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# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2463

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21 October 1983

EAST EUROPE REPORT  
ECONOMIC AND INDUSTRIAL AFFAIRS

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INTERNATIONAL AFFAIRS

CEMA-FINNISH TRADE STATISTICS CITED

Bratislava UJ SZO in Hungarian 25 Aug 83 p 4

[Article by Vaclav Lavicka: "Successful Cooperative Balance"]

[Text] Economic Links Between the CEMA Member Countries and Finland

The agreement on economic cooperation between the CEMA member countries and Finland was signed in 1973, and at that time the socialist community's member countries had a 15.2 percent share of this country's foreign trade. Last year this ratio was 28.4 percent. The most favored [nation] principle prevails in the trade and economic relationships between CEMA and Finland.

Between 1973 and 1983, foreign trade between the CEMA member countries and Finland increased from 0.9 billion rubles to 5.5 billion rubles. The following table well illustrates the rate of increase of merchandise trade between the individual member countries and Finland (in million rubles):

<u>Country</u>	<u>Import into Finland</u>		<u>Export from Finland</u>	
	<u>1973</u>	<u>1982</u>	<u>1973</u>	<u>1982</u>
CEMA Total	517	2733	406	2741
Czechoslovakia	16.1	51.3	10.8	40.6
Bulgaria	2.7	5.0	4.3	34.0
Cuba	3.7	18.3	1.9	2.1
Hungary	14.7	41.8	9.1	54.8
Mongolia	0.0	0.0	0.0	0.0
GDR	17.1	58.3	17.9	50.9
Poland	50.6	141.7	23.3	13.0
Romania	10.5	15.1	5.0	6.8
Soviet Union	402.0	2402.0	334.0	2539.0

The tabulation clearly indicates that merchandise trade between the socialist economic community and Finland has significantly increased. This can be said about almost every country of the community. The increases range from 40 percent (Romania) all the way to 570 percent (Soviet Union), while the Finnish statistics do not contain those sums which the Soviet Union pays to Finland for building those industrial objectives which are built within that country.

The committee which guides cooperation between the CEMA and Finland does not deal with specific questions of the merchandise trade. It concentrates its work on improving the conditions, perfecting the formats and methods of trade, evaluating the needs, and evaluating the opportunities for the interested member countries and Finland to supply each other with machinery, know-how, licenses, etc. This committee held its first session in 1973 in Moscow, where it decided to set up five working groups and identified their spheres of assignments.

The foreign trade work group prepares informative material on the yearly basis about the growth of trade and economic relationships between Finland and the CEMA member countries (for the CEMA over-all and also broken down by the individual countries). At the same time it also examines the foreign trade viewpoints of agreements made.

The machine industry work group studies the opportunities of how cooperation and production specialization could be further improved and makes recommendations on it. Primarily wood processing and food industry machinery are involved here, and also paper and cellulose producing mechanical equipment, electrotechnical and energy management machinery (including road construction machinery, lifting equipment, machinery connected with ship building, instruments, etc.).

The chemical industrial work group has already done significant work on improving production specialization and cooperation, mainly in the production of polymer materials and plastics.

The transportation work group studies the possibilities of how cooperation could be expanded in automobile transportation and how the use of containers could be improved. It also handles improvement of railroad safety.

The scientific-technological cooperation work group analyzes the way multilateral cooperation could be enhanced in forestry management, research in the complex use of wood materials, studying the complex utilization of petroleum and natural gas, in environmental protection, in the construction and building materials industry, in the food industry, in cybernetics, etc. Based on the committee's suggestions the CEMA member countries have signed several agreements with Finland about scientific-technological cooperation.

In addition, the countries of the socialist economic community are cooperating with Finland also in statistical activity, mainly in the preparation of foreign trade statistics. They deal with statistical methodology and exchange information, etc.

Multilateral economic and scientific-technological cooperation between the CEMA countries and Finland has favorable prospects for the future. This year the special committees on cooperation will in 12 different areas prepare agreements for signatures about multilateral cooperation. In all of the work groups, experts are conducting discussions in over 30 topic areas.

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CSO: 2500/454

GOVERNMENT OFFICIAL VIEWS SET OF MEASURES WITH OPTIMISM

Prague SVET HOSPODARSTVI in Czech 9 Aug 83 pp 1, 2

[Article by Engineer V. Filip, State Committee on the Questions of the National Economy's Planned Management: "Positive Elements Are the Dominant"]

[Text] The Set of Measures for Improving the Planned Management System of the National Economy After 1980 (hereinafter: the Set of Measures) called for the application of the following basic principles in the area of planning: extension of the time frame of planning, and a more mandatory long-range outlook; the five-year plan as the basic instrument of management; technological development as the main axis of the plan; the plan must be interlinked and balanced; counterplanning; and cumulative evaluation of the five-year plan's fulfillment. At the same time it also called for significant modifications in planning, particularly in planning research and development, replacement of fixed assets, replacement of labor, wages payable, foreign trade, and the indicators of the efficiency of production assets.

The Set of Measures was introduced in most sectors of the national economy as of 1981. Therefore it will be expedient to evaluate how it has been applied in practice, what problems have arisen in conjunction with its realization, and whether and how it has contributed toward influencing our economy's development. Introduction of the Set of Measures as of 1 January 1981 did not yet mean its complete application. To wit, the program for its realization presupposed gradual modifications such as, for example, the creation of suitable conditions in planning, the enactment of certain statutory regulations as of 1 January 1983, incorporation of the economic conditions into the enterprises' internal khozraschet over a period of two years, and a lapse of 2 or 3 years necessary for the changes to gain acceptance.

Elaboration of the long-range outlook was partially delayed because in this period, contrary to the original assumptions, we failed to introduce the general changes aimed at thorough intensification of the replacement process. In January 1983, therefore, the government rescheduled this work.

The principle that the five-year plan is the basic instrument of management was asserted in the stage of drafting the 1983 plan. It was not possible to apply

this principle in the first two years of the five-year period because of the objective conditions that existed at the time of adopting the 7th Five-Year Plan. Therefore separate annual guidelines were issued for drafting the 1981 and 1982 plans.

In accordance with the intentions of the Set of Measures, attention was devoted to introducing the method of counterplanning. "The Policy of the Federal Government and Central Council of Trade Unions on Worker Participation in Forming and Implementing the 1981-1985 Plan and in Controlling Its Fulfillment" and "Procedures for Employing the Method of Counterplanning" were issued. Although its systems prerequisites were ensured, nationwide the method of counterplanning has failed to produce any significant results. The presented drafts of the ministry plans did not ensure the tasks contained in the guidelines. There were departures mainly in export, wage normatives, rise of labor productivity, and profit.

At the VHJ's [economic production units] and enterprises, however, the contributions of counterplanning have been differentiated considerably. In the course of drafting the 1983 plan, for example, the number of VHJ's that adopted stepped-up tasks in comparison with the guidelines (for the 7th Five-Year Plan) increased over the preceding years, and the differences between their drafts and the five-year plan's tasks are narrower than before. In many instances, however, the stepped-up drafts of individual enterprises within a VHJ were cancelled out by the poor results of other enterprises belonging to the same VHJ. At the VHJ's and enterprises the results of counterplanning manifested themselves particularly in higher adjusted value added and higher profitability in relation to production assets, both of which directly influence wages. In the counterplans, however, not much use was made of the other possibilities such as improvement of the quality of production, reduction of the work force, and expansion of export to nonsocialist countries.

The principle of the plan's cumulative fulfillment, in the sense that an organization may offset within certain tolerance limits a shortfall in plan fulfillment one year with the plan's overfulfillment the next year, and that the organization is to be evaluated cumulatively from the beginning of the five-year plan, is to be implemented in the coming years, after the issuance of executive instructions and regulations.

In the past two years the indicator of adjusted value added had a very positive effect. The incentive it provides helped in particular to reduce the costs of materials. The use of this indicator creates certain problems that stem from its essence and practical application. Adjusted value added is a type of net output indicator that does not take sales of the output into consideration. Therefore it has been proposed to change over to the indicator of realized adjusted value added so as to increase pressure on completing and selling the output. The problem, however, is how to specify this in the plan and in the economic conditions. Therefore this question is being investigated further.

#### Economic Incentives

The system of regulating wages payable has met the basic requirements of regulation and stimulation and has ensured attainment of the planned proportions



in the development of wages. The relationship between labor productivity and average earnings specified in the 1981 and 1982 plans was essentially observed. The stimulating effect of the basic component of wages payable on adjusted value added manifested itself in savings of material costs so intensively that the results achieved before the introduction of the Set of Measures have been exceeded considerably. The system of regulating the development of wages payable is being criticized as administratively demanding. Therefore its possible modifications are being discussed, beginning with the introduction of one-component regulation (instead of the two-component regulation at present), abolition of the qualifying indicators, simplification of the conversion factors, and reduction of the number of items that can be added (or subtracted).

There was partial improvement in 1982 in applying the principle of remuneration based on merit. However, the process of ending wage equalization has not made much headway and is awaiting further measures (for example, the 1983 experiment in the area of technological development).

In financial management the application of khozraschet principles to cover the organizations' needs basically from their internal financial resources to the extent that these resources are actually formed, and giving the organizations more authority and responsibility for the results of their financial management have proven suitable. The system of profit allocation--according to which transfers to the state budget are made first, then allotments to the funds that ensure the financing of the organizations' planned needs, and finally allotments to the economic incentive funds--is providing more incentive for the VHJ's and enterprises and is exerting more pressure on them.

Credit pressure by the bank has helped to eliminate the shortcomings of management within the enterprise sphere, and the restrictive measures that the bank employed had a considerable impact on economic incentives. The development of inventories and investments, however, showed that it is difficult to resolve the problems solely with the help of financial and credit instruments.

#### Application of Khozraschet

The application of khozraschet within a VHJ--in other words, intrasectoral khozraschet--lies to a decisive extent within the authority and responsibility of the given VHJ. During the past two years, intrasectoral khozraschet underwent gradual perfection at every VHJ and was adapted to the specific conditions of each VHJ. Elements of khozraschet are being employed at practically every organization, with varying intensity. Two distinct systems are crystallizing. The first system centralizes considerably all management functions (for example: marketing, technological development, and capital construction) and decentralizes at the enterprise level all the other functions.

In the area of khozraschet for enterprise subdivisions the situation is strongly differentiated and depends on the organizing work of the VHJ in question. It can be said that khozraschet for enterprise subdivisions was developed during the past two years, the VHJ's and enterprises prepared programs for its application, and particularly in 1982 its rules were intensified. However, the level of khozraschet for enterprise subdivisions varies by VHJ's and enterprises. This level depends first of all on the khozraschet position of the

enterprise as a whole, on what conditions have been set for the economic incentives of the enterprise subdivisions, and on how stable these conditions are.

The interlinking and balancing of the plan at every level of management are an important condition for making management more efficient.

The system of balances is the most important instrument for ensuring this linkage. This system has been elaborated fairly well, and work is underway on perfecting it further (the balancing on turnkey projects and subdeliveries, and perfection of the balances' distribution function through the qualified setting of consumption norms at every level).

### Supplier-User Relations

The supply of materials and equipment, and supplier-user relations are the most criticized areas of management. The Set of Measures perceived them as a system based on the five-year plan, the related preliminary supply contracts, and incentive measures favoring the users. The problems with drafting the five-year plan, the profound objective changes, particularly the decline in the availability of fuels and curtailment of the sources of raw materials, metals and capital construction, and import savings often disrupted the traditional relations between suppliers and users.

Solution of the contradictions in supplier-user relations during the past two years was protracted and not very effective, and a moderate improvement began only with the drafting of the 1983 plan. Some supplier organizations set up procedures of their own at the expense of their customers, violated the principle of responsibility for continuous supply of the economy's needs, and did not adequately ensure supply of the demand for new or better products that the users need for their final products of growing complexity. In capital construction the difficulties experienced in years past recurred to a considerable extent, especially the constant gaps between capacity and the demand for construction work. There was also a lack of discipline in planning and supply. Preference of deliveries and subdeliveries for research and development was not ensured, although statutory regulations specify such preference.

Within supplier-user relations, users often did not show any interest in demanding the conclusion of preparatory supply contracts for periods longer than a year, and the questionable principle was employed of supplying users at least at the same level of deliveries as the preceding year. There were too many priorities, and as a result they declined in importance. The problems of supplier-user relations are being aggravated also by unclarified production tasks and sources of raw materials. For the 7th Five-Year Plan the principle contained in the Set of Measures that the most important supplier-user relations must be clarified in the phase of contracting and breaking down the plan has been modified in the sense that the establishment of supplier-user relations is scheduled for the period of drafting the enterprise plans (up to mid-February of the current year).

The shortcomings in supplier-user relations are subjective rather than systems shortcomings. Most of them stem from failure to observe the established procedures and rules (for example, exaggeration of requirements, failure to check

the normative base, mistakes in setting up balances, absence of developmental concepts, inadequate market research, etc.). Decree of the State Planning Commission and Federal Arbitration Office No 48/1980 on Preparing Material Balances and Negotiating Supplier-User Relations set very specific procedures and regulations. The principles of this decree are essentially good, but they must be observed.

### System of Indicators

The overall scope of the items for which material balances must be prepared (about 300 items in the state plan, 250 at the central organs, and 300 at the VHJ's) approximately corresponds to the optimal demand, after the exclusion of the items that proved ineffective, unnecessary or difficult to administer. For example, the material balances that are expressed globally, without any linkage to the production structure, and the ones expressed only in value terms proved ineffective. Likewise ineffective are the material balances for which statistics are lacking, and which therefore cannot be compared with the actual development.

The profitability of production assets as the basic indicator characterizes the overall efficiency of invested resources, even though its comprehensive use is feasible only for a VHJ as a whole and long term. This indicator influenced the scrapping of obsolete fixed assets, and in this sense it is better than the plan's previous mandatory indicator that it has replaced. Linking of the production assets' profitability to the bonuses for top managers has given them more incentive to utilize fixed assets and inventories. So far, however, we cannot speak of any basic change in the utilization of production assets. This is due to the long-term nature of the investment process, and to the momentary situation caused by earning profits in excess of the plan, which does not exert pressure for the more efficient utilization of production assets because profit in excess of the plan is reflected favorably in this indicator (the ratio of profit to assets is about 1:10). The pressure that the profitability of production assets exerts on their utilization may manifest itself in the future at the organizations that are not fulfilling the prerequisites for earning profit (in this case profitability will act intensively, and the ratio will be reversed to 10:1).

In the area of manpower and its regulation it has been specified that, beginning with the 1982 plan, the number of workers would be included in the plan only approximately. The obligatory nature of planning the number of workers has been retained only from the viewpoint of regulating the regions. Development showed that an approximate indicator of manpower was adequate for the needs of the sectors, but the problem would have to be investigated further from the viewpoint of the incentive to save manpower. This incentive has not functioned so far, even though the enterprises that save manpower are entitled to retain the saved wages payable for their own use. The enterprises have not yet been forced to take this road because higher adjusted value added has given them more wages payable, without the need to save manpower.

### Management Methods

Analysis has confirmed that the organizational principle of the VHJ as the basic link in management is suitable where the conditions for it have been

ensured. Centralization of the decisive areas at the general directorate has permitted more efficient management of entire sectors. But at the same time it has also been demonstrated that the mentioned principle cannot be regarded as absolute, and that it must be differentiated according to the nature of production and the size of the VHJ and its enterprises, taking local and regional conditions into consideration. For these reasons it is possible to leave also independent organizations as basic links of management when this is expedient.

During the past 2 years, the VHJ's changed predominantly from organizations of the trust type to organizations of the concern and sectoral types.

So far as relations within the VHJ's are concerned, there were also the opposite tendencies in terms of the organization of the general directorates' apparatus. While in some VHJ's there was a tendency to merge the general directorate's apparatus with the main enterprise, elsewhere the general directorate was separate from the main enterprise's directorate.

Since the introduction of the Set of Measures, also the information system is being perfected. The level of economic and social development's evaluation is being raised, and the system of controlling plan fulfillment is being intensified, with due consideration for multiaspect evaluation and the system of controlling the state target programs, particularly in the area of the consumption of raw materials, fuels and energy.

Control, too, must contribute toward the national economy's development and efficiency. A series of measures was adopted in the Set of Measures and the government resolutions on perfecting the control system, and principles were formulated for perfecting internal control. For the time being, realization of the measures is proceeding slowly at every level. This is evident particularly in the organizations' approach to appointing chief controllers.

Worker participation in management and its various forms have shown a rising trend since the introduction of the Set of Measures. The effectiveness of worker participation in management has been evident particularly in the stage of drafting the plans, during their realization, and in controlling fulfillment of the adopted tasks. The method of counterplanning has gradually begun to assert itself as an instrument of the worker collectives' participation in drafting the plans, for the purpose of uncovering reserves, accepting more challenging tasks, and creating possibilities for obtaining more resources to be used for remuneration. The process of differentiation in the area of wage policy, and of asserting the principle of merit, has been accompanied also by the workers' increased participation in its realization.

The rising trend in 1982 reflects the fact that workers were better informed about the tasks of the plans, not only in terms of the overall tasks, but also from the viewpoint of the mandatory tasks' differentiated breakdown, including information about the economic incentives and continuous fulfillment of the adopted measures. The workers' approach tended toward economizing the energy inputs, cutting costs, and achieving greater economy and overall efficiency of introducing new technology into production, in the sense of the conclusions of the 10th Congress of Trade Unions. These efforts are reflected also in the development of the individual forms of socialist competition, of the brigades of socialist labor, comprehensive efficiency brigades, and of the invention and innovation movement.

## Enterprise Sphere

The Set of Measures has influenced favorably the results in the enterprise sphere and in the replacement process.

Material costs have been clearly reduced. The costs of materials were reduced in industry by 1.1 percent in 1981 and 1.4 percent in 1982. In 1976-1980, before the Set of Measures was introduced, material costs dropped at an average rate of only 0.6 percent a year. In comparison with the tasks of the state plan, the savings in material costs amounted to about 3.0 billion korunas in 1981, and approximately 3.5 billion in 1982. Within the material costs, savings of metals were about 3.5 to 4 percent.

Overall costs were reduced and profits were increased in 1981 and 1982 by about 7.0 billion korunas, generation of national income in the enterprise sphere increased by roughly 10 billion korunas, and the profitability of production assets improved.

Labor productivity in relation to adjusted value added reached a rate of 104 percent in 1981 and 103.4 percent in 1982. The proportion of work performed overtime partially declined.

The exceeding of the limit on wages payable at some organizations significantly improved in 1982 in comparison with 1981.

Adjusted value added was better than planned. In 1981 the plan of adjusted value added was exceeded by 0.9 percent, at a rate of 105.1 percent and a 1.22-percent increase in output. In 1982 the rate of adjusted value added reached 104.2 percent, at a 1.5-percent increase of output. The difference in the levels of the growth rate of adjusted value added and output stemmed predominantly from the effect that savings in material costs had on adjusted value added.

The favorable results that were obtained in the independently considered enterprise sphere, particularly in industry, and which indisputably were influenced significantly by the Set of Measures, show certain differences in comparison with the physical volume of national income and the growth rate of productive consumption.

These differences stem from the fact that the indicators in the sphere of production and the indicators of the aggregate national economic balances are not commensurable.

## Research and Development

The method of coordination plans has been employed gradually and in a differentiated manner in the planning of research and development, but we have still not succeeded in completely linking the plan of technological development with the other parts of the plan. Furthermore, the problems in conjunction with introducing into production the results of technological development are still persisting. So far we have not been able to eliminate certain basic shortcomings that have prevented us from significantly increasing the effect of technological development on the qualitative aspects of the national economy's

development. Technological progress has not yet become the main axis of the plan. Despite favorable partial results in product quality, we have been unable to ensure accelerated introduction of the results of science, research and development into production, or to shorten the innovation cycle.

A partial improvement occurred in attaining a higher proportion of new products within industrial output, and of high-technology products within the new products. In 1982 the proportion of new products rose to 16 percent (from 15.8 percent), and the proportion of high-technology products improved to 26 percent (from 21.5 percent in 1981).

Within the two years that the Set of Measures was in effect it was not possible to achieve a breakthrough in technological development, partially because of its long-term nature, and partially because in this respect it is necessary to intensify direct management as well as the system of management. From a systems viewpoint, therefore, a program has been adopted to verify experimentally measures for accelerating research and development.

#### Czechoslovak Economy's External Relations

So far we have not been able to fully ensure consolidation of external economic equilibrium through intensification and the increase of the Czechoslovak economy's efficiency and ability to export, especially not in relation to non-socialist countries. In 1981 and 1982 the trade turnover with socialist countries was greater than planned, due to overfulfillment of the export tasks. In trade with nonsocialist countries the export tasks were not fulfilled.

In the present situation in international trade and political relations, the Set of Measures has been able to influence import, export and the balance of trade only to a limited extent, predominantly with the help of the export incentive fund. Because of the limited possibilities to honor claims, the system of foreign-currency incentives has been hardly effective.

In view of the need to expand our ability to export and to improve the efficiency of external economic relations, measures to this end are being tested experimentally as of 1 January 1983.

The experience to date with the functioning of specific instruments confirms the soundness of a differentiated approach to applying the basic principles of the Set of Measures in the individual sectors of the national economy. Most of the implemented specific measures have proven suitable. In the coming period it will be necessary to refine the specific solutions, particularly in the areas of transportation, the production of medical supplies, and culture. At the same time it will be desirable to focus attention on evaluating the effectiveness of new instruments in the sectors providing paid services.

The management system perfected on the basis of the Set of Measures has influenced favorably the development of the consumption of materials (adjusted value added, total cost, profit, and the profitability of production assets). At the same time it has contributed toward maintaining the planned relationship between labor productivity and the rise of average earnings, and toward a partial

improvement of the quality of production (increase of the proportion of new products, and of the share of products belonging to higher quality grades).

On the other hand, the perfected management system has not as yet influenced significantly those areas of the economy in which there are factors of a long-term nature, and where objective elements of direct management outweigh the systems measures. This applies particularly to increasing our ability to export (improvement of commercial work, product quality, etc.), the replacement of fixed assets, and technological development.

In these areas, however, partial improvements are noticeable (scrapping of fixed assets, shortening of the average construction time in capital construction, observation of the plan's proportions in the case of fixed-limit investments, issuance of inefficient research tasks, selection of a more efficient export structure under the influence of the economic incentive fund).

In sum it can be established that the gains and positive elements of the perfected management system are the dominant, and that the systems elements have exerted their influence in the right direction. To intensify the management system in those areas where factors of a long-term nature are exerting their influence--i.e., in technological development, capital construction, and external economic relations--additional measures for the further intensification of the replacement process are being tested experimentally as of 1983.

1014  
CSO: 2400/437

## NATIONAL TRANSPORTATION IN FIRST-HALF 1983 EVALUATED

Prague HOSPODARSKE NOVINY in Czech 2 Sep 83 p 2

[Article by Antonin Husicka, CPCZ Central Committee official]

[Text] In the first half of 1983 public transportation fully provided for the transportation requirements of the national economy. The planned volume of transportation was fulfilled at a 104 percent level, with the excess amounting to 12.6 million tons. In comparison with the same period last year, 6.8 million more tons were transported.

Railway transport exceeded its target for transported volume by 2.5 million tons, thereby fulfilling the plan at a 101.8 percent level. Public highway transport exceeded its goals by 9.8 million tons (and the plan by 105.9 percent), and water transport by 309,000 tons (and the plan by 105.4 percent). Since the beginning of the year public transportation has moved 50.7 percent of the planned annual volume of goods, a figure composed of railway transports' 50.5 percent, Czechoslovak Automotive Transportation's [CSAD] highway total of 51 percent, and water transport's total of 48.3 percent.

The fulfillment of objectives in railway operations was positively affected by uniformity in the loadings of critical substrata made possible by favorable climatic conditions and the more uniform fulfillment of loadings by production enterprises, especially in the coal industry. This made it possible to cover the daily requirements of the coalfields for railway cars. The plan for loadings of solid fuels was fulfilled at a 106.8 percent level, with the excess amounting to 471,000 tons. Most of the credit for the achieved results belongs to the railway employees of the Northwestern Lines, who since the beginning of the year have transported out of the North Bohemian fields 107.9 percent of the planned amount of coal, and to the railway employees of the Southwestern Lines for exceeding targets for loadings and the transportation of coal from the Sokolov field by 107.5 percent. The transportation of other goods was also assured without any serious fluctuations.

Under the annual protocol, the export of Czechoslovak goods to the Soviet Union was fulfilled from the beginning of the year by only 90.8 percent, for a shortfall of 104,000 tons. One of the reasons for this is that even though there has been some improvement, the receipt of the transported goods by the Soviet railway system has not reached the agreed-upon level. Therefore, this



year as well there have been limitations placed on loadings of export goods to the Soviet Union. Likewise, imports of goods from the Soviet Union have been fulfilled at a 98.9 percent level.

This significant improvement of railway transport during the first half stems clearly from the qualitative indicators of work. We consider a basic reason to be the demonstrated improved management of railway cars. In this area, there has been a shortening in the turnaround time of rolling stock units of 5.6 percent in relation to the plan (and of 6.3 percent in terms of 1982 performance). This, along with a higher average static utilization rate and improved rhythm of unloadings during the week (by increasing them on days off), has made it possible to meet transportation demands with a lower working number of railcars in the network. Improved management of General Freightcar Pool rolling stock made it possible to meet these requirements by working with a daily average of 5,264 fewer freightcars.

The average daily number of 50.9 idle trains was the lowest average number for the past 5 years. However, a negative situation still persists in the maintenance condition of the freightcar fleet. The average daily freightcar maintenance backlog increased in June over the previous month to a total of 17,337 freightcars, which represents a 14.5 percent excess over the norm. The number set by the norms was adhered to only on the Southwestern Lines.

Despite measures adopted by the senior management of the Federal Ministry of Transportation to resolve the extremely unfavorable trend in the violent damaging of freightcars, the situation has not improved, but rather has gotten worse. For the first 5 months of the year, more than 70,000 violently damaged railway cars were found in the Czechoslovak State Railway network, with assessed damages of Kcs 73.7 million. This is 2,400 railway cars and Kcs 14 million more than at the end of May 1982. It continues to be the case that most of the cases of damage and the person responsible remain undiscovered. The managerial organs of railway transport should be acting more decisively to eliminate everything that prevents the discovery of the causes of damage and the determination of who is responsible. Otherwise, the losses will continue to grow.

Favorable weather conditions and the smooth flow of railway traffic made it possible for employees of the track maintenance organizations to take advantage of good work organization to fulfill and even to exceed planned performance levels in the maintenance, renovation and reconstruction of railway lines.

The desired improvement in the accident rate in railway transport has not been achieved this year either in terms of the number of accidents, or in their consequences. The total of 15 fatalities and 21 serious injuries, most of which were caused by human inattention or sloppiness, is too high a price to pay. The largest number of fatal accidents (seven) has been on the Eastern Line. In contrast, there have been no fatalities on the Southwest Line. These results point to the necessity of devoting increased attention to more thorough control of adherence to regulations and to the need for embarking on an uncompromising battle against the use of any kind of alcohol at all when at work. In this area complete unity must be achieved between the managerial and professional organs of every operating division. Greater emphasis must be placed on prevention than on instruction after the fact.

Railway Industrial Repair contributed to the good results of the transportation sector. Adjusted values added were fulfilled at 105.8 percent (exceeding targets by Kcs 32.8 million). In the first half, this performance was participated in by all of the enterprises of the Nymburk Railway Industrial Repair VHJ, particularly the Nymburk Railway Repair Center and Machine Works (112.7 percent), Plzen (106.5 percent), and Martin-Vratky (112.7 percent). Labor productivity for the whole VHJ was exceeded by 106.4 percent. The target for periodic repairs, however, remained occasionally unmet (98.6 percent) for electric and motorized locomotives and freight cars. Targets for the in-house production of spare parts were fulfilled.

Public highway transport of the CSAD exceeded its planned volume in the CSR by 7.6 million tons (107.1 percent) and by 1.4 million tons (101.2 percent) in the SSR. In contrast, planned output targets (in ton-kilometers) were met in the CSR by 99.9 percent and by 100.1 percent in the SSR. This attests to the requisite limitation on long-distance highway transportation and its replacement with less energy-intensive railway transport. In the enterprises of the CSAD the projected reduction in standard consumption of propellants was not achieved, meaning that the ceilings for the first half were exceeded.

Both of our enterprises exceeded the half-year plan for water transport. The Czechoslovak Elbe-Oder Shipping Line fulfilled the planned transportation of goods by 104.5 percent, and in domestic transport by 107.1 percent, with energy coal targets being exceeded by 107.9 percent. The Czechoslovak-Danube Shipping Line fulfilled its targets at a 107.3 percent level, and its domestic targets by 113.6 percent. The planned level of receipts for foreign transportation was exceeded by the Czechoslovak Elbe-Oder Line by 102.8 percent, and by the Czechoslovak-Danube Line by 112.7 percent.

Air transport fulfilled its planned output by 105.5 percent. On domestic routes the Czechoslovak Airline [CSA] reached only 93.4 percent of its targets, while achieving 106.4 percent of its international objectives. There was a partial reduction in the number of delayed flights on regular routes. In spite of the efforts devoted to the safety of airline operations, the number of surface accidents between aircraft increased.

Exceptional attention has been devoted to the public transportation provided by the railways and the CSAD. Some 1,334,300,000 people were transported, 205.8 million of whom were transported by the railways. The output plan for public rail transportation was exceeded by 3.1 percent. The bus transportation of the CSAD moved 681 million people in the CSR and 447.8 million in the SSR. The quality of public transportation, its regularity and punctuality are all increasing. Shortcomings remain, however, in the sale of tickets and reservations both for the CSAD and CSD, especially in Prague. Moreover, adequate attention is still not being devoted to the cleanliness of the trains, station areas, and travelers' services.

A comprehensive evaluation of the economic results of the first half is being carried out in all economic units of the transportation sector. The rigor and specificity of these will determine whether the increases in the quality of freight and public transportation throughout the transportation system will continue in the remaining months of the year.

## ASPECTS OF PIECEWORK PAY DISCUSSED

Prague HOSPODARSKE NOVINY in Czech 9 Sep 83 p 5

[Article by Eng Vojtech Mechura, Federal Ministry of Labor and Social Affairs:  
"Results Are What Counts"]

[Text] In HOSPODARSKE NOVINY No 17/1983 an article on the issue of the application of piecework wages entitled "More Progressive Than Salary" was published by Eng Vaclav Makrlík. This was followed in issues 23, 24, 25, and 29 of HOSPODARSKE NOVINY with expressions of opinions and thoughts which are basically correct; nevertheless, the attitude of specific authors to a direct piecework wage are not identical and in some respects are completely at odds. Some of them regard the direct, individual piecework wage as a more effective incentive and as more progressive than other forms of wages. Other authors contend that they should be replaced as soon as possible with more appropriate and motivationally more effective forms. It is my intention in this article to assist in a more comprehensive understanding of piecework wages.

First of all, I wish to emphasize that I consider all forms of wages and combinations thereof, which under certain conditions can create effective personal economic incentives in various areas in terms of quantity, quality or managerial efficiency, to be of equal value. If the requisite preconditions and conditions for one or another form of wages have not been created, or if this would indeed be impossible given prevailing production and managerial practice, then that form of wages is not economically effective and fulfills only a distributive function and in no sense the motivational function which is the crucial one for wages as an economic category. This implies that all forms of wages are "just as good or just as bad"; if they are ineffective it is not their fault, but the fault of those who are applying them.

With this I have already indirectly answered the question of whether a direct piecework wage is more progressive than other forms of wages. In general it is not and cannot be; nevertheless, this thesis is repeated again and again and many employees even in divisions of labor economics believe it. At the same time it must be said that if all of the foundations and conditions for

the effective functioning of piecework wages at a workplace are created, then they can be more effective than many other forms of wages. But even in these instances, it cannot be stated unambiguously that it would not have been possible to implement another form of wages or combination of wage forms for which the results would have been the same or even better.

#### Preconditions for Introduction

In the 30 January 1981 guidelines of the Federal Ministry of Labor and Social Affairs for the implementation of wage forms the following conditions for piecework wages are presented:

--the prior establishment of a technological procedure, working procedure and the form the output is to take,

--the creation of the essential technical and organizational preconditions for the smooth carrying out of the assigned tasks,

--the assurance of reliable control over the amount and quality of the work that is performed.

Of course, there are other necessary preconditions for the effective functioning of piecework wages, such as the need for direct management consistent with the qualifications of the employee. The creation of all the essential conditions is in no sense easy and in a number of instances it is not even possible. In the case of partial production, or of maintenance or assembly work, etc., it is impossible to establish precise, reliable output standards. Nevertheless, quite often at these and other workplaces direct piecework wages are being used. In what sense can this be "economical"? For 1 percent standard fulfillment, of both high quality and low quality (soft), a direct piecework wage guarantees 1 percent of the wage rate, which is to say that it leads to incorrect differentiation, and because with only rare exceptions all output norms are exceeded; moreover, they imply an increase in wage costs without regard for the amount of work actually performed.

In situations where it is impossible to establish quality standards or where such standards for whatever reason do not exist, a direct piecework wage should not be used; it must be replaced with other wage forms such as differentiated piecework wages, a mixed wage, salaries with premiums, multifactor wages which, given the proper choice, are capable to a large extent of eliminating in earnings the imprecisions of output standards.

The same is true of situations in which it is impossible to assure a smooth production flow. If a direct piecework wage is used at such a production site, experiences with wage systems indicates that sooner or later an intentional softening of standards occurs along with the recording of various types of excess work so that when the inevitable lowered results occur the average wages will remain roughly the same.

It is, however, necessary to see that the direct piecework wage has some important advantages. Administratively it is relatively simple. The employee can compute his own wage fairly easily under such a system, and knows that his earnings depend on this. Also of importance is the long tradition of this form, the familiarity with it on the part of management and labor alike, and the fact that rates are easily determined, etc. Its exclusive focus on output may easily be compensated for by the use of premiums, and particularly performance bonuses tied to quality, materials usage, etc.

Therefore, I do not consider it proper to regard it as completely outdated developmentally, and to discard it quickly and replace it precipitately with other forms. Where the essential foundations and conditions are created for its effective functioning, it will undoubtedly be able to be used for a number of years yet. At the same time, it must be noted that it should be used to a much lesser extent than is currently the case. In connection with scientific and technical development and the shift to technically more sophisticated and technologically more complex production, the nature of work will change, with the operation of equipment, an area where the use of the direct piecework wage will neither be appropriate nor effective, tending to dominate.

#### Advantages

It is often considered to be an advantage of direct piecework wages that they provide incentives for employees to fulfill output standards, i.e., to turn out pieces, that are equally intense for the first through the final piece; the wage is determined by how many standard hours or pieces are produced. From the viewpoint of stimulative impact, under certain conditions this principle tends rather to have disadvantages, particularly where relatively precise output standards exist. Indeed, this principle inadequately stimulated the growth of performance within certain boundaries, whether the focus is on amount, quality or managerial effectiveness.

If, for instance, at a workplace output is stable at 108 percent of the output standards (or 108 pieces), and the enterprise has its greatest interest in maximally increasing output, then the principle of direct piecework wages on a one to one basis is not very appropriate. For instance, with the introduction of differentiated piecework wages the situation is such that for output standard fulfillment up to 110 percent, the ratio is 1:1; beginning at 111 percent, the norms prescribe 1.5 percent of the wage rate for each 1 percent fulfillment, while for over 120 percent fulfillment the ratio is 1:0.5 percent. The objective of this is to increase the average level of fulfillment while at the same time not supporting excessive fulfillment. This is without a doubt a technique more administratively demanding than a direct piecework wage, but it is economically more effective. The same objective may, however, be obtained, for instance, with an appropriate combination of salaries with premiums oriented toward performance. At the same time, this method is simpler and easier for employees to understand.

## Disadvantages

In cases where a direct piecework wage is applied at a workplace where the necessary preconditions and conditions for it have not been created, there is still one more negative result. The mechanism of these kinds of wages, their "full mastery" both directly by supervisory managers as well as directly by the workers leads to a situation in which as a rule the earnings governed by the piecework wages grow much faster than those of other groups of workers and technical-managerial employees, which sooner or later leads to great disparities and relational problems. In a situation of conservational wage development, this disadvantage of direct piecework wages becomes especially evident. Research in several enterprises indicates that about 70 percent of the resources set aside for annual wage increases is utilized for the roughly 40 percent of all workers who are working for piecework wages. One often encounters the argument that earnings under piecework wages must increase faster than earnings of other groups of workers because the piecework workers are assuring increased labor productivity. This is a persuasive argument. In places where optimal performance is established objectively, the possibilities for exceeding this figure are minimal. This is attested to by the singularly very small increase in standard fulfillment in large scale production environments, where as a rule the performance standards are set very strictly.

In other types of production environments increases in standard fulfillment consist, in addition to actual increases in performance, of intentionally lowered standards, the exceeding of what amount to startup norms in less repetitive production situations, various so-called extra assignments, and the like. If, for instance, workers on salary have some underutilized capacity in their use of work time, it is essential to provide the necessary organizational measures and direct management so that the time set aside for work is utilized optimally. This is a task for the responsible managers.

## A Few Reasons Why

It remains to answer the question of why a direct piecework wage is used at workplaces where conditions are not favorable for its application. Tradition as well as the simplicity and comprehensibility of piecework wages certainly play a role in this, as does our technique for determining production costs. However, I perceive the main reason to be that this form of wages "best suits" managerial employees (foremen) as well as workers, because they work "excellently" under them.

A direct piecework wage makes it possible for managers to transfer to workers a number of responsibilities and concerns regarding the attainment of planned results, and even though the requisite smoothness of production is not provided, the workers to a large extent themselves take care of the needed mechanisms, materials and preconditions so that they will be able to earn a living. If something exceptional happens, it is possible through piecework wages to assure workers their accustomed earnings, for example, by modifying norms or adding on work, so that conflicts do not arise. For their part, the workers know that with this form of wages their earnings will always be increasing, that they control its level more or less themselves, and that

regardless of the difficulties and shortcomings that may arise in production, they will still have their generally accustomed earnings.

It is in this symbiosis that I perceive the greatest problem. These attitudes must be overturned and those concerned gradually convinced that it is in the interest of the entire society as well as of every worker to employ at every workplace a form of wages which is appropriate to the conditions of that workplace.

There is, however, still another reason why direct piecework wages are being utilized to an immoderate extent. This is the inadequate professional qualifications of many employees of divisions of labor economics, who do not know how to apply, or who are unable to apply in a creative manner, or who are incapable of introducing more favorable and effective wage forms. On many occasions the reason is none other than plain comfort, the attempt not to create problems and conflicts for oneself. Often the requisite courage and purposeful effort for introducing something new, progressive, forward looking is absent. In many enterprises as well the professional compensation divisions do not have the requisite support for this from the enterprise management. It is essential that matters of this sort be corrected rapidly.

In conclusion, I would like to state that we should not conduct a discussion of why a direct piecework wage should or should not be used. Rather, we should focus our attention on areas where the conditions for such wages are appropriate and, especially, on what types of wage forms or combinations of wage forms will yield the best performance and a more intense and comprehensive motivational impact, as well as assuring more proportional development of wages in specific employee groups.

9276

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MEASURING WORTH OF ENTERPRISES DISCUSSION CONTINUES

Prague HOSPODARSKE NOVINY in Czech 9 Sep 83 p 4

[Article by Frantisek Brabec, general director, Wool Industry Economic Production Unit (VHJ), Brno: "The Subject Is Also Important"]

[Text] The article entitled "We Are Behaving Non-economically" which appeared in HOSPODARSKE NOVINY No 32/1983 and was written by Eng Jan Vrba, the director of Textilan in Liberec, shows that we are in a situation in which we sometimes realize much too late that a change has taken place in economic mechanisms which is an outcome of the gradual and increasing rigorous implementation of the principles contained in the Set of Measures. His article was directed at the issue of exports and their difficulty at the present time. It is my opinion, however, that the problems which exist in this area must be judged comprehensively, i.e., not in isolation and especially not without a critical view of work itself. In many instances the author of this article must be acknowledged to be correct.

For an objective evaluation it is necessary to divide the issue into two areas, which may be described as the ability to design and to sell well, and the ability to produce quality products and to meet deadlines. The article suggests that the main problems lie in the area of production, where the possibilities for rapid, high-quality and timely deliveries are influenced negatively by plan indicators, and especially by systematic increases in them.

Possibilities Exist

There are a number of factors which make more difficult and sometimes even render impossible the successful meeting of export targets, but for the most part they are not indicators, but rather constraints or a lack of unanimity in the interpretation and practical implementation of regulations.

One cannot agree with the view that an indicator is or could be a barrier. I understand an indicator to be a measure of the quality of work that is performed,



whatever the area of activity to which the indicator applies. Therefore, if I am to be objective I must evaluate the manner by which a given indicator could make it impossible to behave rationally. In connection with this, there must be a critical evaluation not only of the environment which causes frequent difficulties, but also of the quality of the work itself and the consequences of this for the overall sophistication of production, supplier service and the ability to compete.

When approached from this angle, then, some of the conclusions presented in the article are not always objective. In the first place, it is not always possible to assert that the meeting of export targets is accompanied by such a large reduction in performance, because increased labor intensiveness does not occur in all areas and in all working operations.

It would likewise not be proper to agree with the view that the possibilities for further growth have been exhausted. This for one reason alone, namely that investment activity at Liberec Textilán has for years been characterized by expanding production, where investment inputs have been higher than write-offs, making for ongoing growth in the value of capital stock per worker. Increasing chemicalization has also exerted a positive influence, and there are other possibilities, such as the thorough regular rationalization of activities to assure greater capital asset effectiveness and higher productivity per worker.

I think that the view that machinery and equipment utilization is on a par with that in the developed countries must be corrected. The utilization, in terms of time, of the capital stock at Textilán is roughly 80-85 percent of that in the developed countries and roughly 60-70 percent of the best world performance. The utilization of machine capabilities, however, fluctuates at 90-95 percent of the levels of the developed countries, and sometimes is even 100 percent of these.

The article mentions the dependence of wages payable formation on values added and in this regard presents the example that a greater volume of wages payable may be generated by the production of heavier fabrics. This view is incorrect because the volume of wages payable for the basic components of wages is generated on the basis of adjusted values added, i.e., after the subtraction of costs of materials. By the same token, the incentive component of wages is generated in relation to the return on capital assets, or again not on the basis of the value of production.

However, it must also be taken into consideration that a heavier fabric means a substantial increase in yarn consumption, for which labor consumption is proportional to the kilogram amount. This implies greater labor intensiveness. Indeed, in most operations labor consumption is directly proportional to the amount of materials.

What, however, must be criticized is the fact that in plan breakdowns the possible total volume of adjusted values added is not being respected as the basic criterion and indicator of work efficiency for this or that organizational entity from which is to be derived the overall volume of production.

Too often when defining marketing targets the amount and volume of production is determined beforehand, while the amount of labor available given the number of employees involved is often at variance with requirements for the quality of what is produced. In these instances efforts to incorporate a greater amount of value added into products is at odds with the breakdown of production value.

It is understandable, then, that if an enterprise is to assure production with greater labor content, or distributed among subconstraint categories, it finds itself in a situation where one or another indicator may seem unfeasible.

I do not know who Eng Jan Vrba perceives the haler indicator of materials costs to be a barrier to economic cooperation, when this is in no way a binding indicator, but an orientational one. Adjusted values added is the critical indicator, and these should not be influenced by any cooperative venture that may lead to increased efficiency.

Another question is whether so-called material costs are an indicator which has sufficient predictive ability for conclusions to be made from its movements. After all, in a number of instances within the context of a VHJ a given material has been incorporated into this indicator twice, or even three times. For this reason, conclusions from an increase in so-called material intensiveness may be drawn only after an analysis of the materials costs which excludes the multiple counting of the same material.

#### Timely Information

The article mentions the fact that a conception of the possibilities for improving service and speeding up deliveries was created within the enterprise. In my view, there are no obstacles to a speeding up of the design process. Such an acceleration must, however, come about solely as a result of organizational intervention, and cannot be tied to investments or other conditions. This is a question of internal organization, but also of an adequate amount of information concerning the focusing of design efforts and the structure that can be counted on. Because we deliver to a great number of the developed countries, not only in Europe but to the Third World countries as well, the design palette is quite broad. For the supply to correspond to the demands of markets, fashion is not the only issue that must be addressed, but also structure, where roles are played by climatic conditions, national preferences, pricing issues and several other factors. In this regard comments are always made that we enter markets late and with wrong design information, so that our products are not suitable.

We must ask ourselves the question of where, then, do the foreign manufacturers obtain their information, since they have already become involved in a sales situation with collections that correspond to given fashion preferences. There can only be one answer, namely that we do not obtain information concerning designs for a given period with the same lead time as producers in other countries. It will therefore be necessary to improve both our information and our documentation so that our design work is in step with the time.

It is impossible, that is, to view the problem only from the viewpoint of conditions and the so-called objective preconditions for task fulfillment. This neglects another aspect of the possibilities which are rather more subjective, and which may be expressed in the overall sophistication of products, product quality and, within the context of quality, price as well.

That portion of improvement which is expressed by greater sophistication and speed of the designing cycle is realizable because these are measures of an organizational character and concern the application of the creative abilities of employees in the areas of production preparations and in the design collective. The second portion of the possible measures lies in the area of information circulation and the speed of reaction to it.

Possibilities for shortening delivery schedules for exports have for some time been a subject of discussion. We have several times analysed the reasons that this has not happened and nothing remains but to repeat once again that which we formulated some years ago.

In contrast to the producers with whom we are compared, we do not operate with a warehouse of completed goods. Instead we start production only when goods have been contracted for. This means that there is no opportunity for accelerated production because production facilities are fully occupied with preceding orders and export orders may be worked in only when all of the existing orders have been filled. Under the commercial code, we are required to give every consumer a proportional share of the year within the context of quarterly contracts. If we would want to speed up a given export order, which would mean exceeding the proportional share for that quarter, we would have to restrict deliveries to other consumers. This, however, is not possible. We must, therefore, put off the delivery to a time after the coverage of all contractual commitments, which in the worst case may mean a delivery time of 9 months, and in the best of cases, 5 months.

No other resolution exists at present, given the length of the production cycle under current conditions. It is not an option for us, as for other manufacturers in the world, to hire and fire employees according to the volume of work, nor do we have the possibility of working with an extensive stock of finished items so that we could fill some orders from our inventory, nor do we have stocks of semifinished goods which would also allow us to react faster in some instances. Finally, we are limited as well in terms of possibilities for lengthening the work day, i.e., for working overtime.

Much too often as well the decision-making process as to whether an order should be accepted or not takes much too long. We often appeal to the commercial code which gives a 20-day deadline. An enterprise, however, may shorten this deadline and it is no accident that we have established under our conditions that an indication of the acceptance of an order, provided no further clarification is needed with the supplier, must be made within 3 days. Likewise, the supplier, as long as professional cooperation is the issue, must indicate his acceptance within 3 days and may not wait for the officially permitted 20 days.

## More Flexible Marketing

Inventory optimization need not be a dream, as long as the ability exists to evaluate a situation objectively, and to exert pressure on turnover as the situation dictates. The current situation is that planning agencies at all levels have simplified things by speeding up turnover by sheer administrative pressure rather than first evaluating possibilities objectively. Unfortunately, this results very often in noneconomic behavior.

Our V&H belongs to those fields in which a large portion of raw materials deliveries have a seasonal character, where some of the deliveries come in so-called minimum amounts, i.e., those amounts which must be ordered for the delivery to arrive at all, and where there is a lack of congruence between the conditions for the delivery of inputs and the conditions favorable for outputs of our products. Situations therefore arise in which it is impossible to shorten the delivery schedule of certain products, with the acceleration of inventory turnover then being focused on what remains of the structure of inputs. This means that assuring the smooth flow of production cannot be done otherwise than by overdrawing inventory stocks or lengthening delivery schedules. Such conditions make it almost impossible to speak of creating standing inventories for the operative fulfillment of export orders.

In this regard it must be decided whether the composition of inventories corresponds to today's demands for turnover, and to determine their requisite size for primary production, secondary production, domestic and foreign trade, etc. Our supply system, made up as it is of thousands of input items, is a very complex activity during which it is not always possible to satisfy generally accepted views concerning the extent of inventories. Nevertheless I think that the issues analysed in the article by Eng Jan Vrba cannot be restricted solely to the conditions and so-called objective difficulties. The route to correction is not simple, because it requires the improvement of work in all areas of activity, particularly, however, in the final phase, i.e., marketing.

In this regard it is necessary rather to evaluate work techniques in sales and in preparations for sales, i.e., in the preparation of design plans and their execution. It appears that sales are taking place too much according to old techniques, in the sense that instead of active work in the area of prospecting, the conception persists of a passive approach to selling, namely that the customer comes to us.

It is a fact that production does not have the needed amount of contact with foreign markets. It suffers not only from too little information, but primarily from too few qualified comments or suggestions about how production might be organized. Direct, personal contact with the customer is lacking. Overall it may be stated that the issues addressed in this article are in fact much broader and therefore require a more comprehensive solution. It is my opinion that a much larger part of the problem may be found in the area of management, because an analysis of shortcomings points to too much inertia in thinking and therefore also in actions, to failures of responsibility in precisely those areas where it is essential to exert organizational efforts to bring together

various directions of activity and the employees of various divisions, to shortcomings in the areas of production planning and management, but also in production preparations, in the conduct of commercial activities, and in the overall sophistication of commercial work.

The most serious shortcoming is that we have spoken for some time now of the need to bring production into line with foreign trade, but that we unfortunately have not been able to do anything specific to bring this about.

9276

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ADVANTAGES OF COMPUTER USE DEFENDED

Prague RUDE PRAVO in Czech 1 Sep 83 p 3

[Article by Vladimir Cechlovsky: "Let Us Make Full Use of Advantages Offered by Computers"]

[Text] "I do not want to assert," wrote us a reader from the Kolin region, "that computers have been of no benefit to us or that we could do without them. Nevertheless, the effects achieved seem to me very small in relation to the technical equipment and number of people who operate computers. I see it for example in regard to the reduction of the labor force. Many promises have been made in this respect and what is the reality? The administrative machinery as well as the number of technical-economic workers have actually further increased in our enterprise. Have we not overestimated the possibilities of computers?"

One can refer to a number of organizations in which the labor force was demonstrably cut down after the computers had been introduced. In the Czech State Savings Bank for example--taking 1965, when the first computers were employed, as the basis--the number of workers increased by 180 (or 3 percent) by the end of the Sixth Five-Year Plan, but the number of monetary transactions, due to the more diversified services of the savings bank, increased by more than 40 percent. If the savings bank had wanted to achieve this scope of operations without computers, it would have needed an additional 1,280 workers during the Sixth Five-Year Plan alone.

In domestic trade, computers have helped maintain the labor force on approximately the same level, although the retail turnover and the number of items necessary for management, records, accounting, wages, transportation and so on have increased so much that without computers trade would have to employ an additional 20,000 workers. In large food warehouses, for example, computerized goods handling has virtually eliminated the so-called cost accounting departments, which used to employ as many as 30 people to keep complicated written records. Computers, however, also prepare payrolls for 360,000 employees in the trade sector, "monitor" inventories in warehouses and warranty periods for products, and so on.

Even these examples, however, will not convince some of our readers who have formed "definitive" opinions about computers. From their experience they will mention a number of instances where the computers not only did not reduce, but in fact increased the existing labor force by adding the computer operators to it.

Even such "negative" examples need not reduce the significance of computers. There are namely areas of computer use in which the reduction of the labor force is not and even cannot be the decisive criterion for their use. A computer system, for example, installed in the intensive care unit of a health establishment, where it analyzes EKG curves for many patients simultaneously, aims not at reducing the number of nurses or physicians, but at improving the patients' care. Although the use of computers in ordering international airplane tickets has not reduced the number of workers in this area, it certainly has contributed to the more effective use of airplane space.

Does this mean that the reader's view referred to above is unique and unjustified? Not at all. It is generally thought that computers have not produced expected effects even in reducing the labor force, although the equipment in the value of almost Kcs 22 billion is operated by more than 60,000 people. Nevertheless, the situation varies depending upon the manner in which the computers are used. Let us therefore concentrate on the area to which most of criticism is directed--to the computerized control systems [automatizovane systemy rizeni] of enterprises and their technological processes. In the enterprises which have to process as many as 43 million basic information documents annually, the computers really are an absolute necessity. An overwhelming majority of computers are installed there and this is where the biggest effects are anticipated.

In most of the organizations which we have visited the use of computers either reduced or could have reduced the labor force. This has been confirmed also by the survey conducted by the federal Ministry of Technological and Investment Development in which 58 percent of enterprises surveyed reported an absolute reduction of the labor force and almost 99 percent of computer users a relative reduction of the labor force--this means that the increasing management and administrative needs have been met not by an increase in the labor force, but by automation. The experts working with the computers blame the persisting shortcomings not on the computers, but on the fact that appropriate organizational and technical conditions have not yet been created for their effective use.

These also are the main causes of the problem described by our reader. How can the use of computers result in a reduction of the labor force in an enterprise in which automated information processing has been introduced, but--"to be sure"--data also continues to be processed manually. Savings cannot be achieved also in those instances where those responsible proceed according to a faulty project, do not train people for automation or apply the computers to an area in which savings cannot be achieved. We came also across one instance in which a certain area was computerized only in several plants of the enterprise, while the existing method of processing was retained in other plants.

This is only a small fraction of the broad variety of shortcomings for which the economic management personnel bears the primary responsibility. Particularly, it was not exceptional in the past that a manager ordered the purchase of a computer simply because the neighboring enterprises in the okres already had one or because he saw in it a sort of salutary tool for further increasing the production volume. Such a computer, which began to operate "at any price" without the clarification of the basic concept and planned goals, usually brought about an increase in the labor force.

However, is a similar view of computers definitely a thing of the past? Unfortunately, this is not so. Quite a few management employees continue to show little interest in this area, although the computers are designed to serve as the basis for their decisions in the first place. In placing the order, they do not say what the computers will have on management and reduction of the labor force; they do not properly prepare the building of computerized control systems [automatizovane systemy rizeni--ASR] including the training of personnel; and frequently they confine themselves to criticism of existing shortcomings. Proof of their approach to ASR is clear also from the discussion in our periodical which has been going on already for several years, but in which the management employees participate only exceptionally. It is no wonder, then, that the management employees, instead of actively controlling the use of computers for their own benefit, are uncontrollably pushed by the equipment to a certain level of management with all the accompanying negative phenomena.

Moreover, many members of management have not yet learned how to use computers as a matter of course, like a telephone, typewriter or service car. They do not know because they did not want to learn, and they frequently use the flood of information which they receive as an argument for further increasing the number of technical-economic workers. Yet, practice has made it clear that despite a significant increase in production volume, the number of technical-economic workers can be reduced or at least maintained on the existing level. In other words, only the automation of information processing can prevent a further increase in this category of workers. This, however, presumes taking to heart the words uttered at the Eighth CPCZ Central Committee plenary session on the speedier application of scientific and technological achievements in practice: "We are not interested in science for the science's sake or in technology as a vogue, but in science and technology as a tool for achieving economic results."

There still are small incentives for economic management personnel with regard to automation and the resulting savings. Particularly, the fear on the part of department or division heads of losing their jobs leads to a "struggle" against computers or for maintaining the existing labor force even after the introduction of computers, although this is no longer necessary. It also happens that the workers relieved [due to the application of computers] are assigned other administrative work.

A completely separate matter is technical facilities for programming [software]. All experts are, for example, troubled by the fact that the equipment for the preparation and preprocessing of data is obsolete. This not only prolongs this work, but also requires many more workers. The unreliability



of some automation components and the fact that they have to be serviced by the enterprise's own workers also calls for an additional labor force. An individual approach on the part of enterprises to design preparation still prevails in our country, and the preparation and use of quality standardized projects is making slow progress.

As in the health care sector, also in production the reduction of the labor force need not always be the primary objective in the introduction of computers. The speed in obtaining required information and the fact that computers will relieve hands and brains for other more important tasks will be of greater importance to the enterprise. Some information in fact cannot be obtained without computers. This frequently leads to the installation of computers directly in the enterprises and plants rather than in economically advantageous computer centers, and this sometimes cannot be without additional workers.

Occasionally one also comes across the view that the introduction of computers will completely dispense with people at least in some areas and that everything will take care of itself. Such an approach reveals a lack of understanding of the substance and significance of computers. They are the tools which can really replace men in many instances, but in other respects they place bigger demands on the users and require that proper conditions be created for their operation and that their peculiar features be taken into account.

Nevertheless, computers still frequently do not reduce the labor force even in those instances when it is possible. This testifies to the fact that, despite our more than 20 years' experience with the use of computers in the national economy, we still are in the initial, extensive stage of their use, with all of the shortcomings which in the eyes of the public reduce their tremendous significance. It would be, however, more correct to rectify the mistakes rather than to blame the computers.

10501

CSO: 2400/443

## GAS PIPELINE CONSTRUCTION REVIEWED

Prague RUDE PRAVO in Czech 4 Aug 83 p 1

[Article by Lumir Hrudka: "Peace Cooperation Construction: Gas Pipeline Across the Country for a Fourth Time; a 3,136-km-Long System; Using the Experience of Soviet Experts"]

[Text] Prague, 3 Aug--Safely and reliably, the transit gas pipeline transports large amounts of natural gas from Siberian deposits to consumers in seven European countries. The total length of all pipelines in this system has reached 3,136 km. The system consists of three parallel interconnected pipelines stretching from the Soviet border to our western borders. The system is being extended further, in accordance with new international agreements.

"On July 25, the builders of the Siberia-Western Europe gas pipeline completed the entire line laid on Soviet territory, 4,451 km long. We appreciate this success especially because we know how the U.S. Government tried to frustrate this work by imposing an embargo on the exports of machinery and material to the Soviet Union. This achievement is a stimulus for us to consistently fulfill our obligations in the construction of the fourth pipeline, which will be connected to the new Soviet export main line," says Eng Stanislav Podolec, deputy director of the Transit Gas Pipeline enterprise. The construction process has been scheduled in such a way that the international gas supply is provided regularly in the coming years. A third, and so far most extensive, phase of the construction development is now in process. It is expected that yearly transport capacity will increase to 53 billion cubic meters of natural gas as early as in 1984. The energetic value of this amount of gas equals 75 million tons of best-quality coal. In 1988, when the entire construction will be completed, as much as 68 billion cubic meters of gas will be transported annually.

The objectives for this and the following years are demanding in terms of both preparations, which must be accomplished in a very short time, and actual construction. The investor, suppliers and designers endeavor to make the construction of compressor plants and the pipeline progress quickly and smoothly from the very beginning. A new hall in Velke Kapusany was put into operation last year, the compressor plants in Jablonov nad Turnou, Velke Zlievce and Nitra and three other plants at the gas pipeline's southern branch

are being expanded. Sixteen turbosystems will enhance the operation this year. Compressor plants are being extensively equipped with new technology: the number of machinery sets will increase 50 percent by the end of 1985.

The receiving station and measuring lines in Velke Kapusany near the Soviet border are being extended. They will be put into operation by the end of this year. However, this border station will go through a second construction phase in order to adjust its capacity for the increased demands of coming years.

The fourth pipeline, which will cross our country from east to west and will be 850 km long, is an important construction. At present, its first part is being built from Plavecky Petr to Rozvadov, more than 400 km. It will be the joint work of experienced builders from Hydrostav in Bratislava and their assistants, Inzenyrske Stavby [Engineering Constructions] in Kosice. Plynostav [Gas Constructions] builders from Pardubice began from the western borders. According to the information from the investor, Transitni Plynovod [Transit Gas Pipeline], approximately 70 km of pipeline had been welded and about 25 km had been laid in the ground at the end of July. There is still much work to be done; this year's plan calls for 160 km of the southern branch to be completed.

"Welders and other workers increased the work pace and are approaching the plan's objectives. Our joint efforts aim at building 8-9 km of completed pipeline a month, including welding, insulation, laying in the ground and covering with soil again," emphasized Eng Jiri Fruehbauer, manager for development coordination and control in Transitni Plynovod enterprise.

For the first time we are building a gas pipeline with large-sized pipes, 1,420 mm in diameter. Our enterprises and designers made use of the extensive experience of Soviet gas pipeline builders. The new line requires using more powerful machinery, new technology and new organization. In their joint socialist pledge, announced at a meeting in Bratislava, the gasline builders promised the the southern branch would be completed at the end of the 5-year plan and the entire route in 1987.

"Such a large construction necessarily has its problems and shortcomings, which we want to solve and eliminate together and with consistency," said Eng Stanislav Podolec. "We all understand the significance of this work which will provide more gas fuel for our national economy. In this way our country also participates in international peace cooperation between countries with different social systems."

9814  
CSO: 2400/406

GERMAN DEMOCRATIC REPUBLIC

TRANSPORTATION MINISTER URGES ORDER, DISCIPLINE FOR RAILWAY CADRE

East Berlin EISENBAHNPRAXIS in German Vol 27 No 4, 1983. (signed to press 1 Jun 83)  
pp 147-149

[Edited excerpts from the speech by Transportation Minister Dr Otto Arndt to German Railway cadre on 6 May 1983 in East Berlin: "Order, Discipline and Safety in Rail Transportation"]

[Text] On 6 May 1983, an advisory meeting was held in Berlin to discuss further tasks to ensure a large increase in the nation's economic output and to implement order, discipline and safety consistently in the DR (GDR railroad). Because of the extraordinary significance of this conference and of the statements of principle in the struggle to fulfil plans and to achieve a high level of order, discipline and safety in rail transportation, EISENBAHNPRAXIS is publishing an edited excerpt from the speech given by Minister for Transportation Dr Otto Arndt.

New Approaches in All Phases of Transportation

The commission given to the Deutsche Reichsbahn [DR] and the railroad workers, to realize the demands for above-average productivity in railroad transportation, particularly freight shipping, with a further improvement in the relationship of expenditures and results, demands new approaches in all phases of the transportation process, starting with the formulation of optimal technologies and going on to their consistent implementation in daily work. In our political and economic leadership work, we must pursue the principal avenues mentioned below and incorporate them constantly into the work of the party and the masses and into the state's leadership activity. These avenues are:

--Constantly guaranteeing the unity of setting objectives, accounting and control in the entire leadership activity of all levels, which includes elevating the role of the leaders

This principle requires better quality in the total activity of leadership, starting in the Ministry for Transportation, continuing through the directorates and offices of the Reichsbahn, down to each department. Work at all levels must be concentrated on the consistent implementation of the resolutions of the party and state leadership.

The work of all railroad employes, adherence to the established technical regime and preventive work to eliminate factors that favor interruptions, breakdowns and accidents, all in accordance with prevailing legal and work regulations, in accordance with orders and directives, must be at the center of leadership activity. In the totality of social life, in submitting reports, in all conferences on work and employment, the main concern is to calculate constantly how well the set tasks have been fulfilled. The more complicated these tasks become, the more necessary it is for all communists and leaders to act in a unified and concerted fashion. This has to be organized, the lower-level leaders must be competent to do this, they must be given guidance, assistance and support.

The political organs and party organizations have been given the assignment of exercising constantly operative, strict party control of these processes and of working unshakeably on the consistent realization of the basic orientation that was established with the party resolutions. In this context it is necessary to direct initiatives in socialist competition to increasing order, discipline, safety and the quality of work in all areas of the railroad, in all operations and offices and in every major branch. Within the framework of general directives to assume an obligation to perform accident-free work in the collectives, the results achieved in the course of this must be accorded special material and moral appreciation. This has to be organized in close cooperation with the union leadership.

What results from these broader contexts are severe demands on the personality of the leaders, particularly on their political and professional skill level. The stable filling of all leadership and command functions with competent cadres turns out to be a key question for the continued development of the productivity and reliability of the railroad. The highest requirement for every leadership cadre is unbounded loyalty to the party, ideological steadfastness, a prominent awareness of responsibility and a combative stance in implementing party and state discipline. This means he must be in the position to motivate the railroad workers collectives entrusted to him correctly and to mobilize them to fulfil the tasks assigned to them. Full consideration must be given to these requirements during the selection of leadership cadres and during their training and continued education.

--A clear improvement in the level of work carried out by railroad personnel employed in the most important areas, on whose careful and disciplined work safety on the railroad and the life and health of the passengers are to a large extent dependent, primarily locomotive engineers, switching staff and construction supervisors, whose role and responsibility in the production process must be clearly established

Railroad workers who have a crucial and immediate personal involvement in completing the process of transportation, bear an extraordinary responsibility. As a consequence, they have a particular obligation to behave in a safety-conscious manner.

Special obligations derive naturally from these special responsibilities, because they are acting independently in each situation and have to make decisions within the framework of their responsibility and because they have to make a personal and

and active contribution to an increase in operating safety; at the same time, they have to show themselves to be intolerant of derelictions of duty on the part of other railroad workers, of passengers and other citizens, because they and only they can prevent, and must prevent, irregularities, dangerous situations and accidents in the operation of trains.

Naturally it is also part of the job for this circle of railroad employes to have to meet their obligations to maintain constant standards of professional and political qualification on a broad front, particularly by regular participation in training sessions and acquiring the most recent knowledge by intensive study of the regulations of the law and of their job, which includes proving their knowledge by taking examinations.

Just as it is assumed that railroad employes in important areas accept special obligations, it is also assumed that appointed leaders have an obligation to behave particularly attentively toward them, to give them particularly thorough guidance and to check on them, also to take an interest in their personal concerns and to heed their suggestions and proposals. This is a two-sided process, which is intended primarily to help to develop a close relationship of trust.

We must attain our objective of impressing primarily on the diesel railcar drivers, the workers who operate switches and railroad crossing barriers and construction foremen, who have to make decisions under working conditions, the types of political attitudes which, on the basis of a profound knowledge of their jobs and a developed sense of responsibility, guarantee safety-conscious work in any situation.

In consultation with experienced experts, we are presently working on raising the qualification requirements for railroad employes in crucial areas of employment on a differentiated basis.

We are thinking in the direction of introducing more effective qualification and repeat examinations and of creating special opportunities for young railroad, so that after their job training they can acquire the necessary practical experience to be employed in difficult jobs. With regard to qualification, we do not understand that only as a medical-physical problem, but primarily as a demand on political-moral qualities and professional knowledge, abilities and skills, which the leaders and comrades in the cadre departments of the branches, offices and directorates will have to deal with carefully and conscientiously. What is important is the development of the railroad employe's total personality.

--Strict adherence to the established technological regime in the organization and implementation of train traffic and similarly in the maintenance and repair of rolling stock and installations

In spite of progress, improving the punctuality of passenger and freight trains is still the principal point in the technological process. Delays that can be traced to technical problems or to negligence by individual railroad workers in carrying out their job, to errors by dispatchers in making arrangements and similar causes, must be reduced more energetically. We should start by generaliz-

ing known and proven initiatives more resolutely and making them more binding, and putting them more in the focus of our public work and of all our work for the party and the masses.

Particular attention must be paid to guaranteeing reliable, regularly scheduled preventive maintenance of locomotives, rolling stock, safety and telecommunications systems and track installations in order to reduce the number of technical interruptions even further.

It will be necessary to incorporate the requisite maintenance schedule into train transportation technology, that is, into the schedule, principally on our heavily burdened main lines. This problem area is assuming growing significance with the introduction of the one-year timetable.

Necessary deviations from the normal technological regime, for instance, in the case of construction work that affects operations, must be planned and prepared precisely under all circumstances.

Two paths must be pursued simultaneously:

The number of deviations from regular operations must be kept as low as possible, and technical preparations and preparations for construction operations must be made in adequate time so that the railroad workers are in a position to follow the provisions of the law and of their employment, even under these conditions.

This is the most important precondition for running train traffic safely, even in the event of deviations from regular scheduling.

--Qualifying All Checks and Inspections

This is a question of ensuring that checks and inspections everywhere on the railroad are carried out consistently, without exception, based on the provisions of the law and of the job, and of performing them all at a high level of order, discipline and safety.

The immediate supervision and control of railroad workers on the work site by the leaders and control organs must be improved qualitatively and quantitatively in such a way that the conditions for working safely in the production process can be ensured everywhere.

This means: control must assist primarily in clarifying and altering all weak spots. It is not fulfilling its task if it puts all its energy into reports and observations.

In addition, the control apparatus must also contribute to the careful preparation of any unavoidably necessary deviations from scheduled operations and to seeing that the railroad workers affected by them adjust in adequate time to the new scheduling conditioning under which they will have to work.

During complicated construction operations, while special trains are being run and in the event of other difficult operating conditions, the resources of the control apparatus must be employed to support the railroad workers on the site.

--Supplying the railroad on a priority basis with equipment which can help to increase operating safety even more

Modern switching equipment has been introduced to a considerable degree in the last few years, semaphore signals were replaced with light signals and to a certain extent modern railroad crossing safety equipment has been installed. Much of it has been produced in our own workshops for the building of efficient equipment.

In important locations, the inventory of our equipment shows the following: At the end of 1982 there were about 330 track diagram switching systems in operation, on about 660 kms of track, equipment is installed for localized train control, between Dresden and Bad Schandau, or Schoenau, the future in-train radio system is being tested under operating conditions, and more than 1,700 grade-level railroad crossings have been equipped with modern barrier systems.

Our design calls for following the primary objective of pushing ahead vigorously with equipping main lines with in-train radio, because it guarantees a relatively large extra gain in safe train operation and the productivity of our lines with relatively low expenditure for construction and a similarly relatively low outlay for equipment.

Beyond this, we must install the facilities for localized train control on more main lines and increase the use of modern barrier systems.

--Order, discipline and safety do not come about by themselves

If one takes the five main points mentioned all together, it becomes clear that order, discipline and safety must be implemented as a matter of priority in the transportation process, allocating the appropriate maintenance processes to our main line of production.

It is not primarily technical problems which are determining the progress of work in this area, but rather the social contexts which will have to attract attention in the areas of leadership and guidance. The subjective factor is gaining increasing importance in the solution of these tasks. Even the best safety equipment, in the final instance, is only effective as a result of the safety-conscious work of the railroad employes who operate and maintain it. To this extent, order, discipline and safety are closely allied to such fundamental social categories as initiative, awareness, work morale and role-model effect.

This is by no means abstract, on the contrary it is very concrete; the increase of productivity in railroading is inseparably linked to a high level of order, discipline and safety.

Order, discipline and safety will not be achieved automatically or without help. For their norms to be adhered to, influence must be exerted deliberately and tangibly through the expedient of political-ideological work, with a consistent



and constantly operative educational influence on and goal-oriented training and continued education of railroad employes.

It is not new programs and plans for new measures that are in the foreground, but the uncompromising implementation of existing documents. To consolidate socialist legitimacy and to increase order, discipline and safety in railroading, they must be subjected to constant evaluation and supplemented appropriately if the situation changes. The party organizations' programs of struggle and the resolutions on competition will play a crucial role.

An important condition for increasing order, discipline and safety is the constant, immediate contact of the leadership cadres, particularly those from the local offices, with railroad workers in the workplace, motivating railroad employes for high productivity and ensuring their constant guidance, support and control on the site.

For this to succeed, the cadres themselves must be competent for the job and confront this task politically aware and with full personal commitment. The cadre departments and consequently the presidents of the railroad directorates and leaders of Reichsbahn departments must attend to this task more vigorously, by paying greater attention to the employment of leading cadres in the offices.

The available resources of time are a crucial condition for the leaders and the middle-level cadres being able to discharge their educational and guidance function adequately with the employes in the workplace concerning accurate job performance and safe operations under all conditions, consistent with the regulations of the law and the job.

The cadres are still being distracted excessively from their fundamental assignments as educators and leaders of collectives by a multiplicity of advisory meetings and required written reports.

It is therefore imperative to create a more efficient, time-saving schedule for conducting work and job conferences at all levels of leadership and also to come up with efficient ways of presenting written reports. Only in this way will it be possible for leaders, and also for workers with a leadership function and all functionaries, to gain more time in order to improve their opportunities of discussing and clarifying with the workers on the site questions that have arisen and/or of preparing leadership decisions with them knowledgeably.

I would also like to stress that in addition to the available resources of time the necessary willingness to do this must also exist in the leader himself. Work on the site is certainly not always simple, it requires adopting a position, persuading and changing, which is often linked with a large number of other tasks. All this is not easy, it requires combative positions, the ability to get one's way and tenacity.

Within the overall job of control, special importance attaches to the checking of individual posts in the local offices of the major branch of Operation and Transportation and to ensuring a high degree of durability in the installations and

rolling stock. Prescribed testing and monitoring assignments are to be vouched for accurately and verifiably. This is the foundation for preventing interruptions.

To remedy defects and infringements that have been ascertained, determinations with deadlines must be made at short notice and their realization must be supervised.

The quality of instruction and personnel testing is to be further improved for the goal-oriented further education of railroad employes and all liberal behavior is to stop.

In the lessons, an evaluation of incidents that have occurred and an analysis of the causes and errors are to be undertaken conscientiously, and conclusions are to be drawn in order to prevent similar incidents from recurring.

The important thing is to ensure regular participation by railroad employes in the classes by taking appropriate measures and implementing them in a practical way.

The preparation and breaking in of young skilled workers and also of railroad workers coming new to the job, particularly in general operations and railcar service, is to be supported by object-based training during professional education; this means making intensive use of available training facilities and imparting knowledge thoroughly and conscientiously during local initiation into the job, in particular, practicing the course of action to be followed in the event of a breakdown, and intensified guidance and control during the first shifts with sole responsibility.

Before employes in operations are put to work, there must be an assurance that in the local examination which they are required to take solid knowledge can be demonstrated of normal traffic and when a breakdown occurs.

With all the steps taken for training and continuing education, the instilling of solid, basic moral positions must still precede the imparting and consolidation of abilities and skills. Beginning on the first day of training, in all subjects and in all sectors of teaching, in all continuing education courses and those for acquiring certification of ability at the works academies, at engineering schools and at the Transportation University, the center of education must be the molding of firm discipline, safety-conscious behavior and the absolute inner conviction that, in railroad operation and also in maintenance areas, the smallest error can have incalculable consequences.

As far as science and technology are concerned, the resources of the Institute for Railroads, in order to increase operating safety, must be directed with greater vigor to further work on developing the information system need for operating safety by analytic investigation to this end and the elaboration of preventive measures and of efficient, safer technologies in train and marshalling yard operation.

The implementation of these demands is not a matter of opinion, but a binding mandate for the responsible cadres in the office, Reichsbahn departments and directorates and in the Ministry of Transportation.

From the mandate of the entire society to implement a high quality of work, the conclusion to be drawn is that all these requirements are political tasks of the first order, whose fulfilment must be ensured by all people and functionaries with a deep sense of responsibility.

9581

CSO: 2300/401

NEW EMPHASIS IN IMPROVING AGRICULTURAL PRODUCTION

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol 31 No 9, Sep 83 pp 1281-1301

[Article by Dr. Harry Reimann, born 1927, director, SED CC Institute for Socialist Economic Management and Social Development in Agriculture, Liebenwalde; Dr. Gerald Schmidt, born 1928, head of study group, Institute for Agricultural Economics of the GDR Academy of Agricultural Sciences; and Klaus Schmidt, born 1937, director, Institute of Agricultural Economics of the GDR Academy of Agricultural Sciences: "Transition of Socialist Agriculture to a Qualitatively New Level of Intensification--Essential Factor of the Intensively Expanded Reproduction of the National Economy"]

[Text] The implementation of the economic strategy issued by the 10th SED Congress in the process of the further intensification of agricultural production makes high demands on management and planning and on the scientific penetration of the agricultural reproduction process. That results from the social need to achieve a high rate of economic growth even under altered reproduction conditions in agriculture for the continued successful implementation of the main task in its unity of economic and social policy. We must always start with the realization that the universally valid inevitabilities and requirements of our intensively expanded reproduction are at work in all sectors of the economy, hence also in agriculture. With it, we have to pay attention to the objectively conditioned specifics in the way the economic laws work and thus also to the inevitabilities of expanded reproduction in agriculture. These specifics mainly result from the fact that the efficacy of the forces of nature and their increasingly better utilization are and will remain an essential basis for agricultural production. That significantly affects the dynamics of the economic reproduction process. These specifics, not last, also include the developmental state of the productive forces and of the material-technical base and the degree of socialization of agricultural production.

The central question for the further development of agriculture within the economic reproduction process is how a new level of intensification can be reached in qualitative terms in line with the changed requirements and conditions. At the third SED Central Committee plenum, Erich Honecker made the point that on a dynamic development of agriculture greatly depended "how the fulfilment of the main task can be reliably secured in the 1980's. Significant agricultural performance growth is a political task of the first rank. In this sector also we confront challenges no longer measurable by the criteria of the past."\*

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\*"Aus dem Bericht des Politbueros an das Zentralkomitee der SED" (From the Politburo Report to the SED Central Committee), Dietz publishing house, Berlin, 1981, pp 44 f.

These challenges arise primarily from the internal requirements and inevitabilities of intensively expanded reproduction, but more and more also from the international class conflict.

Through further intensification and the gradual transition to industrialized production methods the conditions also are being created for consolidating socialist production relations in the countryside, reducing the major disparities between towns and countryside, and improving the working and living conditions for the rural workers and cooperative farmers.

Proceeding from the 10th SED Congress resolutions, the 12th GDR Farmers Congress issued the tasks for reliably supplying the population with foods and industry with raw materials through better achievements, qualities and efficiency in fields and stables. That congress also drew up a positive balance-sheet on the working class alliance with the class of the cooperative farmers, its resolution stating: "In the 30-year history of our LPG's, we have developed into a highly educated cooperative farmers class, loyally dedicated to socialism. We have literally become new people. As the alliance partner of the leading working class we are taking an active part in the exercise of political power and in resolving economic, social and cultural tasks. We have done increasingly better in developing creativeness and initiative, comradely cooperation and mutual aid as characteristics of good cooperative work and in spreading cooperative democracy."\*

#### Results of Agricultural Intensification under the Conditions of Labor-Saving and Capital-Intensive Reproduction

To be able to evaluate correctly the criteria, basic trends and focal points of further intensification, we must proceed from the results in socialist agricultural intensification in the 1960's and 1970's. Intensively expanded reproduction is not a new requirement for agriculture. "In this economic sector, intensification has long been the basic developmental production process."\*\* The cooperative farmers and workers, supported by the workers class, have in the last 20 years, under the conditions of further consolidating socialist production relations with a gradual transition to industrialized production methods, brought about the most penetrating intensification process compared with all developmental periods previously, in terms of the effect it has had on boosting, and altering the ways and means of, production.

This process, diverse in its dynamics and in emphases, takes place as an inherent element of the intensively expanded reproduction of the entire national economy. In conformity with the basic economic law of socialism, the most important goal and the crucial criterion for measuring the efficacy of measures and the total intensification process is the contribution by agriculture to satisfying the quantitatively and qualitatively growing need for foodstuffs from the limited agricultural acreages available. With a crop production of circa M 14 billion, we produce more than half of the GDR's primary raw material production. Only 0.37 hectare of agricultural acreage is available for it per capita.

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\*KOOPERATION, No 6, 1982, p 258.

\*\*K. Groschoff/R. Holzberger/W. Schulz, "On the Continued Socialist Intensification and Rationalization in the GDR Agriculture, Especially With Regard to Crop Production," WIRTSCHAFTSWISSENSCHAFT, No 12, 1982, p 1798.

As the most important raw material producing branch, and on the basis of its own, continually reproducible soil and water resources, socialist agriculture is making a steady, growing contribution to supplying the population with foodstuffs and industry with raw materials, and thus to meeting an overall social need of the first order. For that reason the 10th SED Congress reiterated the responsibility the entire economy has for the development of agriculture.

The high level attained in agricultural production and in supplying the population with foodstuffs is due to important intensification advances and their results. This fact is seen mainly in

- a significantly higher yield and performance level, even on the international scale, of the soil and of useful plants and domestic cattle,
- the productivity boost in the live labor used for it,
- the steady perfection and modernization of the material-technical base,
- the social production organizations in stable, efficient LPG's, VEG's and cooperative facilities created by way of cooperation through the gradual transition to industrialized production methods,
- an ever more comprehensive mastery of scientific-technical progress in production and in its management, planning and organization,
- the development of cooperative democracy and industrial management suitable to the specific conditions of cooperative socialist property, and
- the fundamental improvement in working and living conditions.

These results serve as evidence and assurance for that the cooperative farmers class is able to go on and implement according to plan, in alliance with the leading workers class, the performance improvement in agriculture production imperative for the further shaping of the developed socialist society. Cooperative farmers and workers have considerable material and intellectual potentials, the result of 30 years of successful and planned development in socialist agriculture. These potentials must be fully exploited. On this, all advantages of the socialist production relations must be brought to bear. That includes primarily the subjective factor. Cooperative farmers and workers show a higher performance willingness, more of an awareness and comprehension for the requirements of the 1980's and, above all, more of an ability to manage socialist large-scale production on the basis of scientific-technical progress. Education and training skills have become the chief intensification factor.

The qualitatively new level of intensification in the 1980's smoothly continues the socialist agricultural intensification process. It results from a whole set of changed requirements and conditions for the economic reproduction process including those of agriculture itself, mainly from the material and personnel conditions of production. So the transition to a qualitatively new level of intensification of agriculture is an inevitable process. It conforms with the historic developmental phase now reached in intensification and ultimately expresses the objectively possible and necessary transition to a capital-saving type of intensively expanded reproduction.

The chief criteria for this qualitatively higher intensification level are these:

1. Making sure the population is fed, on the high level attained, more and more from our own agricultural production and, eventually, without fodder imports. The chief connecting link for it is the priority of having crop production grow faster than livestock production and further improving the qualities of agricultural products.

2. Rapid labor productivity growth is needed in order to close the manpower gap in agriculture through an increasing productivity level in live labor.
3. The cost/benefit ratio must be improved through higher yields and outputs, a more efficient use of material, energy and the basic assets economy, and an agricultural production that grows faster altogether as compared with production consumption and the expenditures for live labor.
4. Agricultural production must be increased even when there is partly a curtailment, in absolute figures, of resources, especially energy sources (diesel and carburetor fuel, heating oil) and specific materials.
5. Agriculture has to make a greater contribution to the produced national income.
6. Working and living conditions have to be further improved.

Evidently, these criteria are not to be applied haphazardly to reproduction conditions and requirements, regardless of a given developmental phase. Most decisive for correctly assessing the agricultural intensification process and the conclusions to be drawn from it, therefore, is a concrete historic approach. It is necessary to make a special point of this because at times one encounters views ignoring these relations between tasks, conditions and results of the reproduction process as to its diverse phases of development, which is bound to lead to false or superficial conclusions about the efficacy of the GDR's agricultural intensification process.

Agricultural reproduction inevitabilities primarily are due to that the "economic reproduction process, whatever its specific social character, always intertwines in this field of agriculture with a natural reproduction process."<sup>\*</sup> So the first question one must ask is how the soil, the chief agricultural means of production, can better still be used for raw material production.

Between 1960 and 1980, agricultural acreage shrank further by 156,000 hectares, i.e. by 2.4 percent, because of other demands arising. That is tantamount to the total agricultural acreage of Suhl Bezirk. Despite such limits on available acreage, tending toward further per capita drops, public supplies must be ensured. In all of Europe there are only some West European countries with similarly strong acreage constraints per capita. The dynamics and structure of the reproduction process is greatly affected by that production per acreage must grow faster than total production when the overall acreage available shrinks. In view of those factors it is remarkable that because of the intensification process agricultural output per acreage rose considerably (cf. Table 1).

Table 1: Average Annual Gross Crop and Livestock Production (Decitons of grain units per hectare of agricultural acreage; 1961/65=100)

<u>1966/70</u>	<u>1971/75</u>	<u>1976/80</u>	<u>1981</u>
122.5	134.2	139.3	149.6

Source: Our own computations

<sup>\*</sup>Marx/Engels, "Werke" (Works), Dietz publishing house, Berlin, Vol 24, p 359.

An essential prerequisite for this development was the increasingly better use made of the soil as the chief means of production, leading to a significant increase in crop production (cf. Table 2).

Table 2: Long-range Development of Crop Production

	<u>1951/60</u>	<u>1961/70</u>	<u>1971/80</u>
Grain units per hectare of agricultural acreage	30.0	34.1	39.5
Annual average growth		0.41	0.54

Source: Our own computations

The higher growth rate in crop production in the 1970's still was not enough to ensure the needed livestock feed for the rapidly growing public demands for animal foods from our own production. So in the 1970's the higher demands for animal products had to be ensured through more livestock feed imports than in the 1960's. That made it possible in the 1980 period, as compared with the 1970's for instance, to raise cattle production by 139 percent and egg production by 124 percent. Through making intensive growth factors effective, it was not only through cattle stocks but largely also through improving the performance per animal that the production growth was achieved. The high growth rates in livestock production were crucial for constantly raising the per capita consumption of foodstuffs, the originally planned quotas for animal product production and consumption being notably surpassed. "With 90.5 kg of meats, 15.3 kg of butter and 290 eggs, as well as in terms of many other foodstuffs, the GDR now is among the countries with the highest per capita consumption. Last year alone, per capita meat consumption rose by 22 kg. In 1971, it was 68.5 kg, in 1975, already 77.8 kg, and last year, 90.5 kg. One can imagine what economic achievements are required to ensure such a high status."\*

By assuming large achievements in the storage, marketing and processing of farm products and by some other production achievements as well as by farm product quality improvements, the effective agricultural performance improvement surpasses what is expressed for the material production in terms of natural units. The gross product of agriculture relative to the soil rose as shown in Table 3.

Table 3: Average Annual Gross Production of Agriculture (Mark per hectare of agricultural acreage at constant prices 1980; 1961/65=100)

	<u>1966/70</u>	<u>1971/75</u>	<u>1976/80</u>	<u>1981</u>
Gross production	126.2	152.7	173.5	184.9

Source: Our own computations

Gross production rose up to the mid-1970's while manpower dropped considerably. While in the 1961/65 period, farm labor on the average still came to 1,189,000, it had dropped to only 834,000 on the average in the 1976/80 period. That was a reduction of 355,000 to 70.1 percent. Evidently, under such conditions our intensively expanded agricultural reproduction had to be concentrated mainly on

\*Fourth SED Central Committee Plenum, "Aus dem Schlusswort des Genossen Erich Honecker" (From Comrade Erich Honecker's Concluding Speech), Dietz publishing house, Berlin, 1982, p 98.



coping with labor-saving processes and boosting crop production. The production boosts up to the mid-1970's therefore largely depended on coping with the processes of substituting embodied for live labor. Already for that reason, but also on account of other intensification factors, capital-intensive reproduction processes were the logical result. It must be kept in mind in this connection that the cost for job substitution is much higher in agriculture than the cost for live labor. That tendency has gotten stronger yet in recent years. And economically speaking, the substitution effect from the labor cutback in absolute figures up to the mid-1970's is higher than shown for agriculture per se. Moreover, establishing the substitution expenditure in replacing live by embodied labor takes into account only the immediate operational costs of live labor and not the overall social outlays for manpower reproduction. And finally, the increasing costs for substitution greatly depend on the efficacy of the means of production which is in turn affected by industry and also by the agricultural enterprises themselves.

Intensification aimed at the economization of live labor greatly reduced the expenditures for live labor per hectare of agricultural acreage and production unit (cf. Table 4).

Table 4: Reduced Working Hours Used from 1961/65 (= 100) to 1976/80 (in percent)

	<u>Crop Production</u>		<u>Livestock Production</u>	
	Working Hours per hectare	per deciton	Working Hours per animal	per deciton or unit
Grain	60.5	43.8	Milk	78.8
Potatoes	56.5	53.1	Cattle	93.7
Sugar Beets	51.3	46.5	Hogs	68.0
Green Silo Maize	55.5	53.8	Eggs	59.1
				24.3

Source: H. Stegmann, unpublished material

That the cost reduction per production unit was greater than the reduction per hectare or per animal is due to the fact that intensive reproduction processes took effect to a high degree. The cutback in live labor in the final analysis was possible only because industrialized methods were gradually being used and a beginning was made in organizing the ways and means of agricultural production on a new material-technical base. That also formed the basis for high labor productivity growth rates. Thus agricultural labor productivity rose from the 1961/65 average to the 1978/80 average by 236 percent in terms of the gross product and by 175 percent in terms of the net product. The material performance of full-time agricultural workers more than doubled in this period. The labor productivity comparison in terms of the net product also brings out that the coping with labor-saving forms of reproduction (i.e. replacing heavy physical and manual work by machine operations) raised capital intensity and partly the costs as well. This countervailing trend was largely due to objective factors in the reproduction process in this period. It also shows that the demands made on the subjective factor in coping with these complicated processes have grown greatly and that the level of management, planning and economic cost accounting must be made to conform still more with the higher criteria, particularly also in the enterprises.

Agricultural intensification processes are sometimes misperceived because various aspects and causations are inadmissibly combined and treated indiscriminately:

- the objective reproduction processes in agricultural production in the 1960's and the 1970's,
- the more complicated structural economic conditions, and
- a not always complete control over the principles of socialist industrial management.

If the diverse sets of causes are blurred, the objective character of the reproduction process in a given developmental phase is ignored. All deviations from the so-called economic norm, a highly oversimplified and abstract growth sequence of various parameters without regard for concrete historic requirements and conditions, then appear as infringements of the economy and eventually as errors and defects, as inefficient economic management. The transition to industrialized production methods is a lengthy historic process. Great advances have been made, yet the process will not come to an end for a long time. The perfecting and expansion of the material-technical base for modern agricultural production in the 1960's and 1970's objectively required much more basic assets in agriculture. While the basic assets of the whole agriculture came to M 25 billion (at 1966 prices) in the average of the years from 1961 to 1965, the 1976/80 average was M 56 billion, an increase of 224 percent in other words. In that period intensification was closely linked with four processes:

- a significant substitution for live by embodied labor in crop and livestock production, mainly through increasing mechanization,
- a considerable expansion of stable capacities in public livestock production in connection with a drop in individual husbandry and the transition from types I and II to type III of the LPG's,
- the expansion of material funds for improving production, soil fertility and reduction of losses (soil improvement, chemical treatment, storage and canning),
- and the assumption of functions in processing, storage and marketing as had not previously been assumed in agriculture.

Furthermore, satisfying the rapidly growing quantitative and qualitative food requirements and the substitution for imports (young potatoes, fruit, vegetables and so forth) put a priority on the production of commodities that are particularly capital-intensive.

Large investments were needed and will be needed in the future to strengthen significantly and perfect the material-technical base for livestock production. Only after 1960 as much as 62 percent of the cattle stalls available in 1980 were built, or reconstructed, 67 percent of those for cows and 63.5 percent of those for pigs, so as to ensure the increasing livestock production, basically improve the working conditions and make possible the needed expansion of animal stocks. The drop in individual husbandry makes high demands on investments for the development of public husbandry in the LPG's and VEG's. In the 1970's there was a 20 percent drop in the cooperative farmers' individual cow breeding, a cutback of circa 400,000 cows. For pigs, the number came to circa 600,000. So public husbandry had to set up more stable capacities. The emphasis in the reproduction of basic assets in livestock production up to the mid-1970's was placed on new construction of livestock production installations. In that process we established the essential material conditions for socialist large-scale

agricultural production. With that basis, a highly effective use of material and financial funds becomes now necessary facilitating the further transition to industrialized production methods through an efficient use and rationalization of available stall capacities. Through further perfecting and expanding the material-technical base the degree of mechanization and the working and living conditions are greatly improved (cf. Table 5).

Table 5: The Development of the Degree of Mechanization (proportion of mechanized stalls to overall stall capacity; in percent)

	1973		1981	
	Fodder Distribution	Manure Removal	Fodder Distribution	Manure Removal
Cows	53.3	55.9	73.5	84.4
Heifers, above 6 months	38.7	46.9	66.1	77.8
Cattle, above 6 months	31.8	39.9	56.0	70.1
Breeding Sows	19.2	22.3	33.6	55.2
Fatted Pigs	39.3	45.1	54.7	59.5

Source: Unpublished materials prepared by a research collective of the Institute for Agricultural Economics of the Academy of Agricultural Sciences, directed by Prof Dr H. Reimann.

More had to be spent for increasing mechanization to provide the material pre-conditions for production growth and ensuring the improvement of living and working conditions. Under such conditions any demand for keeping funds what they were would mean retrogression and production destabilization.

In spite of the advances made, many stables and stalls still must be taken care of manually. That shows how big and complicated the transition to industrialized methods is. Usually the sanitary and care facilities are inadequate in the stalls. Gradually reducing that proportion in connection with further rationalization is a prime requirement for ensuring production and further reducing the pronounced urban-rural disparities. Public funds must evidently be spent for it without their becoming immediately production-effective.

All these factors compel a higher capital intensity in agriculture. In terms of the gross product the 1976/80 quota was only 77 percent of that of 1961/65. This capital intensity in the transition to industrialized production and further intensification is reflected in such needed increases. Closely linked with that is that basic assets allocations per manpower (full-time workers) in agriculture rose to 305.6 percent in the same period, and labor productivity (on the basis of gross production) to 236.3 percent. The main point of course always is to come up with higher achievements by means of funds available and use the funds as rationally as possible. The larger the funds are, the more that is true. Many reserves can still be mobilized in this sector. That does, however, not preclude inevitable tendencies and processes objectively requiring higher capital intensity for by no means brief time frames. The specifics of farm production, especially the gap between the labor and the production process and the need to ensure a high effectiveness in the brief time frames nature itself controls, among other things, call for high allocations while operational periods are partly very much

confined. Some 45 percent of the basic mobile crop production equipment can effectively be used only from 2 to 4 months a year, for instance.

A greater capital intensity is thus under certain conditions absolutely necessary for stronger intensification as long as we have not yet achieved an industrialized production throughout on a high scientific-technical level.

"Incidentally, an undubitable and long known fact is that advances in agriculture themselves are steadily reflected in a relative growth of constant capital shares over against the variable ones."\* A different view would make agricultural production seem more effective on a lower technical level because its capital quota is more favorable. International developmental trends also have to be examined more accurately. We may point out, e.g., that in the U.S. agriculture between 1950 and 1970 capital allocations per head rose to 343 percent, labor productivity on the basis of the end product (leaving aside inter-branch turnover) to 308 percent, the end product to 156 percent and the size of the basic capital to 174 percent.

In looking at such connections one must take into account that in agriculture the basic assets or capital quota do not reflect the totality of resource investments. That is partly due to the fact that there is no assessment for the soil so that it is not a part of the productive fund. A similar problem pertains to livestock, especially cows, which also is not part of the basic assets. Thus the basic assets quota in agriculture reflects only a part of the relation between production and basic assets invested, those for structures and equipment. That has to be taken into consideration to avoid erroneous assessments of the agricultural reproduction process and narrow considerations. Actually, agricultural production relative to the chief means of production, soil and livestock, grew faster than these two decisive resources. From this it follows that also in agriculture the assessment of all resources and including them in a complex analysis of the reproduction process have to be given further scientific treatment. That is of importance not only for a better economic penetration of all that goes on in the reproduction process but also for scientific generalizations and conclusions to be drawn for carrying on the intensification process.

The fact that the intensification process of the 1960's and 1970's was marked to a large extent by the labor-saving and capital-intensive processes of the intensively expanded reproduction significantly affected the cost/benefit ratio development in agriculture. From the character of the socialist production relations and the requirements for the agrarian and alliance policy very close interactions resulted between production, the solving of socioeconomic tasks in connection with the gradual surmounting of the pronounced urban-rural disparities, and the socially necessary cost/benefit ratio. In looking at the cost/benefit ratio since the 1960's, one finds diverse dynamics at work with regard to production, the massive enforcement of scientific-technical innovations, and the development of the foundations for production. Insufficient attention to the connection among necessary conditions, costs and benefits, and any exclusive concern for specific time frames, will lead to one-sided and, eventually, false assessments of the course of intensively expanded reproduction in agriculture. In the 1960's and 1970's the agricultural reproduction process was marked by the development shown in Table 6.

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\*Marx/Engels, "Werke," Vol 25, p 768.

Table 6: Chief Parameters of the Agricultural Reproduction Process in the GDR at Comparable Prices 1980 (1961/65=100)

	<u>1966/70</u>	<u>1976/80</u>	<u>1981</u>
The Gross Product <sup>a)</sup>	125	171	182
Production Consumption	129	208	221
Production Consumption Intensity	103	122	122
The Net Product	120	126	134
Live Labor Expenditure	113	118	128
Current Expenses per any M 100 of the Gross Product	99	102	102
Basic Assets Quota (Basis Gross Product)	94.4	77.4	73.2

(a) In conformity with CEMA methods, the computation of the gross product includes the reuse of fodder, seeds, crops and eggs for hatching produced in agriculture. That greatly restricts the effects of the social division of labor on the gross product.

Source: Our own computations

Through their efforts the cooperative farmers and workers in socialist agriculture have provided the practical proof that the intensification of agricultural production while gradually converting to industrialized methods leads to a favorable input/output ratio even when capital intensity increases. An increased production consumption was needed to intensify further, alter the ways and means of production, and provide the cooperative farmers with more and better means of production so as to replace live by embodied labor to a considerable extent. The high growth rates in production and labor productivity up to the mid-1970's made possible reducing the live labor costs and balancing out the increase in production consumption. That took care of the intensification process, with current expenses per production unit holding steady more or less. And that is a fairly remarkable economic outcome even when gaged against the international trend. That development is all the more significant in that the cooperative farmers during that period made much more money in the outcome of their own efforts and the growing investments were primarily funded out of the LPG's and VEG's own resources.

Since the mid-1970's, due to altered economic conditions, certain tendencies have shown up in the increased outlays. The cost/benefit ratio continues to be affected by that economically unjustified performance inequalities among enterprises with comparable conditions have increased and that one has not always fully complied with the greater requirements for perfecting socialist industrial management and the direction and planning of complex intensification processes. Nor did one always handle in the sense of increasing efficiency the use of the intensification factors, the structure of the productive funds, especially those for equipment, and the performance/price ratio for some means of production. And finally one must not ignore that already in the first half of the 1970's

manpower dropped faster than could be made up for through mechanization and the growth of labor productivity. That resulted in a considerable manpower deficit with all the effects that had on the utilization of the natural and economic production conditions.

The increasing efforts made in agriculture toward strictly enforcing the socialist industrial management, more of an effort at organizing production in accordance with the territorial principle, deepened cooperation, the steps taken to increase rationalization in all sectors of farm production and, not last, the more consistent application of the thrift principle are already showing their first results. Since 1979 the growth rates of production and costs have been approaching each other. It was possible to stabilize the intensity of production consumption. In 1981 the gross product grew faster than the production consumption did, and the growth of the agricultural net product by 6.6 percent exceeded the 1976/80 averages. Along with reducing the specific fodder consumption, a specific reduction in the consumption of energy, fuels, gas and lubricants of 3.3 percent below 1980 was accomplished.

The Politburo report to the sixth SED Central Committee plenum stated that, as a result of our intensification, we managed "to increase production further while spending less for it."\* While the results achieved do not as yet suffice, they yet express how, in implementation of the 10th SED Congress strategy, the higher intensification criteria are finding ever better application in the practical activities of the cooperative farmers and workers. While the implementation of these new criteria is directly of pertinent and practical significance, it is not amenable to short-range solutions. That requires great and more long-range efforts in agriculture and other economic sectors, especially also in science and technology.

#### Focal Points for Further Agricultural Efficiency Improvements in the Transition to a Qualitatively New Level of Intensification

The altered reproduction conditions of the 1980's confront agriculture with higher tasks both in accelerating its efficiency growth and in improving the cost/benefit ratio. Such a comprehensive requirement can be coped with only by having agriculture also take, resolutely, the step toward the capital-saving type of intensively expanded reproduction. That calls for implementing further agricultural performance growth, step by step and in conformity with the specific agricultural reproduction process conditions, on the basis of capital and investment-saving forms of reproduction. An ever improving effectiveness of qualitative growth factors also is becoming more of a crucial source for further performance improvement in agriculture. A determined implementation of the economic strategy in agriculture thus calls for an all-inclusive application of scientific-technical progress and an ever closer linkage between science and production as the main course for the further intensification of agricultural production. There are notable reserves for reducing unjustified performance disparities among the LPG's, VEG's and their cooperative facilities. For that reason the sixth SED Central Committee plenum emphatically called for making still better use of the

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\*H. Dohlus, "Aus dem Bericht des Politbueros an das Zentralkomitee der SED" (From the Politburo Report to the SED Central Committee), Dietz publishing house, Berlin, 1983, p 40.

potentials of cooperative property. "The responsibility of each cooperative and of each member for high and efficient production has to be strengthened further. The most important concern here is to tap still more rapidly the considerable production and efficiency reserves in our agriculture and purposefully reduce unjustified disparities in the performance levels of the LPG's."\*

A still more effective use of all available natural and economic production conditions calls for a resolute application of socialist industrial management and of competition and an all-inclusive and mandatory application of scientific-technical progress in all LPG's and VEG's. An essential step in that direction are the acreage-related maximum yield conceptions in crop production and stable-related maximum performance conceptions in livestock production. In these conceptions, based on a broad participation by cooperative farmers and workers, scientists, technicians and economists, the natural science, technical, technological and economic requirements were set down for applying new scientific data and proven agricultural and husbandry measures for getting higher yields from fields and stables. That makes it possible that, closely combined with performance comparisons, more and more LPG's, VEG's and cooperative facilities, with strict regard for any given specific production conditions of theirs, begin to make the results and experiences of the best units the yardstick for their operational activities and socialist competition.

These higher criteria for further shaping the agricultural reproduction process are derived from the dimensions of the production and the available material-technical base, from the altered internal and external factors of the economic reproduction process and from the level attained of the productive forces and the maturation of the socialist production relations. This comes down to very penetrating changes in the requirements and conditions for the intensification of agriculture.

In his concluding speech at the central conference with agricultural, forestry and foodstuffs industry personnel in Markkleeberg, Werner Felde made the point that we were facing the tasks "to help enforce further our party's economic strategy for the 1980's also in our socialist agriculture. It means

--combining still more closely the advantages of socialism with the scientific-technical revolution;

--significantly deepening production intensification;

--ensuring, mainly by means of science and technology, the needed increase in labor and lot productivity;

--ensuring a high degree of product utilization; and

--tapping performance reserves to an unprecedented extent.

The point is to ensure a considerable economic growth for 1983 and beyond through unchanged and, partly, lower funds."\*\*

So it has become more urgent than ever to explore the inevitability of agriculture's gradual transition to capital-saving reproduction as an element of the economy's transition to all-round and intensively expanded reproduction, and to

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\*Ibid., p 43.

\*\*"Highest Achievements from Every Acreage and Every Stable for the Karl-Marx-Year," NEUE DEUTSCHE BAUERNZEITUNG, No 4, 1983, p 3.

demonstrate the practical consequences in attaining effective performance growth while the resources situation changes greatly. The key issue for further intensification is a better soil utilization and fertility. To ensure public supplies in foodstuffs out of indigenous production and to supply industry with raw materials, we need a 15 to 20-percent higher crop production than in the 1976/80 period. To ensure indigenous fodder supplies calls for a long-range resolute implementation of the strategic task of more rapidly developing crop production than livestock production. That can only be done by improving the production structure and the use of the soil and using the available arable land still more effectively for further performance improvements by cutting back unjustified disparities in yields. The growth rate for crop production, which in the 1970's gave us an annual average of 0.2 decitons of grain units per hectare of farm acreage, must be raised significantly in the 1980's. Increasing yields for all varieties is the cardinal issue, the centerpiece of all our efforts. That also opens up the chance for expanded grain acreages and thus for increasing the fodder concentrate production. Indispensable for solving these tasks are a significant intensification of the use of pasture land and improving the grade of coarse fodder.

By increasing crop production on a priority basis, substituting for grain imports in the 1980's and ensuring a high supply level of its indigenous production, agriculture is making its most important contribution to further converting the entire economy to all-round intensively expanded reproduction.

For safeguarding the food supply situation, the economy finds its costs reduced by reduced grain imports. Since especially for grain the costs of indigenous production are lower than for imports--which is quite different with respect to imported protein foods--the cutbacks in grain imports help reduce social expenditures for the whole food production industry, which helps increase the national income of the economy.

This economic effect of intensively expanded reproduction, attainable in agriculture through further performance improvement, conforms with the law of time economy Marx formulated. It becomes apparent, however, only at the national economic scale.

In the branch reproduction process, and hence in the resource utilization in agriculture, in part there are even counter-trends because in agricultural enterprises the getting away from imports makes for higher operational costs. The total economic effect of grain import replacement is therefore not reflected in the branch-type agricultural reproduction process. This fact is of crucial importance for understanding the character of reproduction and the achievements of agriculture as a whole and in its LPG's, VEG's and cooperative facilities.

In the 1980's the labor-saving forms of reproduction are going to continue, its degree of efficacy having to increase, regarding the cutback in live labor, yet no labor becomes available for other economic branches, by that token. That is in line with the 10th party congress guideline that "for stable and effective agricultural production it is necessary not to let the manpower pool dwindle further."\* What we rather have to accomplish is to perceptibly reduce the in

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\*E. Honecker, "Bericht des Zentralkomitees der SED an den X. Parteitag der SED" (SED Central Committee Report to the 10th SED Congress), Dietz publishing house, Berlin, 1981, p 74.



part still very high overtime hours while keeping the labor capacity relatively stable, particularly in livestock production, reduce the labor deficit we have and thereby create better prerequisites for the full utilization of all natural and economic production conditions. That reconfirms that the boosting of labor productivity is one of the most effective factors for further deepening the whole agricultural intensification process and making the reproduction process more efficient. For that it is necessary at least to double the average annual growth rates. This high demand made on boosting labor productivity to grant primacy again in the intensification process to the yield and performance increases in crop and livestock production, is the crucial condition as well as the source for the productivity growth of live labor. A higher share of the growth in labor productivity also has to be achieved through perfecting scientific labor organization, the rigorous application of socialist industrial management and socialist competition. On the long run, however, it will more and more be up to the improvement of techniques and technology and the application of science and research data to become the main labor productivity source in agriculture.

The farm price reform decided on by the 10th SED Congress, and going into effect in 1984, among other things, expresses in adequate figures the socially necessary costs in agriculture including their antecedent, mainly industrial, costs. Close correlation especially among farm prices, dues and promotional funds will effectively stimulate the material incentives of the LPG's, VEG's and their cooperative facilities for increasing production further and reducing costs much more than before.

In the 1980's agriculture is facing the basic task to increase more rapidly the hectare yields for all cultures than the allocations per acreage, so that there is a cost reduction per production unit. In the allocations per acreage most enterprises have reached a level where the need and possibility have ripened objectively to achieve higher yields through reduced costs per unit of product through improved structuring and a more effective use, especially, of the qualitative intensification factors. It is economically impossible to allocate more while keeping the structure unchanged, nor is it objectively necessary. That is not primarily due to the fact that certain resources and funds are limited but is primarily due to the reproduction requirements at the current stage of embodied and live labor investment. Further intensification will lead, through rationalization, also to improving the development between production and one-time costs, and thus to a relative reduction of the one-time costs in important basic capital, especially in crop production, through extending its working life and through modernization. Great efforts have been undertaken in socialist agricultural enterprises to get also an absolute reduction in operational costs, especially in energy and certain metallurgical and chemical commodities.

With the given state of science and technology and the effectiveness of extant means of production, the chances to reduce costs absolutely are relatively small, yet they are far from being exhausted. Among the sources for cost reduction are

- enforcing territorial production organization,
- further deepening of cooperation for managing a streamlined crop and livestock production reproduction process,
- optimizing intra- and inter-plant transport, and
- perfecting the production structure.

To carry out a capital-saving intensification of agriculture we have to tap on a more long-range basis far more cost reduction sources by means of more rational techniques and improved technologies.

Higher crop production yields becoming the pivot and fulcrum of further agricultural intensification, especially great importance attaches to intensification measures that will improve soil fertility and humus enrichment, reduce and do away with structural damage, amelioration, counter the influence of environmental factors and shape the natural environment. That keeps capital-intensive reproduction processes in effect which are an essential and fundamental condition for making better use of the soil, so that the overall process can become more effective. Higher allocations per unit of acreage also become necessary to close mechanization gaps. One must, in the final analysis, not overlook that to ensure the high targets of crop production there is no reduction in the allocations of live labor per unit of acreage and that the costs for live labor keep rising due to the systematic income raises.

In connection with the changes in the foreign economy conditions, factors making for higher expenditures also affect agriculture for which we must compensate by improving the effectiveness of the overall process so that, despite such aggravating factors, the conversion to capital-saving reproduction forms gains in weight. The conversion of heat production plants to raw lignite, for instance, in order to save heating oil and diesel fuel, calls for investments and labor without there being any immediate production-increasing effects. This exclusively means holding production steady while the resources situation changes. All this affects the development of the basic assets quota.

The essence of intensification, as formulated by Marx, that economically we mean "by intensive culture none but the concentration of capital on one and the same acre instead of distributing it over juxtaposed acreages,"\* remains the expression of objective inevitabilities in intensively expanded agricultural reproduction even under the altered conditions and requirements. This inevitability is not being curtailed even when economic conditions for a certain period do not allow a further growth of necessary allocations for particular elements of the reproduction process. The remark by Marx that intensive reproduction amounts to a higher effectiveness of the means of production invested does, however, gain in importance. This is the point of departure for scientific-technical progress and its role in the intensification of the 1980's and for the economic strategy issued by the 10th SED Congress.

In livestock production likewise further steps in intensively expanded reproduction are necessary and possible. The main sources for further performance improvement are a better use of the animal stocks, a broad application of the scientific-technical progress, and a more effective use of all available resources such as the labor capacity, the livestock feed and the stables. Then one must also look at certain things that are different from crop production which significantly control the course and efficacy of the reproduction process in livestock production enterprises. The higher effect of the reproduction process must be

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\*Marx/Engels, "Werke," Vol 25, p 687.

achieved while the high production level attained must be ensured, a considerable part of the material-technical base be renewed, and the fodder requirements must be satisfied from our own production. That calls for still more effective structures of animal and fodder production and higher results in the fodder economy. Relations between animal stocks, feed production and livestock maintenance must be shaped in such a way that the territorial production conditions can be used optimally for the largest possible indigenous product throughout.

Next to the soil, livestock is the most important agricultural means of production. Effective livestock use is one of the crucial prerequisites for intensively expanded reproduction. This, after all, involves the use of a production potential of some M 15 billion. The focal point here lies on further improving livestock performance and on making better use of the livestock feed. In connection with that it is especially important to reduce animal losses and improve the fertility and breeding results. The object has to be to have the weight of the breeders increase more day by day and cut down their losses as much as possible and to achieve a longer life-span with extended life-time capacity, especially among the cows.

The process of intensively expanded reproduction is greatly controlled in livestock production by the reproduction of animal stocks and of the basic assets. Reconstruction and rationalization of the livestock production plants have turned out to be the main way to modernize the basic assets. Important effects have been achieved through making better use of the available stables. The object is the modernization of a considerable part of the stables to improve the totality of production and working conditions for the cooperative farmers and workers as well as the maintenance conditions for the animals. That pertains to animal maintenance and care, the fodder economy, the boosting of labor productivity and, mainly, to greatly reducing the still high proportion of heavy physical work. Whereas in the 1970's we still had a circa 40 percent proportion of newly built cattle and pig sties, in the 1980's, due to the consistent implementation of the economic strategy and the significant increase of the rationalization portion in investments, it will come to only 10 percent for the cattle and to 8 percent for the pigs.

Proceeding from the state of mechanization attained, our economic possibilities and the requirements for further improving working and living conditions, the emphasis in further mechanization is placed on reducing manual labor. Greater savings in working hours, with less expense for the release of labor, are achieved thereby in the foreseeable future than by exclusively replacing the prevailing equipment. By eliminating manual labor the prevailing gaps in filling the needed labor requirements can then be closed more rapidly. That is a condition for improving the intensity of animal care and becomes thus an essential condition for higher animal performance, better fodder utilization and reduced animal losses. Compared with that, the replacement of available equipment normally means reduced economic effects. An inadequate scientific-technical lead often is responsible for that the prevailing mechanization solutions cannot be replaced by more efficient ones and that then also no better economic results are attainable.

Rationalization in livestock production is an essential element in further molding the material-technical base in agriculture. That of necessity remains tied, however, to capital-intensive processes. The reason for that is that the modernization of a large number of stables and the elevation of the technological level makes things more expensive yet production in most cases cannot be increased at an equivalent rate or live labor cannot be reduced at such a rate. Furthermore, available basic assets in livestock production are often underassessed and the financial outlays for rationalization are usually in excess of what the material performance per stable unit amounts to. In spite of all that, reconstruction is necessary to ensure a higher labor productivity growth rate in livestock production for the 1980's and 1990's and create the kind of conditions for the animal breeders that will at least come close to the public requirements issued for working conditions. From that it follows that also in the 1980's the basic assets in livestock production will increase faster than production, which means that basic assets allocations will increase faster than labor productivity. Reversing this ratio is possible only step by step and is feasible only if we succeed in translating scientific-technical innovator processes into more efficient technologies than the ones we now use. In this connection, at present the agricultural enterprises in their basic assets reproduction are now confronted with the fact that the expenses for substituting embodied for live labor continue to be higher than what can be saved by cutbacks in live labor. This is bound to lead to higher operational expenses in livestock production. Scientific-technical progress must here be brought to bear on higher animal performance with better fodder utilization and reduced maintenance expenditures for live labor.

In the process of the intensively expanded reproduction in agriculture it becomes necessary to make simple reproduction per se a source of accumulation through a higher economy in the use of all resources, especially the basic assets. That largely is a demand made on the consistent enforcement of socialist industrial management and also a demand on scientific-technical progress, on means of production with a higher qualitative effectiveness. Even during development and designing we must resolutely apply the yardstick that the use of the means of production and the application of corresponding projects bring in a much higher benefit, through good economic management in agriculture, than it costs agriculture to operate them. This basic principle is in effect only to some extent at present. Connected with that is that the improvement in the cost/benefit ratio must result in positive effects for industry and agriculture alike.

Utilizing effects of accumulation already during the simple reproduction process raises complicated problems. That is all the more so because through the farm price reform the prices for the means of production go up but the basic assets have to be assessed at their old prices.

Through the strategy of deepened intensification a decisive step is taken in the 1980's to increasing economic results in agriculture of each individual resource invested.

Thus far the agricultural reproduction process was marked by higher acreage productivity and labor-saving and capital-intensive processes. In the 1980's and 1990's higher acreage productivity will gain still more importance as the outstanding criterion of the agricultural reproduction process. Labor-saving reproduction processes will also continue, and their effectiveness also must be

enhanced. New is that these reproduction forms and criteria, which have been in effect for some time, are supplemented by capital-saving reproduction, whereby the intensification process reaches a qualitatively new level. Ultimately that means an improvement in the ratio between the outcome and the total resource investment relating to the soil, the labor, the animal stocks, most of the material and especially the energy and even to a considerable portion of the basic assets. Capital-intensive processes become less important yet remain in effect as an objective condition for expanded reproduction. The character and dynamics of the agricultural reproduction process are going to change noticeably in the direction toward capital-saving growth, yet the various forms of reproduction will remain side by side for quite some time to come. That indicates how complicated the shaping of the reproduction process is and how diverse the conditions are that have to be noted in shaping it according to plan. That is of great significance from the vantage point of reproduction theory as well as for determining the emphases and further steps in intensification. To those requirements also must be adapted the perfection of management, planning and economic stimulation in agriculture so that all activities be directed at spreading the creative initiatives of the cooperative farmers and workers, the broad application of scientific-technical progress and increasingly better ensuring the complex effect of all intensification factors so that resource-saving growth is brought to realization in agriculture as the predominant form of reproduction.

5885

CSO: 2300/9

ECONOMIC TALKS HELD WITH FINLAND

Budapest NEPSZABADSAG in Hungarian 9 Sep 83 p 5

[Article--no author given: "Economic Negotiations with Finland"]

[Text] The Hungarian-Finnish mixed committees on trade and industrial management, and on technological-scientific cooperation held this year's sessions in Helsinki between 5 and 7 September.

Trade between the two countries increased also in 1982. According to the mixed committee's findings credit for this is due to the fact that the effects of the unfavorable outside economic environment were counteracted by the agreement between the two countries about eliminating customs duties and other obstacles to trade, and that there are no unsolved trade policy problems in the relationships with each other. At the same time it is unfavorable that the bulk of the trade is composed of goods such as lumber, steel, and paper industrial products, which are especially sensitive to market changes. The mixed committee alerted the Hungarian and Finnish enterprises to expand the circle of merchandise they trade.

It was suggested in the discussions that the Finnish enterprises should join in the health spa hotel construction program in Hungary. There have also been negotiations about Hungarian and Finnish enterprises jointly supplying energy management, agricultural and other complete technological equipment, mainly to the developing countries.

The mixed committee has established regulations for coordinating the financial and other conditions of third market cooperation. On Finnish initiative the mixed committee discussed ways of modernizing the Hungarian-Finnish payment system in the future.

8584

CSO: 2500/454

## NEED TO COORDINATE CEMA TECHNOLOGY TRANSFER EMPHASIZED

Warsaw PRZEGLAD TECHNICZNY in Polish No 30, 24 Jul 83 p 33

[Discussion article by Hubert A. Janiszewski: "On the Need To Coordinate CEMA Technology Transfer"]

[Text] A lot has been properly written, particularly during the past decade, about the transfer of technology, including Poland's "licensing policy." However, all this seems to be still insufficient. Neither those who make the decisions nor the administration have taken a stand on the discussion in the press, and that is a pity, since both these links are ultimately responsible for this aspect [of technology].

I understand perfectly well that we are facing perhaps more urgent problems of both an economic as well as political nature that call for an immediate and daily decision. However, I am continuously troubled by the \$13 billion<sup>1</sup> that have been invested during 1971-80.

I would like to take this opportunity to remind our respectable reader that this amount represents 50 percent of our foreign indebtedness for the end of 1981. Moreover, the estimates accepted by the whole world point out that for every dollar invested in technology, the average yearly yield is \$10 during the entire period this technology is in use. Therefore, our investments ought to bring us about \$130 billion in yearly production! That translates into about 1,040 billion zlotys in the market production, according to the official dollar exchange rate for zlotys.

Our observation of the rather modest market supply flow, especially in all kinds of consumer goods, and of the export results of our foreign trade, poses a justified question as to the whereabouts of all this production.

We all know perfectly well that it is necessary drastically to reduce imports, to impose some sanctions, etc. Anyway, this topic deserves a separate article. I would like to draw the attention of the readers and those who have the power of decision at the various levels to the magnitude of the problem of unused invested technological potential and to the lack of an effective and long-term licensing policy. I am not the only person, nor am I the

first one, who is expressing his views in this matter. A PRZEGLAD TECHNICZNY interview with Dr Monkiewicz<sup>2</sup> is one of the latest voices on that matter, especially because Dr Monkiewicz is absolutely right in stating that "we have absolutely no clue on how to conduct the licensing policy and somehow nobody is eager to become informed about it."<sup>3</sup>

It is worthwhile to mention here the statement made to PRZEGLAD TECHNICZNY by the Sejm deputy and commission member, Prof M. Lubinski (No 12, 1983 p 10) concerning the law presently in preparation on the mechanisms of technological imports.

The works of this Sejm commission certainly demand our close attention and call for specific responses, in order to obtain the law which in the long run would take care of the problem and which would bring new elements into the life of our economy, rather than merely trying to correct certain sections of some glaring past irregularities (not even the most important ones) without making an attempt to reach to the core of the problem. After all, we ought to demand such an outcome from our Sejm representatives and laws.

To conclude my introductory remarks, I may state that we have not, nor are we going to have, in the near future, any licensing policy. That lack presents a great damage to our national economy and to the average citizen.

I shall concentrate now on another aspect of technology transfer-related policy, which is the CEMA technology purchase coordination possibilities.

I would like to stress clearly here that I do not use the word "coordination" in its traditional sense, as, for instance, when Poland imports the technology to manufacture product X, while, for instance, Czechoslovakia imports the technology to manufacture product Y, in order to cover together the market demand for product XY, which is manufactured from both X and Y products. Nor do I mean by the word "coordination" a regular exchange of information concerning the planned license purchases. Such coordination does exist within the CEMA framework and brings defined advantages. I am concerned with something different, namely, with the utilization of CEMA's integrated character to realize the aims and the assumptions of the technology transfer policy. I was persuaded to undertake this topic by the data and information concerning contractual limitations practiced by the technology suppliers which have been observed, for instance, in Poland.<sup>4</sup>

As a result of our information we know that, for instance, 80 percent of finalized contracts had export limitations, while the right to grant sub-licenses was guaranteed only in 57 percent of the contracts, and, in turn, the guarantee to use the product's brand name was given only in 36 percent of the agreements, etc.

The data presented above admit the conclusion that similar contract conditions exist in the agreements between the other CEMA countries, and thus that the technology suppliers are in a position to secure their own favorable conditions, at the same time limiting the receivers' full technology-use possibilities for the licenses obtained by the CEMA countries' enterprises.



Unfortunately, no complete data exist with respect to the size of technology import in the CEMA countries, or, even more so, with respect to the conditions of this import. It would be to the benefit of all the interested countries to have the CEMA Secretariat initiate and conduct exhaustive research. Until such broad and in-depth research has appeared, we must limit ourselves to the use of the incomplete sketchy and estimate data.

The accessible information permits us, however, to draw at least two conclusions: first, the CEMA member-countries' technology import conditions are disadvantageous; second, the CEMA countries receiving these technologies do not make use of the integrated character of this economic community.

When we take a look at other economic-integration communities, for instance, at the EEC or the Andean Group (Venezuela, Colombia, Ecuador, Peru and Bolivia), we observe that they have introduced definite instruments to, among other things, improve the technology transfer conditions, and to strengthen the bidding position of the importers of technology.

Naturally, it would be difficult to transfer to CEMA the solutions used by those countries; nonetheless, the introduction of "Principles for technology import by CEMA member-countries' enterprises," for instance, seems to be both advisable and profitable.

Such "principles" could, above all, define the range of their use (for instance, in different kinds of licensing agreements, service and advisory agreements, agreements to supply finished objects, etc.) and the framework conditions, which, in essence, would lead to the elimination of the most common and cumbersome contractual restrictions.

As an example, the "principles" could anticipate that the receiver of technology would have the right to export the goods produced as a result of this technology to all the CEMA member (and affiliate) countries; that he would have the right to grant refinement [privileges] for the entire CEMA area, and that after the expiration of the agreement he would be entitled to continue to use this technology without additional payment, etc.

The framework of these "principles" would permit us to take a critical look at such contractual decisions as the necessity for concurrent import of raw materials, components, etc., at other decisions which might have a negative influence on the economies of individual CEMA countries and of CEMA as a whole. Finally, those importing the CEMA members' technology could begin to utilize their bidding position as the manufacturing enterprises for the entire CEMA market, which represents a good 360 million potential consumers.

The considerations and remarks made above are, naturally, of an introductory nature. They serve to initiate a discussion about the purpose and possibilities of introducing certain framework principles, which would facilitate production increases for the potential importers of technologies, and, in so doing, they would also lower the production costs.

Unfortunately, some time will lapse, for sure, before the proposals presented here will become the subject of attention and action. However, this fact should not stand in the way of undertaking a discussion at present.

[NOTES]

1. See "Technology Transfer: Its Status and Prospects," in PRZEGLAD TECHNICZNY 7/83.
2. "One Must Know One's Stand," PRZEGLAD TECHNICZNY 5/83.
3. Ibid.
4. See "Technology Transfer: Its Status and Prospects," PRZEGLAD TECHNICZNY 7/83.
5. See "Technical Thought Transfer From the Socialist Countries," by J. Maciejewicz and J. Monkiewicz, in SPRAWY MIĘDZYKRAJOWE No 11/82.

9934

CSO: 2600/1324

POLAND

BRIEFS

SHIPPING STATISTICS--During the first 7 months of this year, the Polish Ocean Lines fleet transported 72,334 containers with 783,000 tons of goods. This is 20 percent more than for the same period last year and represents 25 percent of all freight shipped by the Gdynia Shipping Company. [Text] [LD200344  
Warsaw PAP Maritime Press Service in Polish 1200 GMT 19 Sep 83]

CSO: 2600/3

## YUGOSLAV TRADE WITH SOCIALIST COUNTRIES FIRST HALF OF 1983

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 8 Sep 83 p 7

[Article by Anda Petrovic]

[Text] The share of exports to the socialist countries in Yugoslavia's total foreign trade has decreased by almost 7 percent, and the share of imports has increased by close to 7 percent. There are fewer exports to the Soviet Union, while imports from that country are greater than last year. The balance of trade has improved with countries which use convertible currencies. Imports are 7 percent better balanced by exports than the first half of last year.

Yugoslavia's trade with the socialist countries (this group is comprised of all the countries which are members of the CEMA except Cuba and Vietnam, plus China and Albania) shows more positive tendencies this year. These are the lessening of the difference between exports and imports, as well as changes in the share of these countries in Yugoslavia's total foreign trade. Therefore, in the first half of 1983, exports worth \$2.138 billion represented 46.1 percent of the total, while those from the first half of last year amounted to \$2.505 billion, which comprised 52.9 percent of total exports. Imports were 14.7 percent less than the same time last year.

Imports moved in the opposite direction: this year they amounted to \$2.217 billion or 39 percent of Yugoslavia's total, which is visibly more than last year's, which amounted to \$2.043 billion with a share of 32.2 percent of total imports. This is an increase, therefore, of 8.5 percent. These changes in both imports and exports have resulted in a deficit of \$79 million instead of last year's rather large surplus, which in its own way was unsuitable for our partners. There is a clear difference, consequently, in the level of imports covered by exports. In the first half of last year, this amounted to 122.2 and this year to 94.6 percent.

This general data, of course, must be broken down for each country and region in order to obtain a clearer picture of the trade with the entire group of socialist countries under consideration.

The Soviet Union occupies first place among the group of countries, where trade is regulated by clearing house. In the first half of this year, \$1.285 billion worth of goods were exported to the USSR as opposed to last year's figure of \$1.770 billion. Imports amounted to \$1.324 billion this year as compared to \$1.185 billion last year. Last year's surplus of \$585 million, therefore, has been "eased" and transformed into a deficit of \$39 million. The ability to cover imports with 149.3, consequently, has been brought into the more positive, although not ideal, framework of 97 percent.

Czechoslovakia, according to volume of trade, is the second partner in this group. The mid-year's exports to it have reached \$303 million, while last year's amounted to \$222. Imports have also grown to \$295 million, while those of the first half of last year amounted to \$262 million. Instead of last year's deficit of \$40 million, this year is marked by a surplus of \$8 million. The percentage of imports covered by exports, therefore, amounts to 102.7 percent. This is considerably better than last year when that figure was only 84.7 percent.

Trade with the GDR in the first half of this year was smaller than last year: Yugoslav exports amounted to \$166 million as opposed to last year's \$177 million. This year's imports reached \$185 million. Last year's figure was \$199 million. Consequently, the same balance has been maintained: last year's balance was 88.9 percent and this year's 89.7 percent.

The fourth country in this group is Albania, to which \$20 million worth of goods have been exported this year. In the first half of last year that figure was \$30 million. Imports are greater--this year they are \$28 million, and \$37 million last year. The deficit has also remained similar: this year it is \$8 and last year it was \$7 million. This year's balance is 71.4 percent instead of last year's 81 percent. This is the worse balance of trade with the socialist countries.

The total amount of clearing house exports in the first half of this year amounts to \$1.774, the figure for imports \$1.832 million for a deficit of \$58 million. This translates into a 96.8 percent balance of trade (last year's firsthalf figure was 130.6 percent).

In the convertible currency group of countries trade is largest with Poland, and is considerably greater than last year. Exports have reached \$131 million which is 54.1 percent more than last year. Imports are \$148 million or 66.2 percent greater than last year's. This means a significantly larger deficit of \$17 million and a weaker balance of trade of 88.5 percent instead of last year's 95.5 percent. Trade with Hungary was also more successful, since \$130 million worth of goods were exported as opposed to \$107 million last year. This year's imports totalling \$127 million sufficiently surpassed last year's figure of \$108 million. This means, however, that the balance of trade has dipped to 73.6 percent from 79.3 percent for the first half of last year.

Exports to Bulgaria are somewhat greater than last year, amounting to \$45 million (last year's figure was \$39 million). Imports amount to \$43 million, while for the first half of last year they were \$82 million. Instead of a

large deficit of \$43 million, consequently, there is a small surplus of \$2 million, and the balance of trade is 104.6 percent instead of last year's 47.5 percent.

Exports to the group using convertible currency accounts show a growth this year of 21.6 percent, while imports show one of 6.6 percent. It follows from this that the overall balance of trade amounts to 92.8 percent instead of last year's 82.1 percent. However, trade with this group of countries is below the level satisfactory especially for Romania and Bulgaria. While Yugoslav exports have been increased from 6 percent last year to 7 percent this year and imports from 5.4 percent to 6.5 percent, it is not sufficient to meet the needs and possibilities. Every year these figures claim and verify only that the realization of these barely follow behind them.

This year's trade with China has demonstrated that the many difficulties, which arose last year when trade possibilities were widely expanded, have not yet been overcome. Except for some ships, there have been few exports in the last 2 to 3 years and even fewer imports from China: in the first half of this year exports to China amounted to \$14 million, last year the figure was \$18 million, while imports amounted to \$11 million and \$10 million respectively. This disharmony in respect to volume is not suitable and proves that we are still quite far from fulfilling plans and even farther from the hopes of a few years ago. There were new developments in other regions of economic cooperation, beyond trade, but this is another theme.

A considerable growth in trade with Mongolia for 1983 was anticipated by a protocol signed with that country, but did not materialize in the first half of this year: exports remained at \$2 million, like last year, and imports grew to \$3 million. It remains to be seen whether this will be supplemented in the second half of the year.

This data for the last 6 months will certainly be changed over the course of July and August and relations will probably be somewhat more positive. However, mid-year movements are always a sign of whether foreign trade from the beginning is in the position to meet goals and obligations. Trade with the socialist countries could have been better in the first half of this year.

12217  
CSO: 2800/480

- END -