supplying of housing, transportation and even food. At the same time, we mention that, in the views of these specialists, under the conditions of the general growth of the standard of living, the guaranteed social norm (which some authors liken to a social minimum) has a dynamic character, it growing with time along with the expansion of the possibilities of obtaining paid goods and services beyond this norm. According to other economists, the social consumption funds must be oriented toward more and more fully satisfying (at a socially necessary level) /a more limited set of needs/, whose general and equal coverage for all its members society assumes, and the involvement of the population's personal incomes would be justified only for satisfying certain categories of social needs--in any case, not the most important ones.

As far as we are concerned, we feel, like the authors of the cited study, that in establishing the level of coverage of the different categories of needs from the social consumption funds, it is necessary to take into account--as happens, in fact, in the practice in our country and in other socialist countries--both the socially necessary level (in the case of the priority needs) and the guaranteed social norm, even a minimum, depending on the available resources, in

* "Soversenstvovaniie Ispolzovaniia Obscestvennih Fondov Potrebleniia," VOPROSI EKONOMIKI, No 9, 1981, pp 125-126.

the case of other needs. We also stress that, in our opinion, it is necessary to provide the possibility of also utilizing paid services to satisfy as fully as possible all categories of needs that enter into the sphere of the social consumption funds, even in the case of those for which free satisfaction for all citizens of the country is provided at the socially necessary level.

As also follows from the analysis made regarding the sphere of inclusion of the social consumption funds, the practice of their distribution in our country has in view--starting from the functions that are assigned to them--the following directions of utilization: the instruction of the population and the training of the work force; the raising of the population's degree of culture and civilization; health care for the population and, in connection with this, the providing of the conditions for recreation and physical culture; the providing of housing conditions and the arrangement and maintenance of elements of the environment; society's participation in the support of the younger generation (children, pupils, students), family care and the implementation of the demographic policy; the providing of the incomes needed to support the elderly population that performed during active life a useful activity in an organized social framework and the active population with a permanent or temporary inability to work caused by illness or accident (substitute incomes); the providing of social assistance and social aid and services to the population.

The analysis of the available data* on the expenditures made from the social consumption funds makes evident the fact that, under the conditions of the continual growth of all its components, at the start of the period of socialist construction in our country most of the funds were oriented toward the development of services involving education, culture and art, and health care. (In 1950, of the total expenditures made from the state budget to finance social and cultural actions, those devoted to education represented 37.8 percent and those made for health care represented 18.7 percent.) The priority of their development was determined by the low degree of satisfaction of the population's respective needs in that period and by the national economy's great need for skilled manpower.

Gradually, in proportion to the providing of a certain degree of satisfaction of these categories of needs and under the conditions of the continual growth of the resources oriented in these directions, the raising of the standard of living of the population unfit for work, by improving the pension system and increasing the size of the pension, and the raising of the family benefits appeared among the priority objectives of the distribution of the social consumption funds. At present, in the population's total incomes from the social consumption funds, the percentage of those obtained by the population unfit for work is 35 percent in the form of pensions and sickness benefits and 20 percent in the form of family benefits.

The analysis of the current system of distribution of the social consumption funds in our country from the angle of the ratio between the degree of coverage

* We mention that we did not have the necessary data in a sufficient degree of detail to also make for the earlier period a grouping according to purposes similar to that for 1980.

of the main categories of social needs of the population and the socially necessary degree under the current conditions and in the future, taking into account also that achieved in other socialist and capitalist countries, makes evident two priority directions for improving the distribution of the social consumption funds. In our opinion, the necessity of also providing for the peasantry social-security benefits (pensions, sickness and maternity benefits, allocations for children) similar to those that the worker personnel get constitutes the number-one priority in the current stage of evolution of the social consumption funds, the direction in which, in particular, their growth should be oriented in the near future. The necessity of attaining this social-policy objective in the next period, with favorable consequences for securing the equilibrium of the work force in agriculture and the nonagricultural branches, is determined by the existence of still big differences at present between the average pensions and the allocations for children, associated with the two categories of the population in our country. We also place in the field of social security the second priority direction of the distribution of the social consumption funds in the next period. It concerns the reduction of the differences still existing with regard to the level of the average consumption per person between the families of pensioners and active persons and between the families with a different demographic structure.

Table: The Structure of the Population's Incomes from the Social Consumption Funds in 1980

Item	Percentage
Education	20.1
Culture and art	1.6
Health care	16.7
Physical education and sports	0.5
Balneal treatment and recreation	0.4
Communal administration, road and bridge maintenance	2.1
Family benefits	20.1
Substitute incomes (pensions and sickness benefits)	34.5
Social assistance, social services and aid	4.0
Total	100

Source: Calculated on the basis of the data of the DCS /Central Directorate of Statistics/, the Ministry of Finance, the Ministry of Labor, UCECOM /the Central Union of Artisan Cooperatives/, CASCOM /the Social-Security and Pension Fund of the Artisan Cooperatives/ and CENTROCOOP /the Central Union of Consumer Cooperatives/.

Principles and Criteria of Distribution of the Social Consumption Funds

As regards the principles of the distribution of the social consumption funds, we feel that their essence and functions, the very reason for the existence of this distinct form of distribution according to labor, and the restrictions connected with the resources that can be allocated to satisfy the population's social needs dictate as characteristic of the distribution of the social consumption funds /the principle of their distribution at the appearance of the needs recognized by society as social and in proportion to these needs/.

Consequently, from a certain volume of the resources allocated by society to satisfy a certain category of needs, each consumption unit (an individual or a family) benefits in proportion to the objective size of its needs. Thus, for example, a sick person will benefit from health-care services to a considerably greater extent (in relation to the seriousness of the illness) than a healthy one.

In the distribution of some of the components of the social consumption funds--namely, pensions and sickness and maternity benefits (in other words, the ones that replace the incomes obtained from labor)--this general principle of the distribution of the social consumption funds is also combined with /the principle of distribution according to the quantity and quality of the labor/ performed by the recipient in the active period of his life. The taking of this principle into consideration--by including the length of service and the level of pay in the calculation of the pensions and benefits--is justified by the contribution made during active life and by their obvious influence on the material encouragement for those who work and, at the same time, represents a method of attaining the social objective connected with providing a standard of living close to that achieved before pensioning or before the appearance of the inability to work due to illness or maternity. In addition, we feel that in the distribution of the social consumption funds created at the level of the economic units the principle of distribution according to each member's individual contribution to the economic and social activity of the staff can also be associated in some cases with the principle of equal distribution for objectively equal needs, especially when the formation of these funds is made directly dependent on the economic and financial results of the unit.

In the course of the development of the system of social consumption funds, the process of their formation and distribution is marked by the big volume of the social needs included in a certain category that enters into the sphere of the social consumption funds and by the limited volume of the resources that can be allocated initially to satisfy them. This implies the gradual expansion of the sphere of inclusion of the different components of the social consumption funds, in proportion to the formation of the necessary material, financial and manpower resources. In this situation, there is posed the problem of utilizing criteria that define in each stage the categories of population that enter into the sphere of satisfying the respective needs through the social consumption funds.

One of these criteria--the one most often encountered in the practice of the distribution of the social consumption funds in our country as well as in other socialist and capitalist countries--is the level of the incomes of the families (the level of the pay of their active members or the average level of the incomes per person in the family). This criterion is applied when the intention is to orient the limited resources alloacted to satisfy a category of needs (allocations for children, scholarships, day nurseries and kindergartens, medication, tickets for treatment and recreation) in favor of the families with a lower level of income. The utilization of this criterion to distribute social consumption funds has some unfavorable effects on the stimulative function of remuneration according to the quantity and quality of labor, especially when the level of pay is taken into account and not the average income per person.

For this reason, we feel that, where it is possible without affecting the attainment of the proposed objectives, it is necessary to replace this criterion with another that does not contravene the principles of material encouragement.

In the current system of distribution of the social consumption funds in our country, other criteria are also still used. One of them, which can be improved in the future and put in agreement with the essence and functions of the social consumption funds, is the criterion of the family's membership in a social category and of its area of residence, which is taken into account in distributing the allocations for children and in determining the size of the pensions and other social-security benefits. Other criteria that operate in the distribution of the social consumption funds are the length of service (in the case of pensions and benefits for a temporary disability), the results obtained in school by pupils and students (in the case of the awarding of scholarships), the nature of the illness (in the case of providing free medication and the allowance for an inability to work caused by illness) and so on.

/6 Jul 84 pp 22-23/

/Text/ In the first part of this study,* we presented a few questions of principle regarding the distribution of the social consumption funds. In the continuation, we intend to tackle some aspects of the practice of distributing the social consumption funds in our country--that is, the comparative analysis, according to main purposes, of the degree of coverage of the needs that they satisfy, of the forms in which this is achieved and of the criteria according to which they are distributed.

The Forms of Distribution

The selection of the forms of distribution of the social consumption funds is of particular importance for providing efficient functionality to the system of social consumption funds. The main forms are the monetary ones and the ones in kind, the latter being concretized either in free goods or services or in the granting of subsidies for keeping the prices and rates of goods and services at a low level.

Each of these forms has characteristics that condition certain methods of fulfilling their functions, of satisfying the population's social needs. Thus, through the monetary forms there is put at the disposal of the benefiting persons and families an income that they can utilize according to their own preferences, inclinations and way of life, an important matter under the conditions of the continual growth of the population's standard of living, the expansion of the range of needs and the diversification of the possibilities of satisfying them. At the same time, the utilization of the monetary allocations can also favor the nonutilization of these incomes in accordance with their functions (as sometimes happens, for instance, in the case of the allocations for children received by socially maladjusted families).

* The first part of this article appeared in the magazine's issue No 24 of 15 June.

The forms of distribution of the social consumption funds in kind permit the more precise orientation of them toward the fulfillment of their functions, constituting at the same time one of the most efficient means of socially determining the population's consumption model, of actively influencing its size and structure. However, their development requires considerably greater efforts on the national economy's part than the monetary forms, since they presuppose a suitable infrastructure, a material supply and highly skilled manpower. In addition, the inequalities in the development of this infrastructure (on a territorial basis and according to the two milieus) can generate inequalities in the distribution and consumption of these forms of the social consumption funds.

In satisfying the different categories of needs of the population, the monetary forms of distribution of the social consumption funds and the ones in kind complement one another, there being needs to which certain forms of allocations are specific (for instance, the ones in kind for education and health care and the monetary ones for supporting old and sick persons) as well as needs in satisfying which the different forms complement one another and take the place of one another. The experience in the socialist countries shows, for instance, that allocations for children, benefits for mothers who interrupt their activity to raise children up to 2-3 years, services of day nurseries and kindergartens, food at school, free medication, preferential prices and rates for clothing, books and magazines, transportation, performances and so on are utilized to raise and support children.

/The selection of the forms of distribution of the social/ consumption /funds/ and the finding of the optimum combination of these forms must take into account each one's correspondence with the general and specific functions of the social consumption funds, with the system of objectives and the principles of the distribution policy, the efficiency in utilizing one form or another in the case of each category of needs, and the habitude of the people, the traditions of consumption.*

The economic and social implications of the forms, the influence that the utilization of a certain form can have on other fields of economic and social life, also constitute an important criterion for evaluating the advisability of utilizing the different forms of distribution of the social consumption funds. Thus, on the one hand, the utilization of subsidies from the social consumption funds to maintain low prices and rates for some products and services (rent for housing, transportation and so on) constitutes an obstacle to the operation of the economic mechanism of the respective producing units, to the putting of them on the bases of economic efficiency, and on the other hand, it occasions

* According to N. Badila, the following objectively existing circumstances influence the selection of the concrete ways to satisfy the people's social needs: a) the level of efficiency that the satisfaction of the respective needs in one way or another provides; b) the social implications of satisfying the needs in one form or another; c) the people's habitude, the traditions and the concrete conditions in each national economy (Nicolae Badila, "Repartitia dupa Munca" /Distribution According to Labor/, Bucharest, Stiintifica si Enciclopedica Publishing House, 1979, pp 75-78).

an unequal consumption of the social funds distributed through these forms, since, with them being associated with the paid consumption of goods and services, the population with higher incomes benefits from them to a greater extent. Under these conditions, the matter of covering from the social consumption funds or other budgetary funds the differences between the prices and costs of products, between rent and the expenses for operating the housing supply, between the costs and rates of transportation and so on has gradually been abandoned in the economic and social practice in our country and in other socialist countries (except the GDR).*

The simultaneous utilization of several forms of distribution, which complement and enhance one another in the obtaining of as high positive effects--economic and social--as possible, under the conditions of the volume of resources that can be allocated for these forms of distribution in each stage, has a special significance for fulfilling with maximum efficiency the functions of the social consumption funds and for correctly articulating them in the aggregate of the distribution relations, in the operating mechanism of the national economy.

In our opinion, in the future, the configuration of the system of social consumption funds from a viewpoint of the forms of distribution must evolve in the direction of multiplying the forms in which the satisfaction of a certain category of needs is provided in such a way as to efficiently attain through the optimum combination of them the entire complex of current and future objectives of the social policy, helping at the same time to efficiently implement the economic policy. On this basis, on the basis of increasing the volume of the social consumption funds and on the basis of the process of decentralizing their formation and distribution, it is also necessary to increase the flexibility in utilizing the different forms of distribution to also change the conditions of economic and social life in accordance with the concrete situations of life in which distribution through the social consumption funds intervenes.

The Main Purposes of the Social Consumption Funds

Given the particular importance for raising the standard of living and the quality of life of the population and for providing as high a potential as possible to the human factor in economic growth, education and health care are considered priority fields in the utilization of the social consumption funds. As a result, the matter of covering from these funds the needs involving educational and health-care services at a socially accepted level, dictated by the requirements for developing the economy and society and permitted by the evolution of the economy, helps to efficiently attain the objectives connected with generally raising the level of instruction and professional training and to improve the population's state of health--essential compoments of the population's standard of living--along with providing the qualitative aspects of the reproduction of the work force in conformity with the needs of the national economy. At the same time, from the viewpoint of the standard of living and the quality of life, equal access for the population to educational and

* In the theory and practice of distribution through the social consumption funds, moreover, the question of the belonging of these subsidies to the sphere of inclusion of the social consumption funds is in dispute.

health-care services constitutes a basic premise for achieving social equity, it being, in fact, a component of the process of achieving economic equality for all citizens. This is because the possibility of attaining a high level of professional training and a good state of health are conditions for equality in exercising the right to work and, thereby, for the homogenization of the incomes, of the standard of living of the population.

In the practice of the development of the educational and health-care systems in our country and in other socialist countries, the absence of a charge for satisfying the respective needs, up to the level accepted socially as necessary and possible to cover for the whole population, is interwoven with the development of services for payment meant to satisfy at a higher level the needs included in these categories. The polyclinics and other health institutions requiring payment, which offer services that concern the individual's exigency in covering his health needs (in connection with the possibility of choosing the doctor, for example), and the organization, through the people's art schools, houses of culture and so on, of forms of education meant to satisfy the instructional needs in accordance with personal preferences constitute an example in this direction.

Among the population's needs included in the sphere of inclusion of the social consumption funds, the ones connected with culture and art, sports and recreation--needs connected with the multilateral development of the human personality, with the providing of a good state of health to the population and with the useful and civilized employment of free time--stand out as a very wide category of needs, into which both needs of the first order and needs of a higher order enter. In this case, undoubtedly, it is not possible to speak of completely satisfying them from the social consumption funds, with most of them being filled from the population's personal incomes, especially as the formation of some of these needs is determined--to a greater extent than in the case of other categories of needs--by subjective factors, and the selection of the forms for satisfying them also depends on individual tastes and preferences. In 1980, of the total value of the services involving culture and art, 35 percent was covered from the social consumption funds, with the rest being borne from the population's individual budget. In the same year, of the total expenditures made for balneal treatment and recreation, the contribution of the recipients represented more than half (52 percent).

The expenditures made from the social consumption funds for culture, art and sports are oriented mainly toward financing the cultural clubs, the houses of culture, the centers for guidance of creation, the libraries, the museums, the people's art schools and so on. In their activity there predominate the mass forms for satisfying the population's needs involving culture, art and sports, which, together with the competitions and festivals (financed from the social consumption funds), favor the wide penetration of culture into the ranks of the population and which, involving broad masses of citizens in actions with a sporting and cultural character, provide for the achievement of the principle of equal access for the whole population, at no cost or on easy terms, to the utilization of this category of services.

In the first period of socialist construction, the coverage of the needs from the social funds to a greater extent, the supplying of the respective services

at no cost or at low rates, is necessary particularly in order to facilitate the access of the broad masses, in order to introduce culture into the population's way of life. In proportion to the entry of the consumption of food, clothing and housing--thus, the satisfaction of the basic needs of the first order--into the phase of saturation, leaving a clear field for growth in the population's discretionary incomes, the transition to satisfying some of these needs through the incomes from labor becomes more efficient. The prospect of the continual expansion and diversification of these needs connected with the employment of free time, under the conditions in which the demand for and consumption of the respective services depend more on individual preferences, on the personality of the consumer, constitutes an argument for the efficiency of satisfying them through the incomes from labor.

Another category of needs, toward satisfying which part of the social consumption funds are oriented, is connected with providing housing and communal-administration services to the population. As regards the housing needs, we stress that most of them are now provided through the mobilization of personal incomes, either through the construction of privately owned housing or through the providing of state-owned housing, for utilizing which the population pays rent. In some socialist countries, the social consumption funds are utilized to cover that part of the expenses for operating the housing supply that exceeds the level of the rent. In general, the importance of this form of distribution of the social consumption funds is declining,* and in the specialized literature there is posed the problem of reorienting toward other purposes the resources utilized to this end--that is, of concentrating them on the attainment of other priority objectives (the development of the rural infrastructure of the health-care services, the implementation of the demographic policy, the unification of the social-security systems and so on). In this context, either the satisfaction of this need is excluded from the sphere of inclusion of the social consumption funds or it is considered a matter possible to achieve in proportion to the satisfaction of the other priority social needs at a higher level and to the growth of the potential of the economy.

Of the communal-administration services, the ones connected more directly with the consumption of the families (the furnishing of drinking water, natural gas, electric and thermal power and so on) are covered from their personal incomes, there being covered partly from the social consumption funds those communal-administration services that apply equally to the whole community in the urban and rural localities (public lighting, sanitation, maintenance of parks and green spaces, maintenance and repairs on streets, roads and bridges and so on).

In contrast to the directions of distribution of the social consumption funds that we presented above--that is, the utilization of them to finance the services meant to cover a certain category of social needs of the population--the

* In the 1960-1980 period, the percentage of these expenses in the social consumption funds dropped from 5.8 percent to 2 percent in Hungary and from 5.1 percent to 4.3 percent in Czechoslovakia, while the percentage of these expenses is insignificant in Bulgaria. A slight trend of growth in this percentage is noted in the USSR, from 4.7 percent to 5.9 percent. In the GDR, its growth is quite marked, from 2.9 percent to 11.5 percent.

main forms of the family benefits, substitute incomes and social assistance (allocations for children, scholarships, pensions, sickness and maternity benefits, homes for the elderly and handicapped, creches and homes for children and so on) are meant to satisfy completely or partly all of the consumption needs of the categories of population to which they are addressed. The support of the pre- and postactive population (children, young people in the period of schooling, and old people) and of the active persons with a permanent or temporary inability to work--the main objective of utilizing these forms--represents an extremely important economic and social task for the entire society, in achieving which, besides the social funds, there also participate to a significant extent the incomes obtained from labor by the active population, there occurring in this case a redistribution of these incomes on a microfamilial level.

The matter of completely satisfying from the social consumption funds the consumption needs of the population included in these categories is done through the forms of social assistance in the case of the population unfit for work (old people, handicapped persons, children), which does not have the necessary means of subsistence, not having legal providers either. In addition, it is possible to consider complete satisfaction of the consumption needs at a socially accepted level, in correlation with the level achieved on the basis of the pay in the period of active life, in the case of the social-security pensioners with full length of service and of those with a temporary inability to work. In the case in which the social-security pensioners do not meet the conditions of full length of service, their support can be achieved only partly on the basis of the incomes from the social consumption funds (pension, social aid), with the rest being provided by the family.

At the basis of the distribution of the social consumption funds for the support of old people and invalids lies the principle of the distribution of the former according to the contribution of the latter to social production, with the degree of coverage of the needs of the elderly persons and of those with a temporary inability to work being correlated with the length of service and the level of pay achieved during active life.

The task of supporting the younger generation goes mostly to the family, with society helping partly to do this, mainly through the allocation for children, scholarships, and the support of children in day nurseries and kindergartens. As regards the allocations--a chief form of family benefits--we mention that in the current system they cover only part of the minimum expenses for child support and are given only to part of the families with children, with the criteria for granting and distributing them being the socioprofessional category, the area of residence and the level of the pay of the head of the family.

Determined by their specific functions and by the system of the population's social needs, the matter of satisfying the needs involving instruction and culture, health care and recreation, and support for the population unfit for work due to advanced age and illness and of helping the families with children to support them constitutes the main directions of distribution of the social consumption funds.

The level up to which there is provided the satisfaction of each of these categories of needs from the social consumption funds depends on the place that they occupy in the social and individual hierarchy of needs, on the resources that society can allocate in each stage for the population's consumption, on the exigences of the correlation between the two forms of distribution--according to labor and through the social consumption funds--and on the efficiency of the mechanism for distributing them, on the concrete way of combining and applying the principles, criteria and forms through which this process is carried out. Such a mechanism, well substantiated and articulated in the general mechanism of distribution, of the operation of the national economy, represents an essential premise for providing in each stage as high a level as possible of satisfaction of the population's social needs, for fulfilling with maximum efficiency the functions for which the social consumption funds were created, for increasing their contribution to raising the standard of living and improving the quality of life.

12105
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PROGRESS IN SHIP CONSTRUCTION DETAILED

Bucharest REVISTA ECONOMICA in Romanian No 30, 27 Jul 84 pp 8-10

[Article by Mircea Iordan of the Galati Institute for Ship Research and Design: "Ship Construction - Technology and Diversification"]

[Text] In the 40 years since the social and national, anti-fascist and anti-imperialist liberation revolution of 23 August 1944 and especially over the nearly 2 decades since the Ninth Party Congress, our country has experienced strong economic and social development. The implementation of the party's policy for socialist industrialization has ensured a sustained growth, diversification of the branches of industry and a rebirth and modernization of certain sectors that were little developed in the pre-war period. The stress placed on the priority development of the machine-building industry also favored the development of the ship construction sub-branch where, despite the existing tradition, the achievements had been far from the needs of the national economy and the opportunities offered by Romania's geographic position.

Romania's geographic position, traversed for over 1,000 km by the Lower Danube, with its exit at the Black Sea and having a shoreline of over 240 km on the Black Sea, has permited even from the oldest times the development of a prosperous economic life in the ports that sprung up along the shores of the ancient Danube. In these ports, the first repair, and later ship construction, yards appeared and developed, yards whose history is practically blended together with the history of these places. These yards, however, experienced sporadic activity, a sufficiently reduced level of activity, generally carrying out ship repairs and unpowered, small ship construction for local use. During World War II, following the destruction that was suffered, the production capacity of the Romanian ship industry was reduced to less than one-half. The historic act of 23 August 1944 also marked the beginning in the ship industry of a period of profound changes and work, expressed in the creation of a powerful material base and in the provision of a highly-trained workforce necessary for the rebirth and impetuous development of this sub-branch of machine-building.

During the period 1960-1970, ship construction continued to be developed on the basis of a broad investment program providing for technical equipment and the construction of certain modern shipyards, a program which included the majority of these units in Romania. Paralleling this action, a series of organizational measures were also taken for the improvement of activities in this sub-branch,

such as the creation in 1966 of the Institute of Design and Research for the Ship Construction Industry and the establishment in 1969 of the Galati Ship Industrial Central. Beginning in the 1970's, ship building activities were greatly diversified, with Romanian ships being gradually ever more requested by foreign partners due to their reliability and competitiveness. The period that followed was the most fruitful in the development of ship construction in Romania.

This unprecedented development is linked to the name of the secretary general of the party, comrade Nicolae Ceausescu, who, in leading with revolutionary vision the historic work of our people of building multilaterally developed socialism on the land of Romania, gave and is giving special attention and directly supports the activities of the shipbuilders, directing their efforts towards priority areas in the diversification of production and the building of specialized ships of large and small capacity at the level of those nations with a tradition in this field. In light of these directives, at the beginning of the 1970's a priority program was drawn up for the development of the ship building industry that would result in the increase of the tonnage of the Romanian merchant fleet and the creation of certain significant capacities for export (see table below).

Dynamics in the Tonnage of Maritime Ships Built During the Period 1971-1980

Year	DWT	1970 = 100
1971	72,100	124.7
1973	123,100	213.0
1975	280,800	485.5
1978	295,250	510.8
1980	481,000	832.2

The excellent results that were obtained during the preceding decade made possible the transition to a new stage of development of the ship industry. The decisions of the 12th RCP Congress and the National Party Conference and the highly significant guidelines formulated by the secretary general of the party during his visits and analyses conducted at the Galati Ship Industrial Central, as well as at the ship building yards, ensure an important development of ship production during this five year plan and until 1990, with the priority stress being placed on increasing the tonnage of the maritime and river fleets and on diversifying the types of ships in relation to the requirements of the national economy and foreign customers. For 1985, we estimate a production increase of 60 percent compared to 1980.

[Highlights of the Romanian shipbuilding industry:] Romania - among the top European nations producing river and maritime ships; Romanian ship production has increased 21 times over during the last 30 years; the current dimensions of ship production growth and diversification compared to the 1951-1956 period: - from a newly-built maritime ship transport capacity of 2,175,000 dwt to 11,630,000 dwt, and 39 types of maritime ships compared to the number produced 28 years ago; during the current five year plan Romanian shipyards will build about 100 types of ships; in the last 15 years, the time for the production

cycle of a ship has been reduced on the average by 40 percent; during the 1971-1980 decade, the absolute value of production for export increased twice over; and ships of different types and tonnages are exported to 16 countries around the world.

The entire evolution of the shipbuilding industry has been based upon an intense research activity carried out primarily by the Institute for Ship Research and Design (ICEPRONAV). This has been centered around a number of priority directions: the creation of new ships having superior performance parameters, at the level of international technology; the domestic production of finishing equipment for ships so as to reduce imports; and the improvement of production technologies in order to shorten the ship production cycle and reduce the consumption of materials and manpower. In order to attain these objectives, activities were intensified to optimize the shape of vessels so as to reduce resistance in making headway and to reduce dock time during loading-unloading operations by providing high-capacity lifting equipment and so forth.

The reduction of the fuel consumption rates for on-board power equipment was and continues to be a permanent concern of the researchers in the shipbuilding sub-branch. By way of the redesign of the shape of ships, the use of certain main engines having reduced fuel consumption rates and the optimization of the propulsion-steering elements, we have currently reached the point where the ships built by our industry will have fuel consumption rates approximately 15-20 percent lower than 15 years ago under conditions where capacities and speeds are equal or even greater. At the same time, important progress was also made with regards to the degree of integration of domestic production in the building of ships. The first cargo ship built in our country had a degree of integration of approximately 30 percent, with the majority of the equipment and materials used being obtained via imports. Along with the rapid development of the shipbuilding industry it was necessary to have a substantial improvement of this situation, moving towards an intense effort to have the in-country production of ship finishing equipment.

It can be said that nearly the entire Romanian industry took part in this action, beginning with the metallurgical industry, which had to start production of high-quality rolled steel, right up to the light industry, whose products are found in living quarters aboard ships. Currently, in addition to the units of the Galati Ship Central over 80 enterprises from around the country, belonging to all the economic ministries, are taking part in the construction of a ship. Thus, we have reached the current moment where the degree of integration in the production of ships is approximately 88-90 percent, with this slated to rise to 95-98 percent in 1985.

In the process of integrating production, a special contribution was made by starting production on ship finishing equipment, both within the shipbuilding central and in other specialized enterprises throughout the country (ship pumps, electrical equipment and so forth). Currently, the Romanian ship finishing equipment industry also has capacities available for exports.

The Shipbuilding Industrial Central in the signing party to the agreement on specialization and mutual delivery of different types of equipment with the other socialist countries, being noted for the specialization of over 60 types and sizes. During the 1986-1990 five year plan, this number is slated to increase in accordance with the new equipment that is to be produced. In addition to this, within the central they produce a very wide variety of other types of ship equipment, such as: very diverse electrical equipment (electric panels, control panels, battery charge panels and so forth), galley equipment, various ship accessories (doors, windows, side lights, access hatches and so forth) and pressurized containers (air bottles, hydrophores and so forth).

During the recent period, research activities have also been given priority direction towards the field of improving ship production technologies for the purpose of reducing the production cycle and increasing quality and savings by decreasing the consumption of materials and manpower. To this end, the specialists at ICEPRONAV, together with those within the shipyards, have elaborated a series of new assembly technologies, such as those for: the remanufacture of pipes, the combined assembly of the equipment in the machine room, the modeling of the machine room, the saturation of the ship's hold sections and so forth. With regards to the metalwork, which 30 years ago was completed nearly exclusively with riveting, today this work is done only by welding, with the most significant portion being done by automatic and semi-automatic welding having higher qualitative and net productivity indices. All these technological improvements have permited reducing the production cycle by over 40 percent in the last 15 years. At the same time, the introduction of steel plate production machinery having optical and numerical control, with the assistance of perforated plate produced by ICEPRONAV calaculations, has contributed to a great degree in reducing the specific consumption of rolled steel for shipbuilding per ship by 5-7 percent.

Also for the purpose of increasing the economic efficiency of ship production and raising the quality level of this production, special attention was given to the specialization of the shipyards by certain types of ships. Due to the specific nature of production, specialization was based upon both the criteria of available technical equipment and geographic location (on the Danube or the Black Sea) and the criterion of the experience of the personnel of these shipyards in building certain types of ships. Thus, the shipyards at Mangalia, Constanta, Galati and Braila were assigned specialization in the construction of medium- and high-capacity maritime ships (cargo ships, bulk goods carriers, oil tankers, supply ships for offshore drilling platforms, Atlantic-type supertrawlers, chemical products tankers and docks) while the shipyards at Tulcea, Giurgiu, Oltenita, Sulina and Drobeta-Turnu Severin were to specialize in the construction and repair of riverine and small-capacity ships (river barges, vacuum dredges, fishing vessels, general goods cargo ships, various tankers, scows, maritime port tugboats, floating cranes, dry goods barges and tanker barges, self-propelled river boats for dry goods, powered launches, river pusherboats, river passenger ships for local travel and cruises,

maritime and riverine pilot boats, river firefighting boats and so forth). Within the framework of these categories of ships, each shipyard has its own types of ships that it can produce under optimum quality and efficiency conditions.

Special mention must be made of the Galati Shipyard, which also produces floating maritime drilling platforms for the oil industry. Recently, the third platform was turned over to the users, a platform which will soon be placed on the continental shelf of the Black Sea. Also within the Central an important number of enterprises were specialized which produce assemblies and different parts which go into ships (the Tulcea Enterprise for Shipbuilding and Technological Equipment, the Drobeta-Turnu Severin Enterprise for Shipbuilding and Hot-Metals Processing, the Oltenita Enterprise for Shipbuilding and Forged Parts, the Ship Mechanical Enterprise and the Ship Enterprise for Propellers, Forged Parts and Cast Parts in Galati, and the Constanta Ship Mechanical Enterprise).

In the 4 decades since 23 August 1944, the efforts of the Romanian builders has also been permanently directed towards the production of certain competitive ships that can be offered to foreign customers. Year after year, the export of ships has experienced significant growth, especially during the period after the Ninth RCP Congress, a period which is rightly called the "Ceausescu Era."

The achievements obtained in the development of the Romanian ship industry place it currently in the top ranks of the hierarchy of European countries with a tradition in this field. The existing technical-material base, a result of the farsighted policy of the party for the socialist industrialization of the country, the creative ability of the Romanian builders and the superior training of the workforce represent a sure guarantee for certain new achievements along the lines of its even more powerful presence on the international level.

In the near future, the ship builders have the task of starting production on certain technical ships and very complex transports that are needed for the national economy as well as for export. Among these we can note: 15,000 cubic meter liquified-gas transporter, 12,000 dwt ferryboat, a 400/800 ton floating crane, a 12,000 hp salvage tug and so forth. The designs for these ships are being drawn up at ICEPRONAV, with these ships to enter our fleet in the next 2-3 years. The objectives that continue to be pursued have in mind the production of ships at the level of world technology having ever high levels of performance.

[Highlights of Romanian ship export activity] The absolute value of production for export increased in 1980 by more than twice over the amount of 1970. During this period Romania exported 500 and 2,100 ton motor vessels, scows and oil tankers to the USSR, 5,000 dwt mixed tankers to the PRC, 1,750 dwt river

pusherboats to Czechoslovakia, 4,500 dwt cargo ships to Cuba, 18,000 dwt bulk carriers to India, 8,000 dwt semicontainer cargo ships to Norway and roll-on/roll-off ships to Israel, as well as other different types of ships to Poland, Egypt, Vietnam, Hong Kong and so forth.

The party documents drawn up during the recent period of time and which establish the new quantitative and qualitative objectives for 1985 and the 1986-1990 five year plan also call for important tasks for the ship building industry. In order to carry these tasks out, all the technical-material conditions were created. The measures established for the coming period will permit an even greater increase in the competitiveness of Romanian ships and their penetration of the foreign markets.

8724
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SUCCESSES OF BEARINGS INDUSTRY HAILED

Bucharest REVISTA ECONOMICA in Romanian No 27, 6 Jul 84 pp 7, 8

[Article by Gheorghe Badea, general director of the Brasov Industrial Central for Bearings and Assembly Components: "The Romanian Bearings Industry - A Top Spot in the World Economy"]

[Text] The creation and development of the bearings industry in our country are the result of consistently carrying out the policy of the Romanian Communist Party for the socialist industrialization of the country, a process by which Romania has today become a powerfully developed nation having modern industry and advanced agriculture. As a result of this policy, a series of industrial branches have experienced an unprecedented evolution, with a high rate of development in the areas of the machine-building industry, electronics and electrotechny, the production of transport equipment and technological installations, the precision mechanics industry and so forth. The rapid progress of these industrial branches has brought along with it the birth and development of a strong specialized industry in the production of bearings, characterized by a high degree of product parameter diversification which allows it to meet the most varied and exacting needs of the national economy as well as to efficiently honor orders from foreign users.

The Romanian bearings industry, which is celebrating its 35th year this year, has developed over this relatively short period at a excellent rate. Until 1949, Romania obtained its relatively small required amount of bearings - approximately 300,000 per year - exclusively from imports, but, today, the domestic bearings industry provides over 90 percent from its own domestic production and exports better than half of its production to more than 70 countries around the world. The year 1949 marks the beginning of the production of bearings in Romania, with the pioneers of this industry being a small group of specialists within the framework of the "Steagul Rosu" Enterprise in Brasov, who, in just several months, succeeded in producing approximately 6,000 bearings under especially difficult conditions. During the first years of its existence, bearing production was organized in a production department and production resulted in several dozen types of bearings totaling a volume of 200,000 to 300,000 per year. Currently, bearing production in Romania is carried out within certain modern enterprises equipped with top-level equipment which produce over 100 million bearings, with approximately 4,200 different varieties.

During the first 15 years of bearing production, production increased within modest limits, attaining in 1965 a level of 13.6 million items of 480 different types. From an organizational point of view, this period was characterized by the start-up at Birlad in 1953 of the first specialized enterprise for the production of bearings, as well as the opening in 1959 of the bearings department within the "Steagul Rosu" Enterprise and the creation of the new specialized unit Brasov "Rulmentul."

Over the last 20 years, bearing production has seen strong growth, with production exceeding one hundred million in 1980 - with the average annual growth rate being approximately 12 percent - and the per-inhabitant production rising from .71 items in 1965 to 4.77 in 1983 and to 5.04 in 1984. This places our country among the top socialist countries both from the point of view of volume as well as from per-inhabitant production. This period is characterized by a strong development of production facilities by way of the modernization of the bearings enterprises at Brasov and Birlad, as well as by the construction of the bearings enterprise at Alexandria and the heavy bearings enterprise at Ploiesti, both equipped with modern, highly efficient equipment. These achievements were possible because of the policy of our party for the priority development of the bearings sector, which has received significant amounts of investment funds over the last 20 years. Currently, bearing production fully provides the necessary amounts for the production of trucks, cars, tractors, agricultural machinery, machine-tools, electric motors, locomotives and railcars, and metallurgical equipment.

Paralleling the increase in the volume of production, special attention was given to the qualitative level of the bearings, working - by way of improving technological processes - for a reduction in the amount of deviations in form and dimensional tolerances, the improvement of the quality of the bearing race surface, the decrease in the amount of vibration and an increase in precision and durability during use. The qualitative improvements that have been systematically and constantly obtained give Romanian bearings a competitiveness in relationship to bearings produced by recognized companies, with our bearings being well appreciated on the international level. It is worth noting the fact that exports made for convertible hard currency represent over 80 percent of the total bearings exports, which has made it possible to recover in a very short period of time the hard currency spent in developing our production capacities. Thus, if we take into consideration only the exports for convertible hard currency during the period 1970-1983, we find that the hard currency funds that were invested in the development of bearing production were fully recovered. With regards to the other 20 percent of exports, it was carried out on the basis of CTS [expansion unknown] relationships within the framework of mutual trade with the socialist countries.

Imports of bearings is done primarily from the socialist countries belonging to CEMA, within the framework of specialization and multilateral cooperation in the production of bearings, and involves both types-sizes from these countries' production - where our requirements are small and do not economically justify our own domestic production of them - and types and sizes which are also produced by our bearings enterprises but in amounts insufficient to meet domestic user demands.

Along with the development of bearings production, the need has appeared to increase the material base for this production. Where during the first part of the period of its existence the bearings industry was based exclusively on steels and imported technological materials, gradually these were assimilated by our metallurgical industry so that by the end of the 1970's the percentage of imports did not exceed 50 percent the required amounts for the bearings sector. And, starting with the last 2 or 3 years, because of measures approved by the party leadership the entire amount of required raw materials is provided from domestic production.

With regards to technological design, throughout the years the bearings industry has adopted the most modern solutions known throughout the world, including: hot pressing of semi-finished items from bar stock and profiled rolling of bearing races, which ensure increased precision and size constancy and reduced processing, as well as higher physical-mechanical properties because of strand orientation that is obtained after heat deformation and rolling; producing semi-finished rings of tapered roller and cardan thrust bearings having and exterior diameter of up to 80mm that are made from carburizing steel by way of cold extrusion, a high-technology procedure which, in addition to high productivity, ensures a higher use-index for the metal as well as high efficiency as a result of the price difference between carburizing steel and bearings; producing bearing bodies by way of closed-matrices pressing combined with extrusion; turning bearing rings on multi-axes lathes having four, six and eight axes, as well as on single axis lathes located on automated transfer production lines; producing casings by welding from strip steel; using continuously-operating automated equipment and controled atmospheres during the thermal treatment processes; grinding bearing rings on specialized equipment having active control devices and post-process verification; and superfinishing bearing races by using the vibro-smoothing method on automated-cycle machinery. All these concerns in the production of bearings have led to attaining certain ever higher levels of productivity and a permanent reduction in the consumption of metals.

Raising the technical and quality level of bearing production is ensured by the existence of strong research activities that are being carried out within the framework of the specialized center for scientific research and technological engineering. The activities of this sector, which involve over 300 specialists, is directed towards the permanent study of the technical levels attained throughout the world, as well as towards establishing the most judicious solutions regarding the design and production of bearings, the modernization of technological processes, their mechanization and automation, and the supply of adequate devices and equipment for measurement and control. At the same time, the research and design center has laboratories appropriately equipped to determine the reliability of bearings and to follow up of their behavior under loads and in different environments. Similarly, in the center there is a major effort for the assimilation of certain new basic materials, replacements for steel, lubrication, washing and conserving liquids, and, in a specialized group, technical assistance is given to users throughout the entire economy in the area of designing bearings, assembly and use of bearings in general.

For the purpose of supplying an ever higher level of our own requirements for specialized equipment and installations to produce bearings, special attention has been given and is being given to activities to produce our own equipment, equipment which, furthermore, has made an important contribution to the creation of the technical base of the specialized enterprises. Thus, during the period 1966-1983 domestically-produced equipment was turned out in the value of over one billion lei, of which 50 percent represented machine-tools specific to the production of bearings. First priority in this activity has been the study, design and production of specialized machinery for the production of ball bearings, an area where the Brasov group has broad experience, with the equipping of the ball bearing sections being done completely with domestically-produced machinery. The same attention is also being given to the development of production of super-finishing machinery and single-axis, multi-operation lathes, as well as the family of thermal treatment installations Likewise, within the activities for domestically-produced equipment, a special place belongs to the efforts for the mechanization and automation of production processes, especially in the direction of providing transfer lines and the automation of control operations.

In the future, the Romanian bearings industry will also experience priority development, as stressed at both the Session of the Supreme Council of Economic and Social Development and the recent Plenary Session of the RCP Central Committee - expressed mainly in the doubling of the production capacity at the Alexandria Bearings Enterprise and the start-up of another two bearings enterprises. Similarly, within the existing enterprises we will see the creation of production sections for small-scale and special production of bearings (bearings for the aircraft industry and micro-bearings), which currently are being imported. These measures will lead to an increase in the volume of bearing production and the massive diversification of production, which will make it possible to nearly fully provide the requirement for bearings to the national economy and will maintain a high level of exports.

Paralleling the development of production capacity, we will continue to give special attention to providing the conditions necessary for carrying out efficient activities and increasing the quality and competitiveness of the products. In this regard, among the objectives of scientific research, technological development and the introduction of technical progress in the coming period are: the production of special bearings for machine-tool broaches, special bearings for the metallurgical industry and miniature bearings for the precision mechanics industry, bearings for the aircraft industry and those needed for energy programs; the improvement of production technologies for the purpose of increasing the quality level of products so that the percentage of bearings in the high precision categories in the total amount of production will increase from 20 percent to approximately 40 percent, concomintantly with an increase in their reliability; the growth of labor productivity by way of expanding the use of top technologies in the production of bearings and by a more accentuated mechanization and automation of the production processes;

and the reduction of consumption rates for raw materials, materials, fuels and energy, the better use of recoverable wastes and the growth of the use-percentage for replacements of ferrous and non-ferrous metals.

At the same time, broad actions and measures are and will continue to be initiated in the sectors of activity that cooperate with the bearings industry for the purpose of ensuring the material conditions necessary for attaining the established objectives. In this regard, we are pursuing: the supplying of the material base in the varieties and qualities necessary for the technical level of bearing production by having an appropriate development of the production capacities of the current suppliers, especially with regards to the production of steel pipe for bearings and cold-rolled steel plate having a thickness of .2, .25, .3 and 1.1mm, needed for the production of bearing bushes; the increase in the quality of abrasive bodies impregnated with sulfur (especially for grinding at high peripheral speeds), the production of abrasive bodies for the superfinishing of bearing races and the grinding of ball bearings and rollers on centerless grinding machinery; and the continued improvement of washing, cooling, lubricating and conserving products used in the technological processes of bearing production.

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KOROSIC DISCUSSES DEFECTS IN ECONOMIC SYSTEM, ANALYSIS

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 2 Jul 84 pp 18-21

[Article by Dr Marijan Korosic: "A Philosophy of Postponement"]

[Text] In an examination of the present economic situation it is essential to distinguish those measures which have to be carried out in the immediate future and those which are conjunctural in nature from the long-range measures that would be in accord with the general direction of economic policy. Those are at the same time two economic dimensions, while there are several extra economic dimensions (political, ideological, sociocultural and others). I will be referring to the two economic dimensions, and that partially, which is inevitable, though in an effort to emphasize the essential things (assuming I can say something about them).

The Model of Economic Policy. As for the immediate measures, the makers of economic policy derive them from the following model: the prices of goods are set freely, according to the relations of supply and demand, and interest rates would subsequently rise to the approximate level of the rates of inflation.*

This must bring about a reduction of domestic consumption, and then, assuming a realistic exchange rate for the dinar, we would have a growth of exports, since more goods would be left to cross the border. In this model, which has also been accepted by the International Monetary Fund, the most important thing is to guarantee exports, since the debts must be paid off.

For a long time now we have been emphasizing (before we were negotiating with the IMF) that a concept of economic policy turned toward the consumption side neglects the destructive force of inflation. In practice that model leads to a reduction of production (which can be equated with an interruption of the processes of development), but that appears to be the lesser evil to the policymakers. The model does not compel the government treasury to cut back on prerogatives, and it allows undiminished extraction of funds to cover classical government expenditure and quasi-budgetary organizations.

* We find a somewhat broader description of the model in "Inflation and the Balance of Payments," PRIVREDNA KRETANJA, No 44, Consortium of Economic Institutes, April 1984, pp 92-98.

Does this model drive the economy to reduce costs? That should be seen as the key question. Economic policy measures intentionally increase certain costs, and here there is little the economy can do. These include interest on credit already taken and higher costs of imported supplies because of the constant slide of the dinar's rate of exchange. Certain other costs the economy can, of course, reduce. Something can be done with regard to increasing the turnover coefficient of capital and by self-financing of reproduction. Some import substitution is also possible, but this need not signify a reduction of costs. Economic policymakers will also try to do something toward reducing the burden on the economy, but the size of that relief is difficult to predict. The actions to date indicate that there are not many prospects even here. In fact, again we are persuading ourselves anew that almost the only means which economic organizations have for reducing or offsetting costs lies in a mix of various ways of reducing the personal incomes of the workers. We mean a real reduction, although there will be nominal increases. Even up to now personal incomes have been the aspect attacked most fiercely. When we realize in addition that the ultimate sum of the reduction to date and the one that is to come will not be equally distributed, we can arrive at a conclusion as to why work motivation, creativity, new initiatives and new breakthroughs have entered a critical phase. There is now talk in many quarters about motivation, which is no accident.

Thus in the briefest outlines we have indicated why the present model of economic policy is not yielding adequate results in the field of exports and no results whatsoever in the field of inflation, and why stepping up the intensity of certain measures envisaged for the near future need not to a certainty have constructive results. It might rather be said that the future results are altogether uncertain. A somewhat more thorough analysis of the present "shock" measures of economic policy affords us a fuller and more reliable answer. There is a need to debate very controversial (from various standpoints) instruments: interest rates, the rate of exchange of the dinar and price controls.

An Active Interest Rate Policy. The rate of interest is not a "foreign body" in the Yugoslav economic system any more than money is. The rate of interest has very important functions--redistribution, allocation and information. All of these functions have a favorable impact on formation of the volume of investments and on balancing investments (real investments) with accumulation (money savings). This must have a favorable impact toward reducing inflation.

If those functions are to be performed, the rate of interest must be realistic in two aspects: when credit is being extended to the economy and individuals, and realistic when it is paid on their deposits.

When the rate of interest is realistic in the granting of credits, it will reduce investments in the economy to an economically justified level, and that not through administrative coercion, but through the voluntary decisions of the principal entities in the conduct of economic activity. The reference is to investments in fixed capital and working capital. The demand for money will be regulated (though it cannot be regulated by this means alone), and credit will be used to finance only short-term and irregular increases in inventories.

When the rate of interest paid on deposit (above all time deposits) is realistic, it will augment the savings of the economy and individuals to the level of the necessary investments of all economic and noneconomic sectors. The rate of interest increases the supply of capital on the market or, in other words, eliminates the deficit financing of investment projects. That means that the role of the bank issuing notes is reduced to what it should be doing: to supply the economy the necessary quantity of money without any sort of pressures. By increasing savings the rate of interest reduces current expenditure when income is distributed or when a decision is made to purchase durable consumer goods. This simultaneously reduces the need for borrowing abroad.

The basic thing in examining the consequences of an active interest rate policy is that the realistic rate of interest--even though every interest rate must be included in the price of goods (since otherwise cost would not be correctly assessed)--by eliminating deficit financing of investment it offers ever fewer opportunities for raising the prices of goods. A realistic rate of interest compels people to earn income by boosting output and raising labor productivity, by improving quality, by cutting costs; it strengthens financial discipline without additional regulations and penalties; and it opens up the process of the indispensable selection among producers by closing down those which are incompetent and creating new organizations.

At first, however, the realistic rate of interest also has negative consequences. Since it reduces what up to now have been immensely large investments (in terms of their percentage of the social product), the realistic rate of interest brings about a relative reduction of investments (since they become more efficient), and that reduction may even be absolute relative to the size up to now. The reduction of investments also reduces employment, above all in the labor-intensive sectors. And here is the limit on conducting stabilization policy in general.

Although with respect to realistic rates of interest, then, there is no need to think it over thoroughly five times, as in the case of other measures, it should still be stressed that the interest rate is only a necessary, but not a sufficient, condition for the stabilization efforts. Today the greatest barriers to accumulation are when it crosses republic borders, but even local barriers are not much weaker. There are hardly any economic measures whatsoever that could speed up the mobility of accumulation in this case, and political action if necessary. We do not have a system for expanded reproduction that is in place. The manpower market is not acknowledged, so that it has a distorted and inefficient effect on the movement of workers from one sector to another, from one region to another. To speed up the turnover of capital one needs to have sophisticated trade, transportation and information; in our country all three are in an unenviable economic situation. Because of his deep mistrust, the peasant prefers to hold his accumulation in real rather than money form (in the form of corn and the like), and the realistic rate of interest can only partially shatter the suspiciousness of a large portion of the population toward money savings. The price system is set up so as to legalize the monopoly behavior of the producers. The taking of risks for business failures is still something foreign to the self-management portion of our

economy, just as it has no idea about the awarding of bonuses for business success. There are also technical questions of importance: for example, in our system for calculating gross income, in which interest figures as a portion of income for ideological reasons.* Thus for all practical purposes a loss (when the rate of interest is lower than the rate of inflation) is distributed as income among the economy, the government and social services. The consequence is that the economy's own capital melts away, it becomes more dependent upon credit, and higher inflation results.

If the system is not rounded out, and if economic policy retains some of the features it has had up to now, there is every prospect that we will witness an unpromising race of interest rates and inflation, though in and of itself a commitment to an active interest rate policy is justified.

Undervaluation of the Dinar and the Consequences

Even adaptation of the dinar's rate of exchange is in principle a good solution. The continuous conduct of an active policy of a realistic rate of exchange of the dinar is the strongest means of stimulating exports and the inflow of foreign exchange on other bases. A more realistic rate of interest also contributes to this.

In 1983 the dinar was depressed 87 percent relative to the so-called "basket" of currencies, which has not occurred in the last few decades. At the same time producers' prices rose 54 percent. That year was probably the first time when the dinar was undervalued relative to other currencies.

In the polarization of opinions concerning this measure of economic policy, some people say: it is fortunate that in the end the dinar has finally been undervalued.** The arguments to back up this thesis are mainly that this undervaluation is a function of getting out of the condition of indebtedness. If a deficit shows up permanently in the current balance of payments, that is evidence that the rate of exchange is overvalued and that for a lengthy time. If it is to find the parity level in the long term, the rate of exchange must in some other segment of the long term diverge in the opposite direction. That is precisely our position. During long years the overvalued dinar accumulated a high foreign debt, and now, according to that theory, undervaluation is required so that over the average of a lengthy period, say at least 15 years, some of which has already passed, the rate of exchange could be realistic. The short-term realism of the rate of exchange in the present situation, then, has no practical meaning or importance.

Economic policy in our country adhered to that theory up until the end of last year, although it was never clear by what quantitative model the dinar was

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* Neven Mates, "On the Unrealistic Indication of Income and Double Counting and Taxation of Interest," PRIVREDNA KRETANJA, No 44, Consortium of Economic Institutes, April 1984, pp 112-115.

** "The Undervalued Dinar and 'Unacceptable' Consequences of Underestimation," PRIVREDNA KRETANJA JUGOSLAVIJA, No 137, Economics Institute of the School of Law of Ljubljana University, February 1984, p 7.

discredited. In that sense economic policy departed from the Anti-Inflation Program, which calls for depreciation of the dinar's rate of exchange no greater than the spread between the Yugoslav rate of inflation and the world rate of inflation. When prices were frozen at the end of last year, further depreciation and a new rise in the rate of interest were frozen. Prices, of course, did not stay still, and given the stable relation between the dinar and other currencies, there was a renewed reduction of the attractiveness of exports. It is thereby like a replay of well-known history.

By no means dare we take the policy of the realistic rate of exchange of the dinar as the direct cause of the price explosion in 1983, and thus we dare not take the value from the entire policy, even though it was not "more aggressive" than the official Anti-Inflation Program allowed. However, it is a fact that those who pursue individual interests now believe that depreciation of the dinar directly caused the high inflation. There is no dispute that in the short run every depreciation contributes to making production more expensive, that is, is deepens the inflationary processes. But at the same time, as often happens in life, people forget that inflation is necessary until we change the structure of production, which among other things means creating that economic structure which will give preference to exports over imports. A realistic rate of foreign exchange is an essential precondition for the normal conduct of exporting and for creation of production capacities able to export more than they import and thereby contribute to reduction of the debt and ultimately to reduction of the rate of inflation. But an economic structure is not formed overnight.

In that magic triangle of inflation--interest rate--rates of foreign exchange there is no room for manipulation. It is simply impossible and economically untenable to have an overvalued dinar instead of an undervalued dinar and a low rate of interest instead of a high rate of interest, and at the same time to handle inflation successfully.

Undervaluation of the dinar, however, is not the only measure of economic policy. If the use of that measure is to be successful, there is much of the rest which has to be set in motion, just as much as in the case of the interest rate. Without that "much of the rest" the rate of inflation will bring about a repetition of last year with respect to the volume of the dinar's depreciation without any particularly worthwhile effect. Under such conditions, for example, foreign exchange will not be brought into the country rapidly, nor will the revival of the foreign exchange market occur.

The policy of the realistic rate of exchange of the dinar cannot be successful if the present foreign exchange system is operative, since in its basic principles and the manner in which the laws embodying the system are applied, it has a serious influence in the direction of displacing the dinar from almost all principal functions of money and toward replacing it with real foreign exchange or domestic surrogates of that exchange. This causes not only parallel introduction of foreign currencies into domestic economic life, but also a breakdown of the uniform value of the dinar. The negative implications for the effectiveness of the economic system, for its socioeconomic acceptability, and indeed even for the very sovereignty of Yugoslavia are immense and

far-reaching. At the same time, we must take note that today there are numerous attempts and efforts to persist in application of a system that is by definition unrealizable and harmful. The well-known principle--"so much the worse for the facts" applies to this situation. That is, of course, unacceptable. We should not give up the policy of the realistic rate of exchange of the dinar, but we should change the foreign exchange system. Not, of course, in the way this was done at the end of 1983 in exactly the way that was the case at the end of 1982 as well. Partial changes which persistently follow the tradition of complexity and vagueness do not change the essence of the matter.

Fear of Inflation

"Carefree" behavior in the conduct of anti-inflation policy, I would say is already becoming a tradition in our economic policy. Aside from the periodical, usually 6-month, repetition of the freezing and thawing of prices, nothing particularly happens. Inflation, of course. does its work. We have seen already in this article why a policy of realistic rates of interest and the rate of foreign exchange is not calming inflation down even though it is acceptable in principle and indeed even aggressive.

It is interesting to note who has recently been spreading fear of inflation. Many are afraid, and indeed even the FEC, which has displayed an intention to take steps as necessary to shape criteria for prices even after the official price thaw. The general public is also afraid of inflation.

What figures as motivation for rational behavior on the part of ordinary citizens is not a sufficient reason for economic policymakers and creators of the system to alter the price system. They preferred to spread fear of inflation and preach the power of administrative, that is, government, price control, although that is an utter mistake. (Even the federal administration has so far acknowledged on several occasions that it is helpless to control the situation in the price sector by means of administrative decisions.) We know a great deal about the effectiveness of outright price control. As a matter of fact, that "effectiveness" is even obvious. Now we also have the most recent experience with polycentric price controls, that is, with nonuniform interpretation of the interests of the various regional (that is, republic) producers. The same goods are sold at different prices on what we would like to be the unified Yugoslav market. The differences run to fivefold, as shown by recent surveys. We also have experiences as to what can be a "state secret" and many other experiences.

We see this spreading of the fear of inflation as an effort to pass on to organizations in the economy and individuals all the responsibility for the continuation of inflation. However, inflation is above all the consequence of defects in the economic system and economic policy measures. Instead of exerting pressures for setting up the economic system more optimally, the almost exclusive responsibility is passed on to the working class. There is yet another negative or harmful aspect hidden here: the principal entities in the conduct of economic activity become discouraged in seeking optimum solutions for their business operation at the level of the business organization of associated labor, and especially in the conduct of personnel policy. (A position

once gained in an organization is maintained regardless of whether performance is good or bad.)

The turn toward broader use of market mechanisms required that price disparities be significantly reduced in the very first phase of conduct of the stabilization program. This means that as stabilization is carried out there have to be above-average rises in energy prices, railroad rates and fares, the prices of certain raw materials and also of certain agricultural products. But this so-called price reform must not be an occasion for freezing all other prices. (The somewhat earlier introduction of rationing coupons for gasoline and certain foodstuffs, which are usually resorted to in wartime, has also been pointless and without results.)

Nor is the time being used for changes in the present price system. The price system which we "invented" in the lengthy debates before 1980 is such that we should drop it. Its application, although partial, is yielding very bad results. The basic postulates of the price system should not be invented; they consist in the principle that economic entities are those who independently make decisions on prices. The social community for prices should operate above all indirectly (through taxes, credits, interest rates, foreign exchange, and reserves), while its direct action should only be in exceptional situations. The figure was somehow arrived at in the official documents on the price system that this pertains to about 15 percent of output, which probably corresponds to reality. That direct influence must not only be exceptional, but also uniform for the entire country. Price controls now being administered in certain areas by the republics ought to be discontinued, just as most of the price communities and other similar administrative agencies should be done away with. The market inspectorate must also be uniform. The price agencies of opstinas ought to administer direct price control only of goods and services of a local nature, such as municipal services and utilities, local trade, rents, etc. The Federation must control prices (when they are controlled) which are "of interest to the entire country" (the terminology used in the constitution) through an agency which must be independent, must have public authority, much as is done with the uniform system of national banks.

The figure has been mentioned of 55 percent of output on which prices would be set by free decisions of the manufacturers. Let us recall that after 1965, when the economy was considerably less well developed, that 60 percent of the prices were set freely. So that would be a step backward. The remaining 35 percent should be formed by self-management accords according to the regime that has been planned. That is an excessively large proportion.

Extensive conclusion of accords and compacts on prices cannot solve the problem of "price control." The classic market situation recognizes the conclusion of agreements and accords between individual producers and consumers. But our price system, however, considers the purchase-sales contract to be unacceptable and demands that all producers sit on one side of the table and all customers on the other. This creates a bilateral monopoly that is altogether legal. That is what the theory says, and it is always the best instruction for practice. A bilateral monopoly affords a number of solutions within

rather flexible intervals, since it is impossible to determine any fixed solution whatsoever within those intervals. This requires the constant presence of political arbitration. The adoption of world prices as the criterion is also one type of imposed arbitration. Yet arbitration is not desirable in self-management. Since arbitration depends on the lineup of forces at the moment, political authority and power, this is one of the main reasons why we cannot achieve a stable situation in spite of the enormous number of compacts and accords.

We are not dealing with secondary matters. The lack of confidence in self-management has prevailed again this time. The strong control of prices and excessive emphasis on concluding accords on prices among producers also contribute to the constant narrowing of the space for self-management. If a process of lengthy and strictly limited conclusion of agreements is imposed on producers, that also will have its price. Everything is taking us further away from solving the burning problems of the Yugoslav economy.

The Principles Governing Distribution

The system of distribution should be put in the first place as an important part of the system that is in disorder. The solutions adopted up to now have been unable to make labor the sole basis for participation of organizations and individuals in distribution of the social product. We have left out of our solutions to date two pillars of the system of distribution: (a) that inequalities in distribution cannot and must not fall below the index of the primary goods of those who have the least privileges, and (b) that all jobs, posts and positions must be open to everyone on the condition of authentic and fair equality of opportunity and equal access to the means of production. This is a somewhat broader definition of the social character of resources and of self-management, and it is at the same time a definition of equality and solidarity--all of which subsumes self-management.

Distribution in the real world does not come close to conforming to those principles. Much of this must be changed. It cannot be enough to confine ourselves solely to the relation between the personal income of individuals and the income of the work organization.

It is of some importance to our present debates on distribution to notice where the development of contemporary capitalism has brought about different results than Marx anticipated when he assumed that constant improvement of the organic composition of capital must lead to a decline of the average rate of profit and a deepening of cyclical crises. We should cite the rise of average worker pay and the increase in the share of pay in the national income as the most essential process in the opposite direction. A further factor in this connection is the greater nonproductive activity, which is generally referred to as the tertiary sector. I mention this because many people in our country are asking: What would the residual item have to be in the distribution of income? For some people that is accumulation, for others government and social service expenditure, and for still others entrepreneurial profit. Science has not given answers to that question, or if it has, the answers are not ideologically acceptable. That is why economic policy has been wandering: in

some periods it finds some "victim," and when there are no results, it chooses another one. At the moment it is personal incomes which are the residual item in distribution, but the effort is being made to put government and social service expenditure in that position. The wrong answers are being given to the wrong questions.

Opinions concerning the measurability of each work operation or of a majority of work operations come forth, vanish and advance once again in cycles. Some work operations are actually measurable, others are estimable, and still others immeasurable in terms of physical standards of output. Emphasis is now being put once again on the argument--since we do not have a satisfactory general view concerning the system of distribution--that work can be satisfactorily measured in the major portion of production. This is in fact an appeal for work to be measured still more than it is being measured. But the figures show that it is being measured more in our case than in the most advanced capitalist countries.* In those countries the trade unions resist individual measurement, but in our country the trade unions are the principal spokesmen of Taylorism. Although Taylorism is an economic necessity, its use still should not be exaggerated. To test this out, it is sufficient to visit a factory where they have group and individual quotas.

At the same time when the measurement of work is being advocated, there does not exist enough social inclination toward uniform, standard and regulated indexing of personal incomes to the rise in the cost of living. Indexing does exist, but in the process every unit tries to raise personal incomes higher than the level for the entire economy, that is, by appropriating someone else's income.

I have mentioned this, although the problems of distribution have not all been referred to here, because I feel that not a single economic policy measure nor changes in the economic system can count on even the slightest success unless they are completed with changes in the area of personal incomes.

The Market and Unity

Another important part of the system is the unified Yugoslav market. "Market" and "unity" are linked. The market because we can obtain favorable results from it only if we think in terms of an integral market, all-inclusive, not only of a market for goods. In every society there are conflicts. Functionally separated organizations are operating on the basis of particular and differing motivations. We need the market so that we can arrive at economically justified compromises through democratic and daily voting. In the final analysis we need the market for the sake of self-management. That truth is not being seen. That is why self-management, together with the commodity nature of economic activity, has been in a state of retardation. That is why we hear very oddly sounding assessments to the effect that the foreign exchange market signifies a usurpation of self-management.

* Janez Jerovsek, "Work and the Mode of Production," NASE TEME, Nos 1-2, 1984, p 114.

When we speak about the market, it ought to be redundant to use the phrase "unified market." But in our case we need this not only in connection with the market. Above all because of the necessity of unity in other areas, in the area of thinking, viewing and the way in which we assess economic performance. A majority of our economic area does not allow barriers to be dropped in order to prevent the circulation of goods and services. Some measures which prevent the shattering of the Yugoslav market--interest rates, the rate of exchange of the dinar, autonomous setting of the prices of goods--have already been mentioned. They are not sufficient. I am not certain, which is why I do not discuss it, that we will be in a position to remove the facades of self-management and altogether expose statist reglementarianism. Regionally splintered by the autarkic policy of the sociopolitical community, associated labor is not in a position for optimum economic employment of the resources of society and income precisely in a way that acknowledges their social ownership. It is compelled to fight for survival since it is dependent upon unstable and nonuniform conditions for the conduct of economic activity. We can offer as many examples as we like--from the uniform grain prices that have not been set when the harvesters are taking up their sickles, since the crop is ripe, to the posting of police and guns on the bridges of the large rivers: from the humiliating position of the dinar to the failure to inaugurate the foreign exchange market; from the nonuniform prices of energy to the failure to utilize the cheapest sources of energy which we have ourselves. It is not just a question of the unity of the market, but of the character of the social formation we desire to build.

It is in the nature of things that the "May analysis" of the FEC has to be mindful of problems in the short run. Although the analysis describes the measures adopted, but not their effects, we see the most significant problem in it to be the philosophy of postponement, which has already been evident in the political sphere since adoption of the stabilization program. For the sake of survival, to pay off the debts, to mitigate the problems that have accumulated over a long period of time, we need to set course in a different direction than the one we have followed up to now. The analysis makes mention of resistance, but it does not reveal the source of that resistance, the arguments that are used, nor the strength of it. If reaching agreement on the Long-Range Economic Stabilization Program took a long time, why then do we need to enter into agreement once again over something which has already been adopted? Bypassing discussion of the partial interests which, it is now obvious, are able to put the brakes on emergence from the crisis, the May analysis does not reflect either the real situation or the difficulties that face us in the immediate future.

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ELECTRIC POWER PRODUCTION IN FIRST HALF OF 1984

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 23 Jul 84 p 28

[Text] In the first half of this year Yugoslav electric power plants generated more power than consumers needed--nearly 33.2 billion kwh, while about 1 billion kwh less were consumed. At the same time exports were larger than imports--1.8 billion kwh were delivered abroad (1.3 billion kwh were actually repayment of last year's debt, and 500 million kwh were commercial exports), while 1.3 billion kwh were imported (1.1 billion kwh were purchased, while the rest was borrowed).

Favorable weather conditions--abundant rains combined with relatively warm weather, which on the one hand facilitated greater output from hydroplants and at the same time reduced the needs of consumers, contributed considerably to this favorable electric power balance. The inflow of water in the first half of the year allowed more than 16 billion kwh to be generated, which is 15 percent more than was planned and 12 percent more than in the same period of last year. This made it possible for hydroplants with an output of 13.7 billion kwh to exceed the plan (by 3 percent) and last year's achievement (by 1.4 percent). Coal-fired steam plants generated 15.8 billion kwh (11 percent more than last year), oil-fired steam plants generated 1.1 billion kwh (10 percent less than in 1983), and the "Krsko" Nuclear Power Plant generated 2.5 billion kwh (2.4 percent more than in the first 6 months of last year).

Not only did the large inflows of water facilitate high output by hydroplants, but they also made it possible to fill storage reservoirs, so that in mid-July they had water to generate 3.6 billion kwh, which is 600 million kwh over and above the plan.

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FOREIGN INVESTMENT IN YUGOSLAVIA

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 23 Jul 84 pp 22-23

[Text] "The capital of foreign trading partners is little used out of a fear of a restoration of capitalism, although this has been dealt with by Article 27 of the SFRY Constitution. A contradiction arises here. We did not want joint ventures, but we borrowed heavily abroad, mainly in the capitalist countries, which placed us into great dependence on them. The high rates of interest which we must pay are the principal form of capitalist exploitation of our workers and, I would say, the worst form of exploitation, one in which the lenders take no risk at all. A joint venture with a foreign trading partner makes it possible for capitalist economic laws to operate, but under conditions much more favorable for us, since the foreign partner shares in the common risk, and he is then motivated to invest in the most up-to-date technology," Cedo Grbic recently said in an interview with DANAS.

And truly some 10 years ago, when for all practical purposes Yugoslavia was entering the kind of international debt it has today, the idea was presented in some of the long-range development plans that it would be good for the country if in the coming decade it could attract about $20 billion in the form of foreign investments; this idea was to be rejected, and it is quite certain that its authors did not get by without adverse political criticism either. It is altogether certain that the situation today would be essentially different if instead of the heavy burden of $20 billion in loans, we had the same amount in the form of investments by foreign persons. Nevertheless, the statement by Cedo Grbic is relevant even today, since none of the dilemmas has been resolved definitively, and they will probably arise once again in the public debate on the new draft of the law on investment of the capital of foreign persons in the domestic economy, which, it is expected, will come before the delegates of the SFRY Assembly before the autumn.

After it changed its course in the fifties with self-management, Yugoslavia for the first time allowed not only investment of one domestic organization in another, but also investment of the capital of foreign persons in domestic organizations in a package consisting of six laws (26 July 1967). Since that time there have been changes on several occasions in the legislative regulations, changes which of course reflected changes in the political climate, but in all those changes certain restrictive provisions remain invariable, provisions which reduce the interest of the foreign investors to marginal

quantities and diverted them to pursue their interests indirectly--through expensive sale of technology, equipment or raw materials and intermediate products.

Experience to Date. The legislation which today governs investment of the capital of foreign persons states as one of the basic legal maxims that the foreign investor may not have greater rights than the domestic investor. But the legislation has departed even from that initial position, entering into details which by the nature of things ought to be a matter for the contract between the investors, even down to the term for which the capital is invested. To be sure, the latter is nowhere set down precisely, nor is it clearly defined, but the law merely states that it shall be "long-term as a rule," which leaves the contracting parties to agree on this, but not for a time "shorter than required to achieve the goals of business collaboration." Thus the right of interpretation is in practice left to the designated authorities.

Whether because of the various restrictions or because of an extremely lengthy procedure in any case (that takes from 6 months to 1 year) to obtain all the necessary clearances, and the complicated system of business operation, or indeed because of the problematical economic situation and the dominant voluntarism in current economic policy, it is a fact that only 199 contracts on investments from abroad have been signed in the 13 years that have passed since the first contract on investment of a foreigner's capital in Yugoslavia (signed January 1968). In that period the value of the commitments of the foreigners amounted to a total of 10,264 million dinars (converted at the rates of exchange in effect at the time). The corresponding Yugoslav investments were 39,040 million dinars. Although these investments would be considerably greater converted at present rates of exchange, the fact remains that the results are extremely modest (measured in terms of the face value per contract, the average was about 52 million dinars). (See the table)

Foreign Investments in Yugoslavia by Country of Origin

Country	Number of Contracts Concluded	Millions of Dinars	
		Domestic Investment	Foreign Investment
West Germany	52	6,943	1,123
Italy	31	3,393	937
United States	30	7,259	3,368
Switzerland	19	4,112	1,637
Great Britain	12	12,136	1,778
France	11	867	290
Liechtenstein	8	235	41
Austria	7	1,537	254
Sweden	6	550	224
Belgium	6	922	124
Luxembourg	4	385	126
Holland	3	160	76
Panama	2	7	7

Table (continued)

Country	Number of Contracts Concluded	Millions of Dinars	
		Domestic Investment	Foreign Investment
GDR, Czechoslovakia, India, San Marino, Canada and Finland	6	528	275
Total	199	39,040	10,264

Source: Federal Committee for Energy and Industry.

Incidentally, most of the foreign investments consist of contracts with OUR's [organization of associated labor] from the more advanced part of the country. In the structural breakdown the largest portion of the investments were in the metal-manufacturing industry (especially in the production of vehicles), and then in the chemical and electrical products industries. Moreover, although it is very difficult to establish a complete picture of things, in 1977 exports of products and services from joint ventures (this is the last year for which we have figures) represented about 9 percent of total exports, and import substitution represented approximately the same proportion. That this year the economy as a whole had an accumulation of 4.3 dinars for every 100 dinars of capital employed, while the foreign investors realized 10.4 dinars of profit after taxes for every 100 dinars of investment.

Announcement of Greater Openness. At the moment the text of the new law on investment of capital of foreign persons is in process of change. It seems for the moment that several essential changes have been given the "green light."

An obvious example of amendments suggested by past experience is the proportion which sets the upper limit of foreign capital at 49 percent against 51 percent domestic. The same is the case with the obligation to put a cap on profit, which has been in effect until now; this would probably remove from the agenda illusions that the share in income could bring not only profit, but also repayment of the investment. Then comes the proposal that the mandatory appropriation for so-called expansion of the material base of associated labor would in future be an obligation only of the Yugoslav investor, but not of the foreigner as well.

Then come proposals for significant changes in the area of financing. One of the most essential ones is that domestic organizations of associated labor and foreign persons may by agreement obtain a portion of the funds for financing joint business operation from credit or a loan, which would be repaid by the domestic OUR. As a practical matter this means that in future practice the foreign investor could make his investment by taking over existing indebtedness of the Yugoslav OUR. It is further proposed along those lines that a bank or some other financial organization providing the financing for the joint business operation can be one of the parties to the investment contract. Since it is also being proposed that the foreign investor can be compensated

for profit or a portion of profit (if the contracting parties so agree) in goods, for all practical purposes this means that the doors are opened wide both to easier investment by foreign investors and also to repayment of foreign credits on the Yugoslav side. It is also very important here that it is being proposed that a contract on investment of foreign persons can be concluded even by a domestic organization which is in the process of establishment; in the situation where there is less and less foreign exchange to purchase equipment and technology, this could be a very important way of invigorating economic activity.

With respect to calculating the foreign investor's profit, up to now there have been quite a few illusions and considerable confusion resulting from the preconviction that investment by foreign persons in and of itself opens the doors to high excess profits and in turn to rapid repayment of the investment and independent production thereafter. Experience has shown, however, that not only do matters stand differently, but the approach taken up to now in calculating the foreign investor's profit has a bad effect on the attraction of capital into Yugoslavia. Should the proposed solutions be adopted, the system of computation would undergo significant changes. For example, the foreigner would be exempted from payment of a number of obligations which by their nature are the exclusive responsibility of the domestic OUR. Aside from the foreign partner's exemption from setting aside funds to expand the material basis of associated labor, which we have already mentioned and which in practice would signify a further expansion of his investment, it is further stated that the domestic partner would set aside funds from his own portion of income for nationwide defense, depreciation above the minimum rates, money for misdemeanors, court fines and insurance premiums, for construction of housing allocated on the basis of solidarity, and funds to give educational stipends to employees.

The next area of significant changes is related to business allowances and standards. That is, one of the main reasons why foreigners have not been interested in investing in Yugoslav enterprises has been the practice of extensive expansion of the labor force. The proponent of the amendments therefore is introducing a new solution whereby the principals would independently agree on precisely these matters as well as on standards governing funds for personal and social service consumption.

Finally, by way of emphasizing the independence of the OUR in decisionmaking and in negotiating a contract on cooperation with a foreign trading partner, the proponent of changes emphasizes several times the principle that it is left entirely to the principals to independently arrange their relations in the conduct of business. Yet as for consent to the validity of the contract, it is granted by the Economic Chamber of Yugoslavia and the Federal Secretariat for Energy and Industry, which evaluate in the process the soundness of the foreign firm (investor) as well as the feasibility study on the investment. It is very important that the time periods for granting consent be shortened considerably, and the Economic Chamber of Yugoslavia must give its opinion on whether equipment, production supplies or the necessary raw materials are produced in the necessary quantities and quality in Yugoslavia within a period not to exceed 45 days.

The very announcement of changes in the present law on investment of the capital of foreign persons has aroused an exceptionally lively interest which is not confined solely to domestic business executives, which confirms that statements about the willingness of foreign trading partners to considerably expand business collaboration with Yugoslavia do have a real basis if the necessary conditions are brought about. It would be thankless to forecast whether this will happen on the Yugoslav side and what will be the outcome of the public debate. But the very fact that the ideas are very close to those contained in the Long-Range Economic Stabilization Program affords the basis for optimism. But at the same time it cannot be anticipated that one law in and of itself, however decisive it may be, could represent that sum total of conditions for economic activity on which the success of business operations depends.

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PLIGHT OF RAILROADS DISCUSSED

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 6 Aug 84 pp 20-23

[Text] An action conference of LCY members employed on the Yugoslav railroads was to be held at the end of July with participation of the Presidium of the LCY Central Committee, the Presidium of the Council of the Federation of Yugoslav Trade Unions and the Presidium of the Economic Chamber of Yugoslavia. The topic for discussion: tasks of the LC in carrying out the Long-Range Economic Stabilization Program on the Yugoslav Railroads. The fact that this meeting has been postponed until autumn can hardly be interpreted as confidence on the part of the railroad people that there is time for that discussion to be held. What actually is involved will become evident, of course, at the conference itself, but there are grounds for supposing that the postponement resulted from differences in views as to how the postulates of the program are to be realized. Yet there is no time even for differences in views.

On the basis of the growth in the volume of traffic on the Yugoslav railroad network, a growth that has not been large, but has been steady in recent years, it would be a mistake to conclude (as is done quite often) that the railroads have begun to capture the space which logically belongs to them in the country's entire transportation system and which a number of documents embodying the system--the Long-Range Economic Stabilization Program and the Social Compact on Transportation Policy, above all--have defined for them. The actual situation is quite the reverse. The attitude of society (and of the railroad people themselves) toward it has not been changing, and the growth in the volume of traffic is almost exclusively the result of the augmented pressure of freight and passengers. The greater interest in rail transportation can be explained only by the rise in the prices of other types of transportation--air travel in the case of passenger traffic, and highway transportation concerning freight traffic--as well as by restrictions on liquid fuel consumption. The larger traffic, then, is being handled as a practical matter at the expense of the quality of the transport service and by plundering rail facilities. There should be no cause for wonder nor lamentation, then, when the statement is made that it is almost certain that by the end of the current medium-term period the railroads will be in a more pitiable state than they were found in at the beginning of the 5-year period, in 1981.

That is, it is difficult to believe that in the remaining 1.5 years it is possible to make up for what has been omitted up to now. The development plans

on the network of the Yugoslav railroads have been carried out at a level of only 23.4 percent over the last 3 years from the financial standpoint, and by the end of 1985 we can at best expect about 50-percent fulfillment, and we should also mention the percentage of physical realization of the plan is as a rule somewhat lower. It is also important to keep in mind in this connection that the last medium-term development program was fulfilled at about 50 percent.

Economic Power(lessness). The principal cause for this kind of fulfillment of the development programs of the Yugoslav railroads, which have, of course, also been given social certification, is the lack of funds. In this respect the railroad people have been left almost entirely on their own. The structure for financing the costs of reproduction this year, for example, is as follows: domestic and foreign credits have shares of 56.6 percent and 12.5 percent, respectively, depreciation 26.2 percent, and nonrepayable resources of sociopolitical communities only 4.7 percent. A majority of the investments in railroad facilities, then, are to be repaid. Approximately half of these investments are for reconstruction and equipping of old lines and the building of new lines, so that the Yugoslav railroads are also unique in that this is the only branch of transportation which is responsible for financing, maintaining and expanding its own infrastructure.

At the same time, the railroad people are essentially limited in realizing income because the government sets the rates for their services. Freight rates and passenger fares are in the jurisdiction of the Federation, though until the beginning of this year the latter were set at the level of the republics and provinces. Relations in primary distribution are so arranged that disparities to the disadvantage of the railroad industry have been increasing for years. Contrary to the policy which was once adopted (which even now passes for a general commitment) to the effect that rail rates in this medium-term period would increase 10 percent faster than the average rise of prices in the economy, so that even by 1985 compensation would be eliminated from the revenues of the railroad people, they have risen at considerably lower rates. Last year, for example, the railroads were granted permission on three occasions to increase the price for their services by a total of 38.6 percent in passenger transportation and 40.8 percent in freight transportation, while at the same time inflation reached nearly 60 percent. This further diminished the economic power of the Yugoslav railroads, so that achievement of the goal for 1985 which was mentioned has been postponed to 1990. Thus at present the fact remains that the Yugoslav railroads, with all the working resources entrusted to them, whose value amounts to about 11 percent of the total value of fixed capital of the Yugoslav economy, are achieving a share of only 2 percent in the national income. Or, in other words, with a value for fixed capital which is threefold greater, the worker on the railroads is realizing half the income of workers in the rest of the economy.

Since in secondary distribution the railroads by and large share the fate of the rest of the economy, the pressure of a rate and fare policy set up this way has imposed very adverse relations both in the internal distribution and also the special-purpose distribution of net income. The ratio between funds going for personal consumption and social services on the one hand and those

going for accumulation and reserves on the other is approximately 98:2 on the railroads. In the rest of the economy that ratio is 80:20 on the average, while in the other branches of transportation it is 90:10. Changes toward an increase in the share of funds set aside to expand plant and equipment are, of course, unfeasible without a further drop in the already below-average standard of living for about 145,000 people employed on the Yugoslav railroads. Since the distribution of net income is in the exclusive competency of that labor force, it is unrealistic to anticipate that kind of redistribution.

Compensation or a Subsidy. Compensation is an integral part of the policy of depressed rail freight rates and passenger fares. These are supposed to be funds collected fiscally with which society reimburses the railroad people for differences between the actual transportation cost and the rate collected. In economic terms compensation on the Yugoslav railroads is problematical even with respect to its purpose. That is, if it makes transportation less expensive, then it can be regarded as an incentive to attract goods and passengers to the railroads. From that standpoint there is nothing to reproach this instrument for. The problem, however, is that its introduction is suitable only if the railroads are able to take on an increased volume of business.

The Yugoslav railroads cannot do this, since even the use of present capacities is overstrained, and the main result of the compensation cannot actually be anything other than a further drop in the quality of service and a plundering of facilities. The fact that compensation has ceased to be compensation for the price difference and has in time become a subsidy for (partial) coverage of losses only makes matters worse. This transformation of the nature of the compensation, which occurred primarily as a consequence of the fact that it is determined and paid by republics and provinces, has even considerably more serious effects with respect to the operation of the Yugoslav railroads as a unified technical and technological system.

The level of compensation, which represents about 25 percent of gross income on the Yugoslav railroad network, differs essentially in absolute and relative amounts from one sociopolitical community to another. The amounts that will be remitted to railroad transportation organizations depends above all on the financial capabilities of the republics and provinces, but also on the place and role which the railroads are seen to have in the transportation system of the respective sociopolitical community. Which is why decisionmaking on the use of these funds is above all in the competence of those who determine them. Which is why projects which objectively have priority from the standpoint of the functioning of the entire network of the Yugoslav railroads as a unified system usually do not have financial backing. A sufficient illustration is the datum that the Jesenice--Djevdjelija main line, which handles 65 percent of the traffic, although it represents only 20 percent of the total length of the road of the Yugoslav railroads, is in an intolerably bad condition. Although designed for speeds of 120 km/hr, at some 20 places trains cannot exceed 60 km/hr. At the same time certain lines with incomparably lower traffic frequency, thanks to adequate investments in maintenance, reconstruction and equipment, are technically unreproachable. It is clear, as shown even by this example, that the investments in railroad transportation, which are in any case inadequate, are affording a far poorer return than they might under different circumstances).

Contradictory Legislation. This and a host of other (essentially the same) possibilities for unwise investment were opened up by a number of pieces of legislation which constitute the framework for the organization and business operation of all entities in the system of the Yugoslav railroads. The Law on Associated Labor applies equally to all organizations of associated labor, including those in the Yugoslav railroad system. But it does not deal with large technical and technological systems. Regulation of that area was left to specific federal laws. The Law on Associated Labor, in other words, does not recognize the category of mandatory pooling, which is the basic postulate of the specific laws. In practice this kind of legislative arrangement is manifested as a perpetual dilemma in defining and accepting the obligations necessarily imposed by a technologically unified system. It seems that the manner in which the contradictions which arise out of this will be resolved depends most of all on the way in which income is realized.

The share of funds from the budgets of the republics and provinces in the revenues of railroad transportation organizations is almost regularly accompanied, whether this is explicitly stated or not, by pressures to adopt--especially in development programs--and to carry out solutions which have secondary importance from the standpoint of the better functioning of the overall system of the Yugoslav railroads. In order to reduce investments on the territory of others to the smallest possible measure--the rounding out and improvement of the efficiency of the separate railroad systems (and entire transportation systems) are insisted on. This is, of course, a senseless endeavor, at least insofar as the share which the joint product has in the total product. That share ranges about 70 percent.

These decisions, of course, make it essentially more difficult to distribute the revenues earned through joint efforts, which has an additional impact toward further exclusiveness. At the moment that division is subject to criteria set forth in the general self-management acts in the framework of the Community of Yugoslav Railroads far back in 1968. The differences in prices per unit work observed at that time because of differences with respect to technical equipment, the quality of the infrastructure, personnel potential, and so on, were leveled out by introducing the reduction of kilometer distances (that is, by introducing so-called virtual kilometers). The intention was to afford equal income for the same work, and it was set forth that the system set up in that way would every year be updated to keep pace with the changes of the elements on which it is based. How this has been done is best shown by the fact that the debates have gone on for years over establishing the text of the self-management accord on economic relations among railroad transportation organizations, which is supposed to update the subject matter and by the fact that that document (although defined) has been waiting for adoption for nearly 2 years now.

Relations in distribution of joint revenues, in other words, are not changing, although the changes of the conditions--accomplished in the manner for financing reproduction which has been described--are evident: electrification and reconstruction have been carried out on some of the lines and installations; a majority of the unprofitable (narrow-gauge) lines have been taken out of service; new locomotives, cars and equipment for integrated transportation

have been purchased; traction has undergone change toward more economical electric and diesel propulsion; organizational changes have been made to increase the number of railroad transportation organizations from five to eight, etc. The essential thing, then, is to note that the system of distribution of joint revenues now in effect does not evaluate work on the network of the Yugoslav railroads equally and that those differences are increasing in the absence of true criteria for evaluation. It is natural that this has become a problem which is essentially frustrating the functioning of the Yugoslav railroads as a unified system--just as it is inevitable that under those conditions advantages previously gained in the system of distribution are being defended with every means (especially in the context of the general shortage of money on the railroads). At the same time, it is beyond dispute that only a unified system offers a sound basis on which more effective investments can be made and larger and better-quality railroad transportation can be anticipated.

[Box, p 22]

Organization

The Yugoslav railroads are organized as four SOUR's [complex organization of associated labor], incorporating 69 work organizations, and four ZTO's [railroad transportation organization]. In all there are 360 OOUR's [basic organization of associated labor], and that 209 OOUR's in the principal activities (transportation; the activity of train traction and maintenance of rolling stock; the activity of maintaining lines and track installations; and electric power) and 151 OOUR's in other activities. Work organizations within SOUR's which organize and carry on rail transportation, as well as others, are not themselves members of the Community of Yugoslav Railroads, but are associated with it through the SOUR, whose role is to link together, reconcile and coordinate the differing activities and interests.

Given this organizational structure of railroad transportation organizations, which at first glance seems variegated, especially with respect to the number and size of OOUR's and with respect to their internal organization--differences are also strongly pronounced with respect to the following: the principles on which the OOUR's and RO's [work organization] are organized (by region, by function and technology, or some other principle); jurisdiction in operational management of railroad transportation; with respect to the "ownership" of basic transportation equipment; authority for disposition and use; the degree of ramification of rail lines and their length; the quantity of traffic handled; the size of the fleet of rolling stock, its modernity and its level of utilization; the types and names of organizational units and also the functions which they perform; the size of the labor force and its composition, etc.

Another significant fact is that the SOUR's incorporate not only the work organizations in the principal activity, but also work organizations of other additional activities, such as hostelry, health care, education, maintenance of rolling stock and other equipment, freight forwarding, sea and river ports, trucking, institutes, etc. The situation is similar with the ZTO's, which function as work organizations (Skopje, Titograd, Novi Sad and Pristina), in

which these supplemental activities are represented in the association through basic organizations of associated labor. It is clear that this form of association greatly complicates organization and relations, which has an impact on the performance of the basic and legally established function of railroad transport organizations.

Coordination of Development

As part of the preparations for participation in the Action Conference of the LCY on the Yugoslav Railroads, which was to be held in late July in Zagreb, in a meeting on 17 July the Executive Board of the Economic Chamber of Yugoslavia took up the problem of carrying out the Long-Range Economic Stabilization Program on the Yugoslav railroads. Below we single out from the rather extensive discussion passages from the statement made by Nikola Filipovic, vice president of the Economic Chamber of Yugoslavia.

"First, we have to state what kind of railroads we want and what associated labor can and should do in the process of this branch's modernization and faster development. It is clear that the present capacities on the Yugoslav railroads cannot meet the needs of the economy. Last year alone the railroads were unable to fill about 15 percent of orders for freight shipment. If we add to this the quality of transport and the speed of shipment, loading and unloading, it is obvious that the problem does not lie solely in the inadequate fleet of locomotives and cars, but at least equally in the stable development of integrated transportation, in the construction of modern terminals, industrial side tracks, etc. The processes of modernization on the railroads (and in transportation in general) have been going very slowly, so that many railroad facilities are objectively worse today than they were previously. For all practical purposes they have been plundered. For several years now, for example, the datum has been presented to the effect that the railroads are short about 17,000 freight cars, slightly more than 600 passenger cars, and some 50 locomotives. It should be said in this connection that a sizable number of locomotives and other train equipment are out of service, primarily because of the shortage of spare parts or the funds to buy them with, and probably also because of shortcomings in the very organization of the railroads engaged in maintaining those facilities.

"The structure of sources of funds for reproduction of the railroads (credits mainly) is a special problem, which indicates that too large a burden has fallen on associated labor in the Yugoslav railroads. Moreover, there are more organizations of associated labor waiting for credits than there are with funds for credit financing, and some of the organizations are not able to become involved in the processes of modernization regardless of the conditions, since 'their' ZTO's are for all practical purposes eating up their own assets. Accordingly, if we want to have a quality and capable railroad ... then we have to make more decisive efforts to create the conditions for this branch of transportation not only to barely survive, that is, to operate without losses, but the conditions for its accelerated modernization. Aside from those who use the services of the railroads, producers of equipment also have a vital interest in this, since they are making minimum use of their capacities and because they find themselves in a very difficult financial position.

"In saying this I do not mean that accelerated bolstering of the railroads should be done exclusively by raising rates and fares. That is, aside from rates and fares, conditions have to be created here for more favorable credit financing and for far greater pooling of the capital of the economy which the railroads serve. One serious issue in this context which needs to be resolved as soon as possible is the question of financing, maintaining and expanding the infrastructure for railroad transportation, which, by contrast with the other branches, covers all those costs itself.

"Now that we have mentioned pooling, it should be said that in certain areas it has existed even before now. That is, some work organizations which are large users of rail transportation have participated in the purchasing of vehicles, rolling stock, construction of industrial side tracks, terminals and the like. One can be quite confident, however, in saying that all of this put together is inadequate and that far greater cooperation is required in this sector....

"In any case the assertion stands that relations between the economy and the railroads have to be put on a somewhat broader footing than up to now. This presupposes the question of planning traffic above all. It is a well-known fact that the Yugoslav railroads have large fluctuations in the volume of traffic because demand is seasonal and discontinuous. If the increased demand of the economy on the railroad which will certainly follow because of the lower shipping costs is accompanied by timely and concerted planning, then the possibility that those demands would have an adverse effect on the quality of performance of railroad personnel would be essentially diminished, and the railroads would be better able to guarantee shipments than they are now. This is also a condition for the cooperation that is also necessary between the railroads and the other branches of transportation, above all river and maritime, which also have comparative advantages with respect to shipping costs....

"Mutual coordination of the development of capacity on the railroads themselves is a special question. The absence of synchronized efforts in this area leads to autarky, that is, to enclosure within the boundaries of the republics and provinces, from behind which different views are taken as to what has priority from the standpoint of the entire rail system's development. That situation is intolerable. We have to realize that we are a part of the European and world system and that we must ensure synchronization not only with one another, but also with neighboring countries, so that we will be able to discharge our obligations."

[Box, p 23]

Means of Labor

Road: Only 66 percent of the total 9,399 km of road is equipped for axle loads of 20 tons and higher, 12 percent is equipped for loads up to 18 tons, and 22 percent cannot take loads greater than 16 tons per axle. Only 5.5 percent of the lines are designed for speeds greater than 120 km/hr. In actual service, however, those speeds are attained only on one-third of those lines. Much the same is true of lines designed for speeds less than 100 km/hr; on approximately one-fourth of all lines it is not possible to exceed 60 km/hr.

Locomotive: Last year the Yugoslav railroads possessed a total of 1,447 locomotives: 472 electric locomotives, 782 diesel locomotives, and 193 steam locomotives. Most of the work was done by electric traction (66.54 percent). Diesel traction represents 32.51 percent of the work, and steam traction 0.95 percent. The high percentage of locomotives out of service is characteristic; depending on the ZTO, it ranged from 16 percent to 62 percent. The average was about 29 percent, which should be compared with foreign railroads, where it ranges about 12 percent.

Rail Cars: According to figures for 1983, the Yugoslav railroads have a total of 50,255 freight cars with a total carrying capacity of about 2 million tons (41 tons per car on the average). Only 55 percent of the cars were manufactured in the last 12 years, 35.6 percent have an average age greater than 25 years, and 9.4 percent of the cars are more than 40 years old. The portion of the freight cars out of service averages between 10 percent and 12 percent.

Most of the total number of 3,480 passenger cars are more than 20 years old (64.8 percent). Approximately one-third are cars produced in the last 12 years, but cars which are more than 40 years old are also in use. They represent about 3 percent. Only 23 percent of the passenger cars are capable of speeds greater than 120 km/hr, that is, are cars that can be included in international trains.

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