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USSR Report

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PLANNING AND PLAN IMPLEMENTATION

ECONOMIST REVIEWS 1985 RSFSR PLAN TARGETS

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 85 pp 55-63

[Article by N. Zenchenko, candidate of economic sciences: "Questions of Improving the Verification of the Fulfillment of Plans for Economic and Social Development"]

[Text] The state plan for economic and social development for 1985 is an important stage in the implementation of the decisions of the 26th Party Congress and subsequent plenums of the CPSU Central Committee. It is directed toward consolidating and developing the positive tendencies in the economy, strengthening intensification, raising the technical level of production, in always improving product quality, utilizing reserves more completely and achieving greater smoothness in the operation of all branches of the national economy.

The constant growth of the scope of production and the volumes of capital construction and the complication of the interconnections among ministries, departments, associations and enterprises during the course of the fulfillment of plans for economic and social development require constant coordination of their activity. This work of Soviet, economic and planning agencies is of immense significance. In the RSFSR, for example, the plan for economic and social development includes assignments for 25,800 associations and enterprises, 24,200 kolkhozes and sovkhozes, 15,400 construction organizations, and tens of thousands of enterprises of transportation, trade and consumer services as well as institutions in the nonindustrial sphere.

In the plan for economic and social development in 1985 the growth rates for a number of general economic indicators have been set somewhat higher than the average annual rates achieved during preceding years of the five-year plan, which makes it possible to fulfill assignments for that year which were envisioned in the five-year plan or to come as close as possible to this. The growth of the national income will amount to 4 percent. The implementation of measures in the area of scientific and technical progress and the increase in labor productivity should survive for 95 percent of the increase in industrial output and all of the increase in the gross output from agriculture and in construction and installation work.

The volume of industrial production has increased by 3.8 percent as compared to 1984. The plan envisions further development of the fuel and energy complex and improvement of its structure, mainly through increasing the output of electric energy at atomic electric power stations and hydroelectric stations as well as the extraction of natural gas. The production of electric energy will amount to 960 billion kilowatt-hours and will increase by 2.9 percent as compared to 1984. This will provide for an increase in energy consumption and industry of 4.2 percent, agriculture--7.4 percent, transportation--5.2 percent, and construction--1.7 percent.

The extraction of petroleum, including gas condensate, will amount to 575.5 billion tons, and gas--450 billion cubic meters, which is more than envisioned by the five-year plan. It is intended to extract 397 million tons of coal. The production of prepared rolled ferrous metals will amount to 62 million tons and there will be an increase in the production of aluminum, nickel, zinc and magnesium.

There will be further development of the chemical and petrochemical industry. Thus the production of mineral fertilizers will amount to 18.1 million tons (translated into 100 percent nutritive substances) and will increase by 16 percent as compared to 1984.

The output of machine building and metal-processing products will increase by 6.7 percent. Energy, heavy and transport machine building will develop at accelerated rates. There will be a considerable increase in the production of manipulators and robots.

The assignments for the development of the RSFSR agroindustrial complex have been developed on the basis of the decisions of the May (1982) Plenum of the CPSU Central Committee and the RSFSR Food Program. The gross agricultural output in all categories of farms will amount to 65.8 billion rubles, with a 15 percent increase as compared to the average annual level under the 10th Five-Year Plan. The assignment for grain production was set at the level of the five-year plan.

Here a decisive factor in further advancing agriculture and the proportionality of its development, as was noted at the October (1984) Plenum of the CPSU Central Committee, is land reclamation.

In keeping with the Food Program there will be further development of branches that process agricultural raw material. It is planned to produce 4.6 million tons of meat, 16.8 million tons of whole milk products, and 655,000 tons of animal fat. At enterprises of the food industry it will be necessary to increase the output of granulated sugar from sugar beets by 15 percent as compared to last year, margarine products--by 11,000 tons, and confectionery items--by 52,000 tons. The production of fruit and vegetable preserves will amount to more than 2.7 billion cans.

In the plan a good deal of attention is devoted to the development of capital construction. The overall volume of state capital investments will amount to 29.8 million rubles. Measures have been earmarked which are directed toward increasing their effectiveness, concentrating funds mainly on urgent and

startup construction projects, accelerating the startup of production capacities at construction sites that have already been started and reducing the number of projects under construction at the same time. Special significance is attached to expanding the volumes of work for technical reequipment and reconstruction of enterprises. More than 30 percent of the overall limit on capital investments intended for production construction will be used for these purposes. This exceeds the assignment of the five-year plan.

In keeping with the tasks set by the 26th CPSU Congress and subsequent plenums of the CPSU Central Committee, there will be further improvement of the material well-being and the standard of living of the people. The real per capita incomes will increase by 3.6 percent in 1985 as compared to the 3 percent achieved last year. The average monthly earnings of workers and employees will increase to 200 rubles and the wages of kolkhoz workers--to 161 rubles a month. Payments and benefits from public consumption funds will increase by 4.1 percent and will amount to 84.6 billion rubles or 590.2 rubles per capita.

Retail commodity turnover in state and cooperative trade is planned in a volume of 186 billion rubles, which is 5.6 percent more than in 1984. The sale of products from internal production at public catering enterprises will increase by 2.2 percent.

In keeping with the comprehensive program that has been drawn up, the development of the production of consumer goods and the system of services for the population even in 1985 will provide for accelerated development of all branches and units of the economy engaged in the production of goods and services for the population and the technical resupply of these enterprises. All ministries and departments, associations and enterprises should be involved in carrying out this important task.

This year's plan earmarks measures for further development of housing construction, public health, public education, the training of skilled laborers and specialists with higher and secondary specialized education for the national economy, and expansion of the network of cultural institutions and other branches of the social sphere.

The fulfillment of the responsible assignments of the 1985 plan requires improvement of management and planning of the national economy at all levels.

New goals have been earmarked for effective utilization of the powerful production and scientific-technical potential, and it is necessary to keep these parts of the work under constant observation. A great deal of attention should be devoted to conducting the large-scale economic experiment. Since 1 January 1985 on the territory of the RSFSR under the new conditions, along with the Ministry of Heavy Machine Building and the Ministry of the Electric Equipment Industry, associations and enterprises of eight other union ministries will be operating under the new conditions, and also all enterprises of the RSFSR Ministry of Fishing, more than 230 associations and enterprises of the RSFSR Ministry of Local Industry which are located in 13 autonomous republics, krays and oblasts, and other consumer service

enterprises that are directly under the jurisdiction of the RSFSR Ministry of Consumer Services, and also 26 of its territorial administrative agencies.

Comprehensive mechanization, automation, chemization, electrification and biologization of production, the creation on the basis of these highly effective progressive technical equipment and technologies, the deepening of specialization, combination and cooperation, and the changeover to automated systems for control of production are becoming most important factors in the intensification of public production.

A special role is being assigned to reconstruction, technical reequipment and modernization of enterprises with a stabilization and reduction of the number of industrial production personnel on the basis of a constant increase in labor productivity.

It is necessary to take a strict approach to the determination of limits on the number of workers and employees and to accelerate the certification of work stations. An analysis shows that the possibilities created by the new conditions of management are far from being fully utilized. Therefore it is necessary to have an active restructuring of economic work and improvement of the style and methods of management.

The organization of the fulfillment of the plans means daily economic and administrative, mass-political, propaganda and scientific activity on the part of state, party and social organizations. In this work a special role belongs to planning agencies which attentively check on the work of the enterprises, associations and branches. In conjunction with party and soviet management agencies they systematically study the course of the fulfillment of the plans so as to prevent interruptions in the work, to search out resources for overfulfillment of the plan, and to disseminate the experience of the leading collectives, brigades and individual workers.

The plans for the economic and social development in 1985 has increased the attention paid to economizing on raw material, fuel-energy and processed material resources as a most important condition for increasing the volumes and effectiveness of production and balancing the needs of the national economy with the available resources. In a speech at the Politburo of the CPSU Central Committee in connection with the consideration of the plan for economic and social development for 1985, Comrade K. U. Chernenko noted: "Being a thrifty master and striving to achieve the greatest savings--this is the primary task. I wish to say that the approach to the economy should now be principally different. For how was it previously? Savings were regarded merely as some kind of addition to the constantly growing and, seemingly, inexhaustible resources. Now the situation has essentially changed and we must not count on a continuous increase in resources. In our day it is precisely savings that are becoming the most important source for providing for increased production."[1]

The proportion of materials in the social product now exceeds 62 percent (not including amortization). If one adds to this fuel, energy and expenditures on auxiliary materials, the proportion is even greater.

In their socialist commitments for 1984 enterprises of the RSFSR envisioned saving 1.6 million tons of rolled ferrous metals, 10 billion kilowatt-hours of electric power, 20 million gigacalories of thermal energy, 2 million tons of engine fuel and 1.6 million tons of cement, and they also envisioned utilizing more extensively secondary material and fuel-energy resources. A large part of these commitments have been successfully fulfilled. The party's appeal to economize on fuel and raw material resources was actively supported by the labor collectives of Moscow, Leningrad, the Ural area and other regions of the republic.

This year it is intended to save more than 200,000 tons of rolled ferrous metals, 4 million tons of standard fuel, and 330,000 tons of cement in excess of the established assignments.

In order to balance the national economy's need for fuel difficult assignments have been set for economizing and reducing the consumption of engine fuel and electric energy. Special attention has been devoted to economizing on engine fuel. To these ends they shall continue to introduce diesel engines into the automotive fleet and to change automobiles over to compressed and liquefied gas. For boiler furnace fuel the savings will reach 4.55 percent, gasoline and diesel fuel--no less than 9 percent, electric energy--9 percent (through an average reduction of norms) and 1.5 percent from additional savings, and thermal fuel--6 percent. This fully corresponds to the instructions of Comrade K. U. Chernenko at the meeting of the Politburo of the CPSU Central Committee concerning the fact that in 1985 almost 60 percent of the additional need of the national economy for fuel-energy resources and rolled ferrous metals should be satisfied through economizing on them.

The calculations of the plan also envision considerable amounts of additional savings on material resources through increased labor organization and effective management. Fulfillment of the difficult assignments and stricter conditions for economy will make it possible to produce an additional 100 million rubles' worth of products from the material and fuel-energy resources that have been saved.

The industrial enterprises of the republic are conducting a large amount of work to produce products from the raw material that is saved. Thus the RSFSR Ministry of Local Industry is to produce from the resources that have been saved consumer goods worth a total of 25 million rubles, the RSFSR Goskomsel'khoztekhnika--13.9 million rubles' worth of agricultural machines and mechanisms, and the RSFSR Ministry of the Fuel Industry--3 million rubles' worth of consumer goods.

Enterprises of the RSFSR Ministry of Housing and Municipal Services will produce 420,000 gigacalories of thermal energy for the needs of industry and the population, and the savings on electric energy will make it possible to put 58 million cubic meters of water into the network, which is sufficient for the annual consumption of water of such a large city as Khabarovsk.

Saving 45 million kilowatt-hours of electric energy in the system of the RSFSR Ministry of Water Management will provide for the annual expenditure on land

reclamation in all of Maritime Kray or the operation of the irrigation system of Astrakhan Oblast during one summer month.

The ministries and departments of the Russian Federation are taking measures to carry out high-quality development and implementation by each association, enterprise and organization of the clear-cut plan for economizing on raw and processed material resources.

Another peculiarity of the plan for material and technical supply is the enlistment in production and construction of all above-normative residuals of materials and equipment. But, as an analysis showed, in a number of ministries they are not only not being reduced, but are even increasing, particularly at enterprises of the RSFSR Ministry of Local Industries, RSFSR Ministry of Consumer Services, RSFSR Ministry of Agriculture and the RSFSR Goskomsel'khoztekhnika.

The report figures and the materials from an analysis of the work of a number of production associations and enterprises show that in industry there are considerable unutilized reserves for increasing the effectiveness of production through improving the organization of production and labor and adhering to stricter conditions for economy in the expenditure of material and monetary funds.

Despite the measures that are being taken in the system of the RSFSR Goskomsel'khoztekhnika, for example, there has been no radical improvement in the work in the area of norm-setting and economizing on material and fuel-energy resources. Organizational-methodological guidance, coordination and control over the condition of this work are carried out poorly, and there is not enough of an increase in the mobilizing role of norms and normatives in the planning and economic activity of enterprises under their jurisdiction. They are inadmissibly slow in solving problems of improving the development and approval of a departmental system of norms and normatives and also expanding the list of material resources and consumers for whom assigments have been set for economizing and reducing the norms for the expenditure of resources. Moreover, when establishing the assignments for economizing they do not always take into account the existing reserves for reducing the expenditure of raw materials, processed materials, fuel and energy, and continue as before the practice of increasing the planned norm for the consumption of resources as compared to the results achieved during the preceding period. For example in 1983 at enterprises of the Goskomsel'khoztekhnika as a whole the actual expenditure of rolled ferrous metals for manufacturing the ZKKSh-6 tractor rollers amounted to 594.8 kilograms per unit. For 1984 the planned norm was not adjusted and was set in the amount of 671.69 kilograms per unit, and for the seed-cleaning cucumber machine--334.36 kilograms per unit (in 1983--325 kilograms per unit). In the Buryatavtoremont Production Association the norm for the expenditure of rolled ferrous metals for producing 2 PTS-4 1 trailers was increased as compared to the actual level for 1982 by 2.8 percent, and the demand--by 73 tons. There was also an overexpenditure of raw materials, processed materials and purchased items in an amount of 1,257,000 rubles (57.4 percent of the amount of the allowable losses).

Certain enterprises do not sufficiently take advantage of the possibilities and reserve for reducing expenditures and the material-intensiveness of products through introducing resource-saving technologies and reducing technological wastes and losses of metals. In the manufacture of products of chemical and petroleum machine building about 50 percent of the rolled ferrous metals go to wastes and shavings, and in machine tool and instrument items--33 percent. All this has a negative effect on the overall indicators of economizing on metal. During 9 months of 1984, with an assignment for reducing the norms of expenditure of rolled ferrous metals by 4.6 percent, the fulfillment amounted to only 4.07 percent.

Certain plants are not providing for the fulfillment of the assignments for economizing on fuel and energy resources, and a considerable proportion of the enterprises, while fulfilling assignments, do not manage to overfulfill them. In 1983 these included 33.5 percent of the enterprises, in the first quarter of 1984--51.9 percent, and in the third quarter--46.9 percent. There is an overexpenditure of boiler furnace fuel for individual kinds of products. Thus during 9 months of 1984 an excess amount of about 500 tons of standard fuel were expended on casting iron.

The RSFSR Goskomsel'khoztekhnika and the associations and enterprises under its jurisdiction are not properly solving organizational and methodological problems related to the introduction of the normative method of accounting for expenditures on the production of products and calculating the production cost, and also material incentives for fulfillment of assignments for economizing on the norms for the expenditure of material resources.

The republic is doing a large amount of work for expanding the utilization of secondary raw material. Experience has been accumulated in this area and certain results have been achieved. Thus during 9 months of last year we procured 1,191,000 tons of scraps, 219,000 tons of secondary textile materials, 29,000 tons of secondary polymer raw material, 104,000 tons of worn-out tires and 234,000 tons of broken glass. The plan for 1985 earmarks considerably expanding the salvaging of secondary raw material, particularly worn-out tires, phosphogypsum, ash and ash-slag wastes from thermoelectric power stations, broken glass, waste paper and other kinds of secondary raw material. The implementation of these measures is producing a great effect. For example, the volumes of utilization of secondary raw material envisioned by the plan are making it possible in the USSR as a whole to increase the savings on primary raw material by about 500 million rubles as compared to 1984, and as a result of the utilization of secondary raw material in 1985 we shall save a total of 12.6 billion rubles' worth of primary raw material. It is necessary for the managers of ministries and departments to pay more attention to expanding existing and creating new production capacities for processing secondary raw material and providing the proper control over the course of the fulfillment of planning assignments.

The difficult assignments for economizing on fuel and material resources and also for extensively utilizing secondary raw material can be carried out only with strict observance of the expenditure norms. Each enterprise should develop a clear-cut plan of practical actions and establish the supervision of their implementation.

The struggle for economy should encompass all branches and spheres of the national economy, including consumer services. The initiative of the leading production collectives to create at each enterprise in the oblast, kray and republic a fund of above-plan savings and to work for 2 days during the year using the processed materials, raw material and fuel that have been saved is finding broad support throughout our country. The money from the fund will be used for social needs, primarily for improving the medical service for the population.

In the practice of planning economic and social development the organization of the fulfillment of long-range and current plans is a most important task of management and planning agencies.

At the All-Union Conference of People's Controllers a great deal of attention was devoted to the organization of checking on the implementation of economic decisions. Speaking at this conference, General Secretary of the CPSU Central Committee K. U. Chernenko noted: "We have entered a period when life is forcefully placing new and greater demands on the quality of the work of all units that form the system of management of our society."[2] Under these conditions it becomes more important to check on and analyze the fulfillment of the plan. K. U. Chernenko went on to say: "A significant if not the predominant part of your activity, comrades, is related to problems of the economy and concerns for increasing its effectiveness. And this is natural. The sphere of the economy is the key one for us."[3]

Checking on the fulfillment of plans is inseparably connected to the principle of criticism and self-criticism for shortcomings in work in order to eliminate them as rapidly as possibly.

Even during the first years of the establishment of the Soviet state V. I. Lenin oriented planning agencies toward considering questions of the national economic plan in inseparable connection with the practice and development of the country's economy. In the article entitled "On the Unified Economic Plan" V. I. Lenin wrote: "...It is necessary for economists, literary men and statisticians not to babble about the plan in general, but to study in detail the fulfillment of our plans, our mistakes in practical matters, and ways of correcting these mistakes. Without such a study we are blind.... An efficient economist, instead of spouting meaningless ideas, will begin to study the facts, figures and data, analyze our own practical experience and say: the mistake is there and it must be corrected thus. An efficient administrator, on the basis of such a study, suggests, or carries out himself a movement of individuals, a change in the reports, a restructuring of the staff and so forth."[4]

A well-organized inspection helps to provide on-the-spot management of the fulfillment of the plan, to conduct economic maneuvering, to promptly reveal shortcomings in the implementation of the plan and to prevent blunders.

Establishing five-year plans with a breakdown of assignments for the various years and submitting them to all autonomous republics, krays, oblasts, economic agencies, enterprises and organizations create additional

possibilities of improving the effectiveness of the checking on the course of fulfillment of the plans.

At the same time there are still many problems here, including those which are related to methodological support. Thus in the methodological instructions for the development of state plans for the development of the USSR national economy which were published in 1974 and 1980, and also the additional methodological recommendations for the development of the state plan for the economic and social development of the USSR during 1986-1990, do not reflect questions of organization and improvement of methods for verifying the fulfillment of plans. These are also dealt with extremely inadequately in textbooks on planning the national economy. In our opinion, it would seem expedient to develop in the shortest possible period of time methodological recommendations for organizing the verification of the fulfillment of the plan which are the same for all planning agencies and also to create the corresponding training aids.

During the course of the verification it is necessary to study in depth the problems related to the course of the fulfillment of plans by each enterprise, association, ministry, department, autonomous republic, kray, oblast, city and rayon with respect to all quantitative and qualitative indicators of the plan; the introduction into production of the latest achievements of science and technology and progressive technological processes; the disclosure of reserves of production capacities, raw materials, processed materials, labor and other resources and the utilization of these for further growth of the national economy; and the prevention of the possibilities of the appearance of disproportions and partial lacks of correspondence in the development of individual branches of the national economy.

The verification of the fulfillment of the plan should be carried out systematically and comprehensively, that is, with respect to each section of the plan. For example, for production it must be conducted in coordination with the fulfillment of the plan for other corresponding sections, and for the branches--in coordination with the course of the fulfillment of the plan for associated branches of production (not only for the ministry, administration, division or branch as a whole, but also for each enterprise). The monitoring should cover not only the assignment as a whole that is established in the plan, but also its constituent parts, and it should rely on functional statistical reporting. Here statistical methods of analysis in the planning agency must be combined with a verification of the fulfillment of the plan directly at the enterprise with the utilization of data gathered locally so as to take on-the-spot measures to eliminate the shortcomings that have been revealed and to provide for fulfillment of the established plans.

The results of the work for the fulfillment of the national economic plans for the quarter and the year as a whole are considered by the USSR Council of Ministers, the councils of ministers of the union republics, and the ispolkoms of the local soviets of people's deputies and, if necessary, the appropriate refinements are made in the plan. This most frequently involve a disclosure of the possibilities of increasing the output of goods for cultural and domestic purposes and household use and construction materials, as well as a redistribution of capital investments among various objects. The verification

of the fulfillment of the plan should be handled by all management and planning agencies of the country's national economy--from unionwide to rayon. In the work of organizing the fulfillment of national economic plans a large role is played by local soviets of people's deputies. They should carry out their functions with respect to economic organizations not through administration intervention in their production and cost-accounting activity, but through daily monitoring, in keeping with a previously developed program, of the observance of state legislation, the charter of the agricultural business, correct utilization of land and fertile areas, maintenance of technical equipment, and prompt fulfillment of commitments to the state by the kolkhozes and sovkhozes.

This work begins with a verification to make sure that the assignments of the state plan have been submitted to the corresponding specific workers, associations, enterprises and organizations, and also an inspection of the course of the development of the technical and industrial financial plans at the enterprises and construction sites and the provision of construction sites with technical documentation. Then the verification of the fulfillment of the plan is organized.

The gosplans of the autonomous republics, the kray (oblast) planning agencies, the city planning agencies and the rayon planning agencies in conjunction with agencies of the initial Central Statistical Administration and people's control committees in the local areas verify the fulfillment of the plan comprehensively, for all branches of the national economy, concentrating major attention on the work of branches of local industry and social and cultural construction. Here they take extensive advantage of materials of financial agencies and institutions of the Gosbank and Stroybank.

It is also necessary for the ministries of the autonomous republics, the kray (oblast) administrations and the divisions for the various branches of the national economy to coordinate the fulfillment of the plan for enterprises, associations and organizations under their jurisdiction comprehensively, with respect to all the indicators. For their part, agencies of the people's control committees in the local areas devote special attention to revealing internal reserves and unutilized capabilities of expanding production, improving the quality of products, reducing production costs and increasing labor productivity, and they also wage a struggle for the strictest regime of economy and correct and more efficient expenditure of funds and material values. The broad network of groups and people's control posts in the enterprises and organizations render all-around assistance in this work.

Shortcomings in the fulfillment of production and construction plans are, to a considerable degree, the result of the fact that individual managers of soviet and economic agencies are still slow in rearranging their style and methods of management on the basis of modern requirements, they underestimate the role of educational work with personnel, and they do not strictly monitor their activity. They did not always give a negative evaluation to cases of violation of state and planning discipline and mismanagement.

Recently it has been necessary to devote special attention to monitoring the fulfillment of the plan for deliveries of industrial products under

agreements. In January-August 1984 the plan for product sales taking into account assignments and commitments for deliveries by industry under the jurisdiction of the RSFSR Council of Ministers was fulfilled better than in the corresponding period of the previous year. There was a larger number of enterprises that fulfilled all of their commitments.

At the same time there has been no radical change for the better in the fulfillment of the production plan in the established products list. During eight months of 1984 industry under the jurisdiction of the RSFSR Council of Ministers failed to provide for fulfillment of the plan for a number of most important kinds of products. The fulfillment of deliveries in keeping with the agreements that have been concluded continues to be the area of work that is furthest behind.

Socialist competition should play an effective role in the struggle for fulfillment and overfulfillment of plans. In the modern stage it is acquiring increasingly profound economic content. It is increasingly becoming the goal of innovative undertakings to strengthen qualitative economic indicators of production: accelerated growth of labor productivity and increased effectiveness of public production. Generalized socialist commitments are being discussed at city, oblast, kray, republic and branch conferences. Of great significance here is extensive introduction of counterplans which are included in the plans for the production and economic activity of the enterprises and are given the force of law. As a rule they should be reinforced with the necessary organizational and technical measures which are included in the corresponding divisions of the technical and industrial financial plan. During the course of the verification of the fulfillment of economic plans the planning agencies take into account the counterplans of enterprises, construction sites and organizations for achieving certain output indicators, more economical norms and high quality indicators, and they study the experience of the leading enterprises and sections. Here special attention should be devoted to the utilization of the rights of the republic, kray and oblast agencies in the planning and expansion of the production of goods and the rendering of consumer services to the population. Active influence of the plans on solving the problems that have been earmarked and purposive implementation of the unified technical policy constitute a most important task of planning agencies, ministries and departments. The complex of measures for stepping up control over the fulfillment of the plan for 1985 will make it possible to provide for unconditional fulfillment and overfulfillment of planning assignments and the socialist commitments that have been adopted and to create a reliable basis for the fulfillment of the plan of the last year of the 11th Five-Year Plan and successful completion of the five-year plan as a whole.

FOOTNOTES

1. K. U. Chernenko, "Completing the Five-Year Plan in a Worthy Way and Accelerating the Intensification of the Economy," speech at a meeting of the Politburo of the CPSU Central Committee on 15 November 1984, Moscow, Politizdat, 1984, p 8.

2. K. U. Chernenko, "Vysokiy grazhdanskiy dolg narodnogo kontrolera" [The High Civic Duty of the People's Controller], Moscow, Politizdat, 1984, p 3.

3. Ibid., p 10.

4. V. I. Lenin, "Poln. Sobr. Soch." [Complete Collected Works], vol 42, pp 344-345.

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PLANNING AND PLAN IMPLEMENTATION

VALUE INDICATOR, PRICE INTRICACIES IN PLANNING VIEWED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 85 pp 103-107

[Article by V. Sal'nikov and P. Krylov: "Consumer Value and Cost in the Practice of Planning" (The authors consider issues raised in the articles by A. Bachurin, "National Economic Effectiveness, Consumer Value and Value" [PLANOVOYE KHOZYAYSTVO, No 11, 1984] and N. Boyarchenko and P. Vertel'nik, "Consumer Value in the System of Economic Relations" [PLANOVOYE KHOZYAYSTVO, No 12, 1984])]

[Text] One of the most important tasks of planning is providing for increased effectiveness of public production. A significant role in carrying this out is played by correct utilization of scientifically substantiated planning indicators.

In recent years, in keeping with the decree of the CPSU Central Committee and the USSR Council of Ministers, a certain amount of work has been done to improve the indicators of the plan, especially physical indicators. We are speaking about extensive application of scientifically substantiated technical and economic indicators which make it possible to take into account the effectiveness, quality and other consumer properties of the items. But it is more difficult to give a correct evaluation of the basic useful property of the product which is determined by its expedient utilization. It is necessary to pay attention not only to various properties of the item, but also their replaceability, how economical the production is, and how effective the product is when consumed.

The physical indicators of the plan reflect the process of the formation of consumer value which is created in production. As we know, the goal of socialist production is maximum satisfaction of the growing specific needs of the society, which is reflected in state plans in the form of the formation of the final product. At the same time the product of public production is the consumer value. It is precisely the consumer value created in production that is the immediate goal.

Consumer values, expressed in the corresponding units of measurement of physical indicators, should provide incentives both for the consumers and the producers to satisfy the demand of the entire national economy. Therefore the unit of measurement of the same consumer values cannot be constant and

unchanging, but must correspond to the level of development of productive forces that has been reached.

Let us take a look at several examples in which the units of measurement of consumer values change.

In a number of branches they have long been criticizing such physical indicators as the ton, the cubic meter and so forth, which do not reflect the consumer properties of the item and the actual savings on material resources, and they lead to increased material-intensiveness. Thus until recently the planning of paper production in tons (although books, newspapers and magazines are printed on sheets which have a certain amount of space) has impeded the absolute output of products and has not contributed to reducing material expenditures on their manufacture. The changeover to planning in square meters made it possible to increase the output of less material-intensive and better-quality paper without additional expenditures of raw material. The replacement of the physical indicator of "ton" with the "square meter" became a stimulus for increased production volume and reduced material-intensiveness.

Another example. In 1982 some of the metallurgical plants in the country began to produce rolled ferrous metals whose output is planned in standard tons (the physical ton is left only for the development of material balances in these plants). This removed the issue of the differing advantage from producing various products from the standpoint of their labor-intensiveness. Beginning in 1984 all plants of the USSR Ministry of Ferrous Metallurgy changed over to accounting for rolled ferrous metals in standard tons--the savings on steel amounted to up to 18 percent, according to preliminary data.

The experience of the Prikarpatles Association is interesting. The goal of the experiment conducted here consists in that the timber raised on a hectare of forest area is procured and processed not for volume, but for increasing product sales. What is worthy of attention in this practice is the utilization of the indicator of shipment of timber, which is measured in cubic meters in the country, but in Prikarpatles it is measured in tons. When it was technically impossible to process all of the timber the unit of measurement of "cubic meter" corresponded to the tasks facing the timber and wood-processing industry. It was necessary to ship timber which produced the greatest yield of lumber, and after milling the wastes were destroyed. Today the leading enterprises process everything without any wastes (branches, stumps, tops, needles and so forth are put to use). In this case the cubic meter is being replaced by the indicator of the "ton" which motivates the workers to gather all of the timber from the plot and process it. It turns out that the "ton" plays a negative role in one case and a positive role in the other.

This is explained by the fact that if the indicator of the "ton" is introduced in an association which does not have the necessary equipment for complete processing of timber it will not correspond to the conditions of the production and can impede things. This indicator must be introduced in places where the necessary conditions have already been created. This means that in one branch it is possible to plan consumer values in various units of measurement.

Physical indicators are very important when planning the production of machine-building products. At the present time in practically all machine-building branches the production of a number of machines, equipment and instruments is planned in value terms, which does not reflect the consumer qualities of the items and leads to the output of costly kinds of products.

In certain cases the planning of items in millions of rubles creates a situation which gives the false appearance that everything is well. Thus the output of machine-building products on the whole from 1970 through 1980 increased 2.6-fold. But if one were to look at how this indicator increased for individual kinds of machine-building products, calculated in physical units of measurement, it turns out that the production of tractors increased during this period by 20.9 percent, trucks--50 percent, metal-cutting machine tools--6.9 percent, forge and press machines--38.5 percent, metallurgical equipment--11.7 percent, chemical equipment--83.2 percent, steam engines--1 percent, cargo cars--8 percent, and so forth, that is, for any list the rates of growth are lower than they are in value terms. This example shows that planning production in value terms alone distorts the real state of affairs.

In 1980 a unified consolidated line entitled "Equipment for Lifting-Transport, Loading-Unloading and Warehouse Work in Industry, Construction and Transportation," with measurement in millions of rubles, was introduced into the plan. This made it possible to conduct an analysis and a comparison of the development of lifting-transport machine building and other branches of the national economy. But the consolidated line turned out to be simply the sum of the lines that constitute it. If one notes the fact that the products list for the output of lifting and transportation equipment taken into account by the USSR Gosplan includes only 40 percent of the output of this equipment in the country, it becomes clear that the introduction of such a consolidated indicator makes no progressive changes in planning. It would be correct, in our opinion, when planning the output of lifting and transportation machines and mechanism to introduce a generalizing line entitled "The Quantity of Tons of Processed Cargo," which would make it possible not only to take into account absolutely precisely the consumer properties of these machines, but would also make it possible to check on the utilization of listing and transportation equipment in the national economy.

When physical indicators are being considered, the question frequently arises: is it always possible to replace one physical indicator with another that is more efficient? It is necessary to answer this question individually, in each separate case, fully taking into account the consumer qualities of the product. For example, planning the production of metalware and rolling equipment in tons leads to increased material-intensiveness, particularly metal-intensiveness. At the same time the indicator of the "ton" controls production and distribution. The consumer should regard the ton as the limit which should be used as effectively as possible, that is, as economically as possible.

These examples show that the application of one physical indicator or another should correspond precisely to the nature of production. But the changeover to planning the production of products in units of measurement that correspond

to the nature of production and reflect their consumer qualities still does not mean that these problems have been solved and that the new indicator will not have any shortcomings or that it will not be rejected.

Let us take a look at how the consumers react when they have received products from the producers in the new units of measurement.

In many cases the consumers of rolled metal, paper and other products are interested in making sure that the physical indicators do not change so that the metal products and the paper will be heavier (the heavier, the more expensive--and the easier it is to fulfill the plan). They give various justifications which close off the path to lightweight profiles of rolled ferrous metals, pipes and so forth. This takes place because the main criterion for evaluating their activity is the delivery of products in monetary terms. If the expenditure of metal on an item decreases the production cost also decreases, which makes it difficult to establish a higher price and therefore it will be considerably more difficult to fulfill the plan for product sales.

Builders sometimes do not want to accept metal of lightweight profiles not because of the need to rework the plans, but because the estimated cost decreases and, consequently, the volumes of construction and installation work also increase. As for rolled metal, there is one other fact that impedes reducing its weight: the planning of the release of scrap metal from the level that has been achieved.

A timely change in the unit of measurement when planning the production of products can give the country an immense advantage in the form of economizing on material and technical resources. The savings received as a result of the change of the physical unit of measurement in many cases does not require large additional expenditures and, as the experience of certain enterprises shows, can be very significant.

But in order to change the physical indicator of the given product it is necessary to study its relationship to other physical and value indicators for the producer and the consumer, that is, throughout the entire chain of national economic planning and at all stages of reproduction.

At the same time value indicators are used to compare consumer values, that is, in the major role of physical indicators value indicators perform the evaluative function. But when determining the degree of economic development it is value indicators that have begun to play a certain role in evaluating the economic activity of the ministries and enterprises. The main evaluation indicators have consistently been the gross, commodity, sold and normative net output. This has automatically entailed a number of negative phenomena: increased prices for industrial products, deterioration of their quality in a number of cases, slow growth of labor productivity, and so forth.

Striving to fulfill the assignment for product sales, certain enterprises do not fulfill either the plan in the given products list or the economic agreements, thus placing their associates in a difficult position. Hence the production of "unnecessary" and the shortage in deliveries of necessary

products, the expenditure of material resources for other than their intended purposes and, consequently, to some extent, the irreversible loss of them.

Thus the indicator of "product sales," like the gross and commodity output, stands in contradiction to other indicators of the plan.

How does one provide for compatibility of these indicators and overcome their moving in various directions?

Value indicators should be used in economic practice as calculation indicators that are derived from the basic, natural indicators. Actually, if one provides for the output of the necessary items in the given assortment and quality then the value indicators are formed automatically.

Value indicators should direct the collectives of the enterprises not for production for the sake of profit, but toward the output of specific goods and the satisfaction of real social needs. This way of posing the problem should be the basis of improving the economic mechanism. Planning the production of consumer values as the main indicator of the plan fully corresponds to the requirements of the modern stage of the development of our society, the stage of developed socialism.

When considering the significance of indicators of state plans and their influence on the economy of a developed socialist society one cannot but focus attention on such value indicators as production cost and profit as well.

As we know, the law of value does not play a regulating role in our economy. But since commodity and monetary relations still remain in the modern stage, it is necessary to utilize them effectively, having eliminated the negative tendencies that are inherent in these relations.

In recent years certain economists have raised profit to the rank of one of the most important indicators, although it cannot orient workers toward the final results, that is, toward the satisfaction of the specific demands of the society. Frequently a situation arises in which the increase in profit takes place as a result of the increased prices even though the quality and productivity of the equipment that is produced increase much more slowly. Along with the increase in prices of equipment and materials there are increases in the estimated costs of construction, which leads to making each unit of production capacity more expensive.

One of the reasons for the desire of the enterprise to achieve greater profit is to obtain greater deductions into the economic incentive funds. Such desires run counter to the principle of payment according to labor and lead to a weakening of planning discipline.

At the same time profit serves today as one of the indicators of the effectiveness of the activity of the state enterprise, particularly for measuring expenditures of labor and volumes of increase in the value of the added product. And it only registers this increase and does not contain an answer to the question of which goals it is intended to pursue. As was

already noted above, only the consumer value characterizes the goal of public production.

Moreover, many executives, while achieving fulfillment of assignments for profit, are forced to turn to violation of planning discipline, not fulfilling the plans in the given products list and assortment, that is, sometimes they do not provide the society with the specific products it needs. This disturbs the proportionality and balance of public production.

Under the conditions of cost accounting [khozraschet] the evaluation of the activity of industrial enterprises is organically linked to obtaining profit. The entire system of material incentives is based on this. When considering profit one cannot but discuss the fact that any socialist enterprise is the object of two kinds of management: cost accounting at the level of the enterprise and public on the scale of the entire national economy. This, in turn, requires an evaluation of the effectiveness of its activity according to two criteria. The cost-accounting criterion of effectiveness inherent in today's enterprise is profit. The social measure of effectiveness (and any enterprise is a "cell" of the entire national economy) will be reflected in a reduction of expenditures of live and embodied labor and a growth of output. That which is effective for the enterprise may not be so for the society and vice versa.

As was noted above, wholesale prices for certain kinds of products do not grow in correspondence to the improvement in the quality of the items or the productivity of the equipment that is produced. At the present time there are many shortcomings in price setting. Sometimes certain negative aspects in the development of the economy are explained mainly by the imperfection of the prices. This indeed does take place, but not everything can be explained simply by shortcomings in price setting. In order to form prices correctly it is necessary to conduct a considerable amount of work, which should be reinforced with practical data. This is even more important because the proper amount of attention has not been devoted to the indicator of "production cost" since 1965. But regardless of the efforts that may be applied, without planning the production cost one cannot properly solve the problem of price setting.

At the 26th CPSU Congress it was emphasized that the most important task facing the national economy is to increase the effectiveness of production so that the results of production increase more rapidly than expenditures on it do. The main indicator that characterizes the effectiveness of the operation of an industrial enterprise will also be the reduction of the production cost of the products that are produced. Here the question of economizing on material resources becomes more important since material resources comprise more than 60 percent of the cost of the products.

Among material expenditures one should especially single out amortization, which is the transferred value of the fixed production capital and reflects the value expression of production capacities (not including labor resources). But these are not completely identical. With an unchanged value amount of production capital, the output of products from production capacities in the process of operation can change as a result of better assimilation of existing

equipment, improvement of it through the efforts of members of the collective, changes in the list of items that are produced, and so forth. The production capital at related enterprises can differ sharply depending on the value of a unit of production capacity that is used when designing one enterprise or another.

The collective receives production capacities ready-made, created at the expense of the entire society, without its participation. During the process of operation one determines the indicator of output-capital ratio which in one way or another characterizes the work of the collective. If the value of fixed capital at one of the enterprises that produces similar products is higher, all other conditions being equal, its output-capital is lower than the others.

Utilizing analogous production capacities various collectives are in unequal conditions even though they produce the same quantity of products with the same number of personnel. Consequently, the indicator of "output-capital ratio" cannot fully characterize the work of the collective.

There is one other aspect of the formation of production capacities. The collective of the enterprise is called upon to develop production and to carry out reconstruction and technical reequipment. This process is conditioned by the provisions concerning the socialist enterprise and is reinforced in practice with financial resources which are formed from part of the profit that is left at the disposal of the enterprise for these purposes. Having done given the possibility of spending the money formed from profit and intended for expanding production, the enterprise sometimes creates new sections for producing the same batching items or materials of which it does not have enough, and thus impedes specialization. As a result, in the composition of the production cost of similar products the sum of amortization is not the same at various enterprises. The practice of planning, which permits the ministries to independently direct capital investments for construction sites whose estimated cost is less than 4 million rubles, also contributes to this. Each ministry through this kind of construction tries to create production capacities, sometimes not considering its own needs with respect to the interests of the entire society (state).

Capacities created for producing the same product are not always fully utilized in various branches. It is also very difficult to introduce new technical equipment in such a situation. As a result, the cost of a unit of production capacity is steadily increasing.

The problem of reducing the cost of a unit of production capacity and changing over to in-depth specialization of production presupposes making the material incentives of the staff of the ministries dependent on the reduction of a constituent part of the construction cost--amortization. Such a dependency does not exist today.

The normatives of the amortization deductions are established for the ministries and departments by the higher agencies and therefore the payment for fixed production capital does not depend on the activity of the labor collective of either the enterprises or the ministries.

With permanent fixed production capital, the greater the production plan the less the proportion of amortization in the production cost of the products, that is, the reduction of the production cost depends on the completeness of the utilization of fixed production capital.

In 1981 as compared to 1970 amortization as part of the production cost of products increased in the country as a whole by 20.8 percent, in the fuel industry--by 19.5 percent, and in machine building and metalprocessing--by 22.8 percent (1970 was taken a base year because the norms of amortization deductions have not changed since that time).

In the fuel industry the growth of amortization was brought about by the creation of more costly production capital, which was conditioned by the fact that raw material is becoming less and less accessible. In machine building and metal processing the sharper increase in amortization was conditioned by the increase in wholesale prices for equipment, the incomplete utilization of production capacities and the creation of surplus production capacities. The first two factors are undoubtedly important, but the main one is the third one.

Practically every machine-building and metal-processing enterprise has created for itself production sections and shops that produce similar batching items. Many of these sections and shops have sufficient capacities to produce considerably more products than the enterprises need. As a result, in places where production specialization should deepen there is a despecialization with surplus production capacities. But the ministry give permission to create such sections and shops and even allots the corresponding capital investments. And so the higher the rates of the creation of production capacities as compared to the rates of increase in output, the more amortization increases in the composition of the production cost.

Therefore it is suggested that the material incentive of the staffs of the ministries be made dependent on reducing the planned amount of amortization for the products in the composition of the production cost.

Let us explain this with a conventional example.

If in 1983 and, correspondingly, in 1985 the proportion of amortization in the composition of the production cost amounted not to 8 and 9 percent but, say, 7.95 and 8.59 percent, then this would mean that with the same production capacities 450,000 rubles' worth of additional products would have been produced, and in 1985--500,000 additional rubles' worth.

If we assume that the proportion of amortization increased by 0.05 percent, surplus capacities would have been created in 1983 in the amount of 260,000 rubles, and in 1985--300,000 rubles.

In industry amortization has been annually increasing in the composition of the production cost during recent years by 0.3-0.4 percent, and not 0.05 percent as in the example.

But one should not use the same yardstick for all branches of the national economy. The proposed variant pertains first and foremost to machine building and metal processing, and also the construction industry. The food industry and light industry depend to a considerable degree on agriculture, and the production capacities of these branches should obviously be calculated for processing the maximum harvest. Yet these branches too are beginning to develop their own machine building.

When planning the production of products in physical terms the planning agencies could apply the coefficient of satisfaction of the needs of the national economy for the given kinds of products. For example, for the production of rolled ferrous metals as a whole the satisfaction of the national economy amounts to 0.95, but for low-alloy rolled metal--0.5. Consequently, the development of capacities for rolling ferrous metals has practically already been achieved, but for producing low-alloy rolled metal they must be increased. With a coefficient of satisfaction equal to or more than 1, it is prohibited to produce more products than the amount established by the plan. The coefficient of satisfaction will orient the producers of the products toward the expediency of further development of capacities for the given kind of products.

The proposed measures, in our opinion, will contribute to the creation of better economic conditions for effective activity of the enterprises and ministries and to increasing the effectiveness of the entire economic mechanism.

Table

	1983	1985
Fixed production capital, millions of rubles	520	600
Norm of amortization deductions		
Percent	10	12
In absolute expression	52	72
Products sold, millions of rubles	720	900
Production cost of products, millions of rubles	650	800
Proportion of amortization in composition of production cost of products, %	8	9

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INVESTMENT, PRICES, BUDGET AND FINANCE

GOSPLAN OFFICIAL URGES PLANNED CAPITAL STOCK REPLACEMENT

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 85 pp 45-54

[Article by N. Fomichev, chief of subdepartment of Gosplan USSR: "Planned Renewal of Fixed Capital--An Important Factor in Acceleration of Intensification"]

[Text] At the present stage of the economy's development, as pointed out by General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet K.U. Chernenko, "it is absolutely necessary to provide rapid and continuous renewal of all sectors of the national economy on the basis of present-day achievements of science and technology. This is one of our basic tasks. Without this progress of society is simply unthinkable."[1]

Under conditions of intensification of public production, requirements are increased in regard to improvement and renewal of fixed capital, securing of unity of all elements of their reproduction and improving its qualitative indicators (labor productivity, yield on capital, profitability). At the present time, undesirable tendencies persist in use of fixed capital. First of all, yield on capital is being reduced. During 1970-1982 despite growth of the gross national product and a generated national income of 178 and 175 percent, respectively, production fixed capital increased 247 percent. During 1981-1983, fixed capital compared to the gross national product and national income also grew at an advancing rate. This brought about a need for addtional capital investment for preservation and stepping up of the rate of economic growth, which in turn required an increase in accumulation and narrowed down the possibilities of gorwth of the consumption fund. In recent years, the rise of labor productivity in industry has been increasingly lagging behind the growth of its capital-labor ratio (Table 1).

Whereas in 1975, growth of labor productivity lagged behind the rise of its capital-labor ratio by 8 points, in 1980 it was by 37 points, in 1981--by 46 points and in 1982--by 55 points. The "price" of growth of each point of labor productivity thus increased, creating the need for additional startup of fixed capital and consequently of capital investment.

The rise of the capital-labor ratio can be directed not only at increasing labor productivity but also at reducing production cost, material expenditures and growth on this basis of production profitability and correspondingly of

fixed capital. But here the process of reproduction of fixed capital possesses significant defects--its profitability is reduced (Table 2).

Table 1 (in percent of 1970)

Indicator	Dynamics by years			
	1975	1980	1981	1982
Growth of labor productivity	134	156	161	164
Growth of capital-labor ratio	142	193	207	219

Table 2

	Dynamics by years				
	1970	1975	1980	1981	1982
Industry:					
fixed capital, billions of rubles	255.0	385.0	554.0	593.0	634.0
profit, billions of rubles	56.0	65.9	73.3	75.0	87.8*
profitability, %	22.0	17.1	13.2	12.6	13.8
Construction:					
fixed capital, billions of rubles	22.0	35.0	55.0	60.0	65.0
profit, billions of rubles	4.7	8.6	7.3	7.1	7.3
profitability, %	21.4	24.6	13.3	11.8	11.2
Transport and communications:					
fixed capital, billions of rubles	117.0	171.0	237.0	252.0	267.0
profit, billions of rubles	11.5	15.6	16.9	17.2	18.6
profitability, %	9.8	8.9	7.1	6.8	6.9

* With comporable prices and under comparable conditions, profit in 1982 compared to 1981 increased 5 percent. Fixed-capital profitability was 12.4 percent (see "Narodnoye khozyaystvo SSSR in 1982" [USSR National Economy in 1982]. Moscow, "Finansy i statistika", 1983, p 509).

During the '70-80s, replacement of fixed capital was carried out with insufficient intensiveness, and expenditures on retention and maintenance of obsolete production capacities increased in this connection. In machine building alone, losses each year from the use of obsolete equipment amounted to about 200 million rubles.

Each year about 1.2 percent of the fixed capital is replaced in industry because of old age and wear, while in terms of length of service and norms of amortization no less than 4.0-4.5 percent should be withdrawn and in agriculture, construction and transport, with a larger share of active part of fixed capital (machines, equipment)--even more.

Obsolete and physically worn fixed capital needs to be replaced on a timely basis. In time periods provided by the plan, new production capacities must be put into operation and assimilated and outlays on their creation need to be repaid in a timely way. These requirements should be realized on a planned basis.

Renewal of fixed capital needs to be examined in connection with rational use of the existing production potential. Cases are to be found in some sectors of premature writing off of machines and equipment. For this reason, in addition to replacement of obsolete equipment, it is necessary to strive together for its functioning throughout the course of the entire amortization period and to use it again in spheres where it is economically feasible.

The necessity of intensifying the rate of reequipment and modernization of existing production under conditions of higher requirements in regard to intensification of the economy is determined by:

--the growing volume of fixed capital in all sectors of the national economy and increasing needs for its replacement and renewal;

--tasks of improvement of tools of labor and technology of production under the conditions of scientific-technical progress and intensification of public production;

--the requirements of rationalization and renewal of workplaces and balanced development of capacities of existing enterprises and manpower resources;

--the need of eliminating manual, unattractive and unproductive labor;

--the special features of the demographic situation, reduced growth of the number of workers employed in the national economy and in this connection growth of the need for labor-saving equipment and technology;

--requirements of increasing effectiveness of capital investment through curtailment of time periods of operation and reduction of construction cost.

The decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning, Organization and Management of Capital Construction" specified that reequipment and modernization must be the basis of policy in the field of growth of production of capacities for the immediate years ahead and the long term.

The experience of the Dnepropetrovsk Combine Plant imeni K.Ye. Voroshilov shows that this work needs to be combined with certification and rationalization of workplaces while taking into account the requirements of scientific labor organization. In addition, yield on capital and the growth

rate of labor productivity have been boosted. They amounted on the average to 8 percent during 1979-1984, that is, they were 1.7-fold above the five-year target for industry as a whole.

The achievements of Sverdlovsk and Ivanovo oblasts in reequipment of enterprises are widely known. Reequipment and modernization constitute a integral part of the plans of economic and social development of Moscow, Leningrad, Kiev and other large industrial centers. In the Five-Year Plan of Economic and Social Development of the USSR for 1981-1985, the volume of capital investment for these purposes amounts to about 114 billion rubles. In the preparation of annual plans by Gosplan USSR, possibilities are sought for increasing them compared to the targets of the five-year plan and obtaining thereby large growths of production, startup of capacities and economies of material and manpower resources. Thus, in plans for 1983-1984, these outlays were increased by 10-12 percent.

But the growth rate of investment in reequipment is inadequate in the 11th Five-Year Plan. At this time, the need is ripe for progressive shifts in the structure of capital investment for the purpose of replacement of obsolete fixed capital, reequipment and modernization of existing enterprises and in this connection boosting investment in equipment.

Improvement of capital-investment planning for modernization of existing enterprises is also connected with boosting their efficiency and increasing capacities and production) and economy (reduction of production cost, growth of profit) results. As yet, increase of investment for reequipment and modernization insufficiently countervails reduction of the total economic effectiveness of capital investment and utilization of fixed capital.

With reequipment and modernization, expenditures to a significant degree are of a compensatory character. A portion of them is channeled not for growth but for replacement of fixed capital. In a number of cases, the transition of an enterprise to production of new products requires partial elimination of fixed capital whose amortization period has not expired. For this reason the "retirement" of capacities and growth of fixed capital from a unit of capital investment can be comparatively smaller than in the case of new construction.

During the 8th-10th five-year plans, approximately one third of the capital investment did not culminate in growth of fixed capital.[2] During the 12th Five-Year Plan and over the long term this process will be intensified. It is also necessary to take into consideration that in the extractive sectors (petroleum, coal and others) outlays on maintenance of operative capacities and attained production volume will be increased. Furthermore a significant portion of new construction in these sectors is actually connected with maintenance of attained production volume. For this reason, the share of capital investment for simple reproduction of fixed capital and products should significantly increase in the immediate future. For the purpose of reequipment and modernization ensuring growth of efficiency of capital investment and existing production, the new equipment would have to be more productive than the old (replaced) by 40-45 percent as a minimum. But even under these conditions only the attained level of economic indicators (in the existence of a stable share of equipment) is retained. But to raise the

efficiency of reproduction of fixed production capital, it will be necessary to additionally increase both the volume (through a change in the structure of capital investment) and the productivity of the new technology and equipment. The solution of these problems depends on the effectiveness of capital construction and especially of the technico-economic level of plan decisions. For this reason it would be advantageous to carry out an inventary of projects (facilities newly started since the end of the 11th Five-Year Plan and those whose realization will begin in the 12th Five-Year Plan). At the same time the influence of new planned solutions on the economic indicators of development of sectors in 1985 and during the 12th Five-Year Plan should be evaluated. On this basis it will be possible to select projects whose accomplishment will speed up intensification of public production. A certain understanding of the required level of raising the efficiency of fixed capital is provided by a comparison of average and growth yield on capital, that is, the efficiency of existing fixed capital and fixed capital started up in each period. At the present time, as a consequence of incomplete assimilation and increase in the cost of production capacities (in comparison with their productivity), growth yield on capital (growth of national income versus growth of fixed capital) amounts to a total of 65-70 percent of average yield on capital. Its increase by 30-35 percent will ensure stabilization of the average yield on capital for the national economy as a whole. The establishment of economcially practicable limits of increase of growth yield on capital for pertinent sectors will create conditions for boosting the effectivness of the entire aggregate of projects for newly started fixed capital. This work should be combined with an analysis and working up of norms of proportionate capital investment per unit of started up capacity and growth of production output, the development, examination and coordination of which is being completed at the present time for the 12th Five-Year Plan. Such an approach requires considerable reorganization in planning, creation and introduction of new equipment and technology.

Improvement of the use of fixed capital and increase of its influence on acceleration of intensification are closely connected to the development of a system of long-term planning. Five-year plans provide for the development of consolidated plans of modernization and reequipment of existing enterprises, selection of limits of capital investment and of construction and installation work. Lists of enterprises earmarked for modernization and expansion have been worked out. It is also proposed to provide on a first-priority basis measures for capital investment, material resources and a body of contracting work implemented through the means of the production development fund. The interest of contracting organization in reequipment and modernization of existing enterprises has been increased.

In the course of working out the five-year plan of economic and social development for 1981-1985 and annual plans for 1982-1984, Gosplan USSR jointly with ministries, departments and union republics carried out definite work on the realization of these positions. Methods, forms and indicators of the consolidated plans were prepared. In Methodological Instructions for Working Out State Plans of Economic and Social Development (approved by Gosplan USSR 31 March), there was introduced the section "Planning of Reequipment of Existing Enterprises" and in five-year plans--"Consolidated Indicators of Reequipment and Modernization of Existing Enterprises."

In Methodological Positions for the 12th Five-Year Plan and the Long-Range Perspective,[3] questions were also included on planning and normative securing of reequipment and modernization. In a number of materials (Method of Determination of Economic Effectiveness, Norms of Proportionate Capital Investment and others), individual norms have been provided for calculating resources for these ends. In methodological positions on planning of fixed capital and capital investment for the long-term and in forms and indicators for 1986-1990 a special section was set aside on planning of reequipment and modernization of existing enterprises.

The planning of reequipment is a complex task. It must encompass all levels of planning management: central organs, ministries, union republics, associations and enterprises. The methodological bases of planning this process have to be unified and coordinated. In this connection Gosplan USSR in 1984 worked out and established special comprehensive Methodological Positions for the Compilation oof Annual and Five-Year Plans of Reequipment and Modernization on the Level of Associations (Enterprises) and Consolidated Five-Year Plans on the Level of Ministries and Departments.[4]

At the same time, the organizational bases of working out consolidated annual and five-year plans relating to this question were further improved at Gosplan USSR. In the beginning of 1983, Gosplan USSR approved the "Procedure of Organization of Work Relating to Planning of Reequipment and Modernization of Existing Enterprises," which determined that the consolidated plan of reequipment and modernization was to be formed as an independent section of the whole plan. It provided for its outstripping development compared to the plan as a whole. The composition of its economic indicators (capital investment, production output, labor, capital and capacities finances and others) was expanded. In this connection, the participation of functional departments in its analysis and validation was expanded. The head department was determined responsible for the methodological and organizational supervision of this work (the consolidated department of balance of capacities with the participation of the consolidated department of capital investment and the department of consolidated five-year and annual planning).

The establishment of principles and organization of work relating to priority planning of reequipment and modernization is reflected in general documents of Gosplan USSR on the manner and time of working out state plans of economic and social development (general procedure, procedure of working out plan of capital construction, provision of construction projects with technological equipment and other things).

Thus during 1982-1984 in the process of further improvement of planning of reequipment and modernization, new requirements relating to validation not only of resources (capital investment, equipment), but also different forms of effect: production (growth of production and capacities), economic (reduction of production cost, growth of profit, economy of fuel, power and material resources), social (improvement of working conditions, increase of its creative activity, protection of the environment) were reflected in organizational and methodological documents. The content of the process of reequipment has been refined. It is considered as a system of measures

connected with the complete or partial reequipment of an enterprises as a whole based on the requirements of renewal and qualitative improvement of production, technology, the system of management and comprehensive accounting in consolidated plans of progressive technical, economic and social requirements (norms). Intrasectorial and intersectforial problems have been taken into account in coordination of modernization of interrelated sectors and production. The principle of priority development of this plan timewise is considered most important. This makes it possible to determine both the volume of expenditures and the corresponding production, economic and social results. As a result of such an approach to the forming of this section of the plan, the requirement is realized of the decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning, Organization and Management of Construction": funds for the construction of new and the expansion of existing enterprises to be allocated in that case where the needs of the national economy for the given type of product cannot be provided for by existing enterprises while taking into account their modernization and reequipment.

Under present-day conditions, the development of five-year and annual plans is increasingly combined in growing measure with economic, social and scientific-technical plans and forecasts for the long-term (Basic Directions for 10-15 Years, Complex Program of Scientific-Technical Progress for 20 Years, Schemes of Development of Sectors and Economic Regions for 15 Years and others).

But in these materials, questions of renewal of fixed capital and reequipment are worked out in fragmented fashion and not in an integrated way. The need has arisen to examine comprehensively different variants of renewal of fixed capital and the scale of their removal and replacement,to plan a list of technologies subject to removalk from production, to determine systems of machines in leading sectors, scales of production and introduction of flexibile system of production and robotic equipment and to approve the list of basic enterprises subject to complete reequipment and modernization in the makeup of the general conception of economic and social development of the national economy and other planning and economic materials for the long term. While taking this into consideration to validate the rate and proportions of changes in the development of machine building, in plans and balances of distribution of equipment, in the reproduction and technological structures of capital investment and in the structure of capacities of contracting organizations, technical provision of the economic method of conducting work and organizing industrial and effective capital repair of fixed capital. The given planning materials should be tied in to the economic and social tasks of the national economy: raising the growth rate of labor productivity, overcming the drop and stabilization of yield on capital in the basic sectors, reduction of materials intensiveness and boosting of profitability of production, reduction of the share of manual and heavy physical labor and others. In determination of prospects of economic and social development, wide use is made of the special-goal program method of planning (the food and power programs, Complex Program of Consumer-Goods Production and System of Services and the long-term land-reclamation program).

The special-goal program methods needs to be more widely used for balanced and efficacious reequipment of existing production in sectors of the national

economy and industry. The need for development of such programs is determined by the tasks of mass and large-scale renewal of fixed capital, sectorial and intersectorial coordination of consolidated five-year plans of reequipment, coordinated determination of the priority of the order of reequipment of sectors, enterprises and associations. There are not enough consolidated five-year plans of reequipment under these conditions. Large-scale reequipment of a number of sectors exceeds the limits of the five-year period. Long-term sectorial programs can more fully ensure the unity of annual and five-year plans and individual sections of the plan (plan of development of science and technology, capital investment, production and renewal of production, higher efficiency and so on).

The general principles of their development (directivity,address nature, balance and the rest) must be determined in accordance with "Basic Methodological Positions Relating to the Development of Special-Goal Complex National-Economic Programs."[5]

The purpose of long-term sectorial programs of reequipment and modernization of existing production is to ensure the fulfillment of set targets relating to volume of production output and renewal of fixed production capital at the present technical and economic level and to raise the technical level of sectors through the implementation of scientific-technical programs while taking into account targets of the complex program of scientific-technical progress.

The development of a long-term program should be preceded by validation of the need for products and the level of their quality, analysis of technical development of a sector and its leading enterprises and study of advanced domestic and foreign experience. For this end, it is necessary to determine the basic directions of raising the technical level of production and the quality of products for the period preceding the planning period and the deficiencies contained in it and to determine for each enterprise being reequipped or modernized ways of speeding up introduction of achievements of science and technology and scientifically based volume of renewal of the production apparatus. Special attention is directed to improving the balance of production capacities, wide-scale introduction of resource-saving technology of production and output of effective materials and products.

At the same time, a technico-economic appraisal and careful selection of results of completed scientific-research and experimental-design work, licenses and proposals of inventors and efficiency experts should be carried out.

Long-term sectorial programs need to be developed on the basis of a sector's own funds and resources allocated in a centralized manner for its development over the long term while considering established limits of capital investment and construction and installation work as well as progressive proportions in the structure of such elements of production as means and objects of labor, energy, technology, labor outlays and organization of production.

They should include the following sections: validation of objectives, tasks and technical level of the sector's development of production, determination

of the need for capital investment, material, technical and other resources and calculation and validation of effectiveness of the program and basic measures for its realization.

General planning materials relating to renewal of fixed capital within the framework of the concept of economic and social development of the national economy and the said long-range sectorial programs can serve as the scientific-technical and economic basis of consolidated five-year plans of reequipment and modernization of existing production. At the first stage, they could be worked out within the framework of schemes of development of sectors as an independent section and with accumulation of experience to become an independent planning document.

Sectorial programs should also be balanced in the regional framework.

In this connection, the experience of the Leningrad Party Organization relating to development of a regional sectorial program of intensification on the basis of acceleration of introduction of scientific-technical achievements in the economy of Leningrad and Leningrad Oblast approved by the CPSU Central Committee is of important value.[6]

The principles of a program approach to intensification of renewal of fixed capital are taken into account in planning the economic and social development of Georgian SSR. In Buryat ASSR, a program has also been developed of modernization and reequipment of existing enterprises for 1986-1990[7] in which tasks are set of reequipping the republic's industry.

For the purpose of wide-scale dissemination of the program approach and renewal of fixed capital, it has now become necessary to work out a unified methodological basis.

In the solution of tasks of intensification and growth of efficiency of public production, the decisive role belongs to associations (enterprises) as the basic link in the system of the national economy.

In recent years, the role of the fund of development of production in renewal and improvement of the production potential has been reduced. Fixed production capital in industry during the 10th Five-Year Plan grew 43.9 percent and the production-development plan--35.2 percent. In 1982 compared to 1980, the volume of fixed capital amounted to 114.4 percent, while the development fund remained at the former level. Growth of fixed capital moved ahead of growth of the production-development fund, which resulted in reduction of the share of the production development fund in regard to the volume of accumulated fixed capital of industry (in 1975--1.4 percent, in 1982--1.2 percent). This narrowed the economic possibilities of fixed-capital renewal at the level of its simple reproduction. In addition to this, the practice existed of centralizing a portion of the money of the production-development fund, which additionally limited the possibilities of enterprises with respect to renewal of the production apparatus. In industry there is a significant volume of obsolete fixed capital, and the tasks of accelerating scientific-technical progress require raising first of all the technical level of means of labor. These requirements have been taking into consideration

under the conditions of the economic experiment conducted in a number of industrial sectors and in the sphere of personal services.

Expansion of rights of associations (enterprises) in the use of the production-development food is envisaged. In addition to amortization deductions, it can include a portion of the money earmarked for capital repair of fixed capital. This boosts the financial possibilities of enterprises in renewal and improvement of fixed capital. Amortization deductions for capital repair of fixed capital in 1982 amounted to 18.4 billion rubles or more than 39 percent of the total startup of new fixed capital for this year. The effective employment of these funds constitutes an important national-economic task.

Rights of heads of associations and enterprises have also been expanded in the use of the single fund of science and technology and in material and technical provision and planning of work relating to reequipment and its financing. All this is aimed at speeding up the introduction of achievements of science and technology, advanced technology and improvement on this basis of economic and social results of production.

It was pointed out at the February and April (1984) plenums of the CPSU Central Committee that the economic experiment should contribute to the improvement of the entire economic mechanism and its results should be fully taking into account in the development of the plan for the 12th five-year period. For this reason, it would be advantageous to examine a number of current problems connected with further increasing the influence of the experiment on acceleration of renewal of fixed capital and its reequipment.

In accordance with existing methods,[8] the size of the production-development fund depends on the size and norms of deductions from profit, norms of deduction from amortization for renovation and the size of realization of withdrawn property. Up to 35 percent of the sum of economy of fuel and power resources are included in it. Some participants of the experiment propose in particular to boost deductions from profit into the development fund,[9] others to change the norm of amortization deductions for renovation.

Under the conditions of the experiment, up to 40 percent of amortization deductions and 8 percent of profit go into the production-development fund. With such normative deductions, many enterprises will receive considerable funds. But at enterprises where length of service of equipment is above the norm, this percentage is insufficient for its renewal.[10]

The development fund, like other funds of enterprises, possesses certain economic limits. Its increase can occur in conformity with the growth of sources, first of all profit. The norms of deductions should reflect the condition of the fixed capital. Taking into consideration that by this time a number of sectors have a large volume of obsolete fixed capital, it apparently would be practicable to significantly boost the norms of amortization deductions for renovation and for some enterprises to completely turn over renovation deductions. The objective basis of determination of funds for requipment should be normative outlays for reimbursement of withdrawal of fixed capital (minimal lower limit).

At the same time, it is necessary to intensify the cost-accounting functions of this fund so that the basis of its growth is increase of the enterprise's profitability.

One of the most important tasks of the experiment is expansion of the rights, independence and increased responsibility of associations (enterprises) with simultaneous improvement of state centralized planning. Reequipment of existing production is a functions not only of enterpises but also of the socialist state as a whole, for which reason, the need arises of improving planning of centralized and noncentralized capital investment in the development of five-year and annual plans.

Gosplan USSR, taking these requirements into consideration, approved the "Procedure of Determining Limits of State Noncentralized Capital Investment and Its Resource Provision Under the Conditions of the Economic Experiment. On the basis of targets of ministries for production volume coordinated with Gosplan USSR and existing norms of formation of funds of economic stimulation, associations and enterprises are granted the right to independently develop requipment plans and to determine the limits of state noncentralized capital investment and construction and installation work as well as to submit when necessary proposals relating to allocation of additional centralized capital investment. Ministries and departments in forming of consolidated plans of reequipment and plans of economic and social development are allocated noncentralized capital investment within the framework of general limits of capital investment established by Gosplan USSR.

With such a scheme of planning noncentralized capital investment, the interests of enterprises, sectors and the national economy as a whole are combined.

Development of the general conception of renewal of fixed capital and long-term sectorial programs, assurance of integration in the development of consolidated five-year plans of reequipment and improvement of the mechanism of their implementation will be promoted by the introduction in the national economy of achievements of scientific-technical progress, growth on this basis of labor productivity, stabilization and growth of yield on capital and improvement of other economic indicators of development of the economy. Under these conditions, more complete conformity of the process of reproduction of fixed capital with the requirements of intensification of public production is achieved.

FOOTNOTES

1. K.U. Chernenko, "Narod i partiya yediny" [The People and the Party are One]. Moscow, Politizdat, 1984, pp 12-13.

2. Furthermore, a portion of the capital investment (3-5 percent) does not form the cost of fixed capital, while a portion is connected to increase of expenditures on unfinished production.

3. "Metodicheskiye polozheniya po razrabotke Osnovnykh napravleniy ekonomicheskogo i sotsial'nogo razvitiya SSSR na 1986-1990 gg. i na period do 2000 g." [Methodological Positions for the Development of Basic Directions of Economic and Social Development of the USSR for 1986-1990 and for the Period to the Year 2000]. Moscow Gosplan SSSR, 1983.

4. "Metodocheskiye ukazaniya k razrabotke ministerstvami i sovetami ministrov soyuznykh respublik svodnykh planov tekhnicheskogo perevooruzheniya deystvuyushchikh ob"yedineniy (kombinatov), predpriyatiy" [Methodological Instructions for Development by Ministries and Councils of Ministers of Union Republics of Consolidated Plans of Reequipment of Existing Associations (Combines) and Enterprises]. Moscow, Gosplan SSSR, 1984.

5. "Sovershenstvovaniye khozyaystvennogo mekhanizma. Sbornik dokumentov" [Improvement of the Economic Mechanism. Collection of Documents]. Moscow, "Pravda", 1982, pp 95-105.

6. See: B. Ulyanov, "Program of Intensification of the Economy of Leningrad and Leningrad Oblast." PLANOVOYE KHOZYAYSTVO, No 2, 1985.

7. "Tselevaya programma rekonstruktsii i tekhnicheskogo perevooruzheniya deystvuyushchikh predpriyatiy promyshlennosti Buryatskoy ASSR na 1980-1990 gg. Pokazeteli, formy metodicheskiye rekomendatsii" [Special-Goal Program of Modernization and Reequipment of Existing Industrial Enterprises of Buryat ASSR for 1980-1990. Indicators, Forms, Methodological Recommendations]. Ulan-Ude, 1983.

8. "Sovershenstvovaniye khozyaystvennogo mekhanizma. Sbornik dokumentov" [Improvement of the Economic Mechanism. Collection of Documents]. Moscow, "Pravda", 1982, p 273.

9. "First Steps." PRAVDA, 8 Jan 1984.

10. PLANOVOYE KHOZYAYSTVO, No 1, 1984, p 43.

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INVESTMENT, PRICES, BUDGET AND FINANCE

CAPITAL STOCK REPLACEMENT AIDS INTENSIFICATION

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 85 pp 45-54

[Article by N. Fomichev, subdivision chief of USSR Gosplan: "Planned Updating of Fixed Capital--An Important Factor in Acceleration of Intensification"]

[Text] In the modern stage of development of the economy, in order to accelerate intensification and increase the effectiveness of public production, "we," as general secretary of the CPSU Central Committee, chairman of the Presidium of the USSR Supreme Soviet, K. U. Chernenko noted, "absolutely must provide for rapid and continuous updating of all branches of the national economy on the basis of the modern achievements of science and technology. This is one of our basic tasks. Without this progress of the society is simply unthinkable."[1]

Under the conditions of intensification of public production there are greater requirements for improving and updating fixed capital, providing for unity of all elements of their reproduction, and improving their quality indicators (labor productivity, output-capital ratio, profitability). At the present time there are still undesirable tendencies in the utilization of fixed capital, and first and foremost the output-capital ratio is decreasing. During 1970-1982, with an increase in the gross social product and the produced national income of 178 and 175 percent, respectively, fixed production capital increased by 247 percent. In 1981-1983 fixed capital also increased more rapidly than the gross social product in the national income did. This made it necessary to have additional capital investments for maintaining and increasing the rates of economic growth which, in turn, required an increase in accumulations and narrowed the possibilities of increasing the consumption fund. In recent years the increase in labor productivity has been lagging further and further behind the increase in the capital availability (Table 1).

While in 1975 the increase in labor productivity lagged behind the increase in its capital availability by 8 points, in 1980 it was 37 points, 1981--46, and 1982--55 points. The "cost" of the increase of each point in labor productivity thus is increasing, bringing about a need for additional startup of fixed capital and, consequently, also capital investments.

Table 1

(in % for 1970)

Indicator	Dynamics for Various Years 1975	1980	1981	1982
Growth of labor productivity	134	156	161	164
Growth of capital availability for labor	142	193	207	219

An increase in the capital availability for labor can be directed not only toward increasing labor productivity, but also toward reducing production costs and material expenditures and, on the basis of this, increasing profitability and, consequently, also fixed capital. But here too the process of reproduction of fixed capital has essential shortcomings--their profitability is decreasing (Table 2).

Table 2

Indicator	Dynamics for Various Years 1970	1975	1980	1981	1982
Industry:					
Fixed capital, billions of rubles	255.0	385.0	554.0	593.0	634.0
Profit, billions of rubles	56.0	65.9	73.3	75.0	87.8*
Profitability, %	22.0	17.1	13.2	12.6	13.8
Construction:					
Fixed capital, billions of rubles	22.0	35.0	55.0	60.0	65.0
Profit, billions of rubles	4.7	8.6	7.3	7.1	7.3
Profitability, %	21.4	24.6	13.3	11.8	11.2
Transportation and communications:					
Fixed capital, billions of rubles	117.0	171.0	237.0	252.0	267.0
Profit, billions of rubles	11.5	15.6	16.9	17.2	18.6
Profitability, %	9.8	8.9	7.1	6.8	6.9

*In comparable prices and conditions the profit in 1982 increased by 5 percent as compared to 1981. Profitability of fixed capital amounted to 12.4 percent (see "USSR National Economy in 1982," Moscow, "Finansy i statistika", 1983, p 509).

During the 1970s and 1980s the replacement of fixed capital was not intensive enough and because of this there was an increase in expenditures on preserving and maintaining outdated production capacities. In machine-building alone the annual losses from the utilization of outdated equipment amounted to about 200 million rubles.

Each year in industry only 1.2 percent of the fixed capital is replaced because of aging and wear and tear while according to the time periods for service and the norms for amortization no less than 4-4.5 percent of it should be removed, and in agriculture, construction and transportation, which have a

larger active part of fixed capital (machines, equipment) it should be even more.

Fixed capital that is obsolete and worn out must be promptly replaced. The time periods envisioned by the plan should be put in effect and new production capacities should be assimilated, and the expenditures on their creation should be promptly recouped. These requirements should be met on a planning basis.

Renewing fixed capital must be regarded in connection with efficient utilization of the existing production potential. In certain branches there are cases of prematurely writing off machines and equipment and therefore in addition to replacing outdated technical equipment it is necessary to make sure that it functions throughout the entire course of the amortization. And is used again in spheres where this is economically expedient.

The need to step up the rates of technical reequipment and reconstruction of existing production under the conditions of the higher requirements for intensification of the economy is determined by:

the greater volume of fixed capital in all branches of the national economy and the increasing needs to replace and update it;

the tasks of improving implements of labor and the technology of production under the conditions of scientific and technical progress and intensification of public production;

the requirements for streamlining and updating work stations and achieving balanced development of the capacities of existing enterprises and labor resources;

the need to eliminate manual, less attractive and less productive labor;

the peculiarities of the demographic situation, the reduction of the increase in the number of workers employed in the national economy, and the ensuing increase in the need for labor-saving equipment and technologies;

the requirement for increasing the effectiveness of capital investments as a result of reducing the time periods for operation and reducing the cost of construction.

the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Improving Planning, Organization and Management of Capital Construction," determined that technical reequipment and reconstruction should be the basis of the policy in the area of increasing production capacities in the next few years and in the more distant future.

The experience of the Dnepropetrovsk Combine Plant imeni K. Ye. Voroshilov shows that this work must be combined with certification and streamlining of work stations, taking into account the requirements of scientific organization of labor. Here there is a simultaneous increase in output-capital ratio and the growth rates of labor productivity which during 1979-1984 amounted to an

average of 8 percent, that is, a 1.7-fold increase over the 5-year assignment for industry as a whole.

The achievements of Sverdlovsk and Ivanovo oblasts in technical reequipment of enterprises is widely known. Technical reequipment and reconstruction comprise a constituent part of the plans for economic and social development of Moscow, Leningrad, Kiev and other large industrial centers. In the five-year plan for the economic and social development of the USSR during 1981-1985 the volume of capital investments for these purposes amounts to about 114 billion rubles. When preparing the annual plans the USSR Gosplan looks for possibilities of increasing them as compared to the assignments for the five-year period and obtaining as a result of this greater increases in output, the startup of capacities and economy of material and labor resources. Thus in the plans for 1983-1984 these expenditures were increased by 10-12 percent.

But the rates of increase in investments in technical reequipment under the 11th Five-Year Plan are inadequate. There is now a need for progressive changes in the structure of capital investments for purposes of replacement of outdated fixed capital, technical reequipment and reconstruction of existing enterprises and also the increased investments in equipment which are related to this.

Improvement of planning capital investments in reconstruction of existing enterprises also involves increasing their effectiveness and achieving greater production (increased capacities, output) and economic (reduction of production cost, increased profit) results. So far an increase in investments in technical reequipment and reconstruction does not sufficiently counteract the reduction of the overall economic effectiveness of capital investments and the utilization of fixed capital.

With technical reequipment and reconstruction expenditures are of a compensatory nature to a considerable degree. Some of them are used not for increasing but for replacing outdated fixed capital. In a number of cases the changeover of the enterprises to the output of new products requires a partial elimination of fixed capital for which the amortization period has not yet expired. Therefore the "output" of capacities and the increase in fixed capital per unit of capital investments can be relatively less than with new construction.

Under the 8th-10th five-year plans approximately one-third of the capital investments did not end up in an increase in fixed capital.[2] Under the 12th Five-Year Plan and in the future this process will become stronger. It is also necessary to take into account the fact that in the extraction branches (petroleum, coal and so forth) there are increased expenditures on the maintenance of existing capacities and the production volumes that have been achieved, and also a considerable proportion of the new construction in these branches is essentially related to maintaining the volume of production already achieved. For this reason the proportion of capital investments in simple reproduction of fixed capital and products in the near future should essentially increase. In order for technical reequipment and reconstruction to provide for an increase in the effectiveness of capital investments and existing production, new equipment should be more productive than the old

equipment (that which is being replaced) by a minimum of 40-45 percent. But even under these conditions it will be possibly only to maintain the achieved level of economic indicators (with a stable proportion of equipment). And in order to increase the effectiveness of the production of fixed production capital it is necessary additionally to increase the volume (as a result of changing the structure of capital investments) and the productivity of new technology and equipment. The solution to these problems depends on the effectiveness of capital construction and especially the technical and economic level of the planning decisions. Therefore it would be expedient to inventory the plans (new facilities started since the end of the 11th Five-Year Plan and those which will be started under the 12th). Here one should evaluate the influence of new planning decisions on the economic indicators of the development of the branches in 1985 and the 12th Five-Year Plan. On the basis of this it will be possible to select plans whose implementation will accelerate the intensification of public production. A certain idea of the necessary level of increased effectiveness of fixed capital is provided by comparing the average and the increased output-capital ratio, that is, the effectiveness of existing fixed capital and that which is introduced in each period. At the present time, as a result of the incomplete assimilation and the increased costs of production capacities (as compared to their productivity) the increased output-capital ratio (increase of national income compared to the increase in fixed capital) amounts to only 65-70 percent of the average output-capital ratio. An increase of 30-35 percent will provide for stabilization of the average output-capital ratio for the national economy as a whole. The establishment of economically expedient limits on increasing the output-capital ratio in the corresponding branches will create conditions for increasing the effectiveness of the entire totality of plans for newly introduced fixed capital. This work should be combined with an analysis and development of normatives of proportional capital investments per unit of introduced capacities and per unit of increase in the production of products whose development, consideration and coordination is now being completed for the 12th Five-Year Plan. This approach requires an essential restructuring in the planning, creation and introduction of new technical equipment and technology.

Improvement of the utilization of fixed capital and its increased influence on accelerating intensification are closely related to the development of the system of long-range planning. The five-year plans envision the development of consolidated plans for reconstruction and technical reequipment of existing enterprises, the assignment of limits on capital investments and construction and installation work, and they have also developed lists of enterprises that are earmarked for reconstruction and expansion. It is also assumed that priority will be given to measures being conducted through the fund for the development of production when providing capital investments, material resources and volumes of contracting work. The motivation of contracting organizations to carry out technical reequipment and reconstruction of existing enterprises have been increased.

When drawing up the five-year plan for the economic and social development during 1981-1985 and the annual plans for 1982-1984, the USSR Gosplan in conjunction with the ministries, departments and union republics conducted a certain amount of work for realizing these points. It prepared methods, forms

and indicators for consolidated plans. In the methodological instructions for the development of state plans for economic and social development (approved by the USSR Gosplan on 31 March 1980) they introduced a section entitled "Planning Technical Reequipment of Existing Enterprises" and in the five-year plans "Consolidated Indicators of Technical Reequipment and Reconstruction of Existing Enterprises."

The methodological provisions for the 12th Five-Year Plan and the long-range future[3] also include issues related to planning and normative support for technical reequipment and reconstruction. A number of the normative materials (methods for determining the economic effectiveness, normatives of proportional expenditures of capital investments and so forth) envision individual normatives for calculating resources for these purposes. The methodological provisions for planning fixed capital and capital investments for the long-term future and the forms and indicators for 1986-1990 include a special section for planning technical reequipment and reconstruction of existing enterprises.

Planned technical reequipment is a comprehensive task. It should include all levels of planned management: central agencies, ministries, union republics, associations and enterprises. The methodological bases for planning this process should be unified and coordinated. In this connection the USSR Gosplan in 1984 developed and approved specially developed methodological provisions for drawing up annual and five-year plans for technical reequipment and reconstruction at the level of associations (enterprises) and consolidated five-year plans at the level of ministries and departments.[4]

At the same time the USSR Gosplan perfected the organizational bases for the development of consolidated annual and five-year plans regarding this issue. At the beginning of 1983 the USSR Gosplan approved the "Policy for Organization of Work for Planning Technical Reequipment and Reconstruction of Existing Enterprises," which established that the consolidated plan for technical reequipment and reconstruction is formulated as an independent section of the entire plan, it stipulates that it should be developed more rapidly than the plan as a whole, it increases the composition of economic indicators (capital investments, production of products, labor, capital and capacities, finances and so forth) and in connection with this it has expanded the participation of functional divisions in its analysis and justification and determined the head division which is responsible for the methodological and organizational management of this work (consolidated division of the balance of capacities with the participation of the consolidated division of capital investments and the division of consolidated five-year and annual planning).

The established principles and organization of the work for priority planning of technical reequipment and reconstruction are reflected also in the general documents of the USSR Gosplan concerning the policy and the time periods for drawing up state plans for economic and social development (overall policy, policy for the development of the plan for capital construction, provision of construction sites with technological equipment and so forth).

Thus during 1982-1984 during the process of improving the planning of technical reequipment and reconstruction the organizational and methodological documents reflected the new requirements for substantiating not only the resources (capital investments, equipment), but also various forms of the effect: production (increased output and capacities), economic (reduction of production cost, increased profit, savings on fuel-energy and material resources) and social (improvement of working conditions, increased creative activity, environmental protection). They also clarified the content of the process of technical reequipment. It is regarded as a system of measures related to complete or partial reequipment of the enterprise as a whole on the basis of requirements for updating and qualitatively improving products, technologies, the system of management or comprehensive accounting in consolidated plans for progressive technical, economic and social requirements (normatives). Intrabranch and interbranch tasks for coordinating the reconstruction of interconnected branches and productions were also taken into account. The principle of priority development of this section of the plan in time is also extremely important. This makes it possible to determine both the volumes of expenditures and the corresponding production, economic and social results. As a result of this approach to forming the given section of the plan one meets the requirement of the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Improving the Planning, Organization and Management of Capital Construction": funds for the construction of new and the expansion of existing enterprises are to be allotted if the demands of the national economy for the given kind of product cannot be satisfied by existing enterprises, taking into account their reconstruction and technical reequipment.

Under modern conditions the development of five-year and annual plans is increasingly being combined with economic, social and scientific-technical plans and predictions for the long-range future (basic directions for 10-15 years, the comprehensive program for scientific and technical progress for 20 years, designs for the development of branches and economic regions for 15 years and so forth).

But in these materials questions of updating fixed capital and technical reequipment are developed fragmentarily and incomprehensively. There is now a need in the overall concept of economic and social development of the national economy and other planning and economic materials for the future to comprehensively consider various variants of the updating of fixed capital and the scope of its removal and replacement, to make a list of technologies that are to be removed from production, to determine the system of machines in the leading branches, the scope of production and the introduction of flexible production systems and robot equipment, and to establish a list of basic enterprises that are subject to complete technical reequipment and reconstruction. Taking this into account we should substantiate the rates and proportions of changes in the development of machine building, in the plans and balances for the distribution of equipment, in the reproduction and technological structures of capital investments, and in the structure of capacities of contracting organizations and technical support for the internal method of conducting work and organizing industrial and effective capital repair of fixed capital. These planning materials should be coordinated with the economic and social tasks of the national economy. The increase in the

rates of growth of labor productivity, the surmounting of the reduction and the stabilization of the output-capital ratio in the main branches, the reduction of the material-intensiveness and the increased profitability of production, the reduction of the proportion of manual and heavy physical labor, and so forth. When determining their prospects for the economic and social development one should extensively use the target program method of planning (the Food and Energy programs, the comprehensive program for the production of consumer goods and the system of services, the long-term program for land reclamation).

The target-program method should also be used more extensively for balanced and effective technical reequipment of existing production in branches of the national economy and industry. The need for the development of such programs is determined by the tasks of mass and large-scale renewal of fixed capital, branch and interbranch mutual coordination of consolidated five-year plans for technical reequipment and coordinated determination of the sequence of technical reequipment of the branches, enterprises and associations. The consolidated five-year plans for technical reequipment are inadequate under these conditions. Large-scale technical reequipment of a number of branches goes beyond the framework of the 5-year period. Long-term branch programs can more fully provide for unity the of annual and five-year plans as well as individual sections of the plan (plans for the development of science and technology, capital investments, production and updating of products, increased effectiveness and so forth).

The overall principles for their development (direction, address, balance and so forth) must be determined according to the "Basic Methodological Provisions for Developing Target Comprehensive National Economic Programs."[5]

The goal of the long-term branch programs for technical reequipment and reconstruction of existing production is to provide for fulfillment of the established assignments for the volumes of production of products and the updating of fixed production capital on a modern technical and economic basis and to raise the technical level of the branches as a result of the implementation of scientific and technical programs, taking into account the assignments of the comprehensive program for scientific and technical progress.

The development of a long-term program should be preceded by a substantiation of the needs for products and the level of its quality, an analysis of the technical development of the branch and its leading enterprises, and a study of the advanced domestic and foreign experience. To this end it is necessary to reveal the main directions for raising the technical level of production and improving the quality of products during the period preceding the planned one and the shortcomings that exist here; it is necessary to determine for each technically reequipped and reconstructed enterprise the paths for accleration of the introduction of the achievements of science and technology and the scientifically substantiated volumes of updating of the production apparatus. Special attention is devoted to improving the balance of production capacities and extensive introduction of resource-saving technologies for the production and output of effective materials and items.

Here one should conduct a technical and economic evaluation and a careful selection of the results of completed scientific research and experimental design work, licenses, and proposals of inventors and efficiency experts which are subject to be introduced.

The long-term branch programs must be developed on the basis of internal funds of the branches and resources that are centrally allotted for the development in the future, taking into account the established limits on capital investments and construction and installation work and also progressive proportions in the structure of such elements of production as means and implements of labor, energy, technology, labor expenditures and the organization of production.

They must include the following divisions: the substantiation of goals, tasks and the technical level of the development of the branch, the determination of the needs for capital investments, calculations and substantiations of the effectiveness of the program, and the basic measures for its implementation.

The overall planning materials for updating fixed capital as part of the concept of economic and social development of the national economy and the long-term branch programs that have been named can comprise the scientific-technical and economic basis for consolidated five-year plans for technical reequipment and reconstruction of existing production. In the first stage they could be developed as part of the systems for the development of the branches as an independent section, and as experience is accumulated they could become an independent planning document.

The branch programs should be balanced in the territorial cross-section as well.

In this connection the experience of the Leningrad party organization in the development of a territorial branch program for intensification on the basis of acceleration of the introduction of scientific and technical achievements into the economy of Leningrad and Leningrad Oblast, which was approved by the CPSU Central Committee, becomes very important.[6]

Principles of the program approach to intensifying the updating of fixed capital are also taken into account when planning the economic and social development of the Georgian SSR. In the Buryat ASSR they have also developed a program for reconstruction and technical reequipment of existing enterprises for 1986-1990, which sets tasks for technical reequipment of the republic's industry.

There is now a need to develop a unified methodological base for extensive dissemination of the program approach and the updating of fixed capital.

A decisive role in solving problems of intensification and increased effectiveness of public production belongs to associations (enterprises)--the main units in the system of the national economy.

In recent years there has been a decline of the role of the fund for the development of production in the updating and improving of the production

potential. Fixed production capital in industry under the 10th Five-Year Plan increased by 43.9 percent, and the fund for the development of production--by 35.2 percent. In 1982 as compared to 1980 the volume of fixed capital amounted to 114.4 percent, while the funds for development remained at the previous level. The growth of fixed capital outpaced the increase in the fund for the development of production, which led to a reduction of the proportion of the fund for the development of production with respect to the object of accumulation fixed capital in industry (in 1975--1.4 percent, in 1982--1.2 percent). This narrowed the economic possibilities of updating fixed capital at the level of their simple reproduction. In addition to this, there existed the practice of centralization of part of the money from the fund for the development of production, which additionally limited the possibilities of the enterprises to update the production apparatus. In industry there is a considerable volume of outdated fixed capital and the tasks of accelerating scientific and technical progress require an increase primarily in the technical level of the means of labor. These requirements have been taken into account under the conditions of the economic experiment that is being conducted in a number of branches of industry and in the sphere of consumer services.

There is to be an expansion of the rights of associations (enterprises) in the utilization of the funds for the development of production. Along with amortization deductions it can include some of the funds intended for capital repair of fixed capital. This increases the financial capabilities of the enterprises to update and improve fixed capital. Amortization deductions for capital repair of fixed capital in 1982 amounted to 18.4 billion rubles or more than 39 percent of the total startup of new fixed capital during that year. Effective application of these funds is an important national economic task.

Managers of associations and enterprises have also been given greater rights to utilize the unified fund for science and technology, to provide material and technical support, to plan work for technical reequipment and to finance this. All this is directed toward accelerating the introduction of the achievements of science and technology and advanced technology as well as improving the economic and social results of production on the basis of this.

At the February and April (1984) plenums of the CPSU Central Committee it was pointed out that the economic experiment should contribute to improving the entire economic mechanism and that its results should be fully taken into account when developing the plan for the 12th Five-Year Plan. Therefore it is expedient to consider a number of crucial problems related to further increasing the influence of the experiment on the acceleration of the updating of fixed capital and its technical reequipment.

In keeping with the existing methods,[8] the amount of the fund for the development of production depends on the mass and the normatives of deductions from profit, the norm for deductions from amortization for renovation, and the amounts of realization of removed property. It also includes up to 35 percent of the sum saved on fuel and energy resources. Some participants in the experiment suggest, in particular, increasing deductions into the development fund from profit,[9] while others suggest changing the normative of amortization

deductions for renovation. Under the conditions of the experiment the fund for the development of production includes up to 40 percent of the amortization deductions and 8 percent of the profit. With such normatives for deductions the enterprises receive considerable amounts of money. But at enterprises where the service life of the equipment is longer than the normative this percentage is inadequate for updating it.[10]

The fund for the development of production, like other funds of the enterprises, has certain economic limits. It can be increased in keeping with the growth of the sources, primarily profit. Normatives of deductions should also reflect the condition of fixed capital. Taking into account the fact that by now a number of branches have a large volume of outdated fixed capital it is apparently expedient to essentially increase the normative of amortization deductions for renovation, and for certain enterprises they should be fully turned over for renovation deductions. The objective basis for determining the fund for technical reequipment should be the normative expenditures for making compensation for the removal of fixed capital (minimum lower limit).

At the same time it is also necessary to strengthen the cost-accounting [khozraschet] functions of this fund so the basis of its growth will be the increased profitability of socialist enterprises.

One of the most important tasks of the experiment is to expand the rights and independence and to increase the responsibility of the associations (enterprises) with a simultaneous improvement in statewide centralized planning. Technical reequipment of existing production is a function not only of the enterprises, but also of the socialist state as a whole and therefore there arises a need to improve the planning of centralized and noncentralized capital investments when developing five-year and annual plans.

Taking these requirements into account, the USSR Gosplan approved the "Policy for Determining the Limits of State Noncentralized Capital Investments and Their Resource Support Under the Conditions of the Economic Experiment." On the basis of the assignments of the ministries for the volume of production which are coordinated with the USSR Gosplan and the existing normatives for the formation of economic incentive funds, the associations and enterprises have been granted the right to independently develop plans for technical reequipment and to determine the limits of state noncentralized capital investments and construction and installation work and, also, if necessary to make suggestions concerning the allotment of additional centralized capital investments. When forming the consolidated plans for technical reequipment and the plans for economic and social development the ministries and departments are allotted capital investments as part of the overall limits of capital investments established by the USSR Gosplan.

In this kind of system for planning noncentralized capital investments, the interests of the enterprises, branches and the national economy as a whole are combined.

The development of an overall concept for updating fixed capital and long-term branch programs, the provision of comprehensiveness in the development of

consolidated five-year plans for technical reequipment and improvement of the mechanism for implementing these will contribute to accelerating the introduction of the achievements of scientific and technical progress into the national economy, to increasing labor productivity on the basis of this, to stabilizing and increasing output-capital ratio, and to improving other economic indicators of the development of the economy. Under these conditions one achieves a fuller correspondence between the process of reproduction of fixed capital and the requirements of intensification of public production.

FOOTNOTES

1. K. U. Chernenko, "Narod i partiya yediny" [The People and the Party Are Unified], Moscow, Politizdat, 1984, pp 12-13.

2. Additionally, some of the capital investments (3-5 percent) do not form the value of fixed capital, and some of them are associated with the increase in expenditures on incomplete construction.

3. "Methodological Guidelines for the Development of the Basic Directions for the Economic and Social Development of the USSR During 1986-1990 and the Period Up to the Year 2000," Moscow, USSR Gosplan, 1983.

4. "Methodological Instructions for the Development by Ministries and Councils of Ministers of the Union Republics of Consolidated Plans for Technical Reequipment of Existing Associations (Combines) and Enterprises," Moscow, USSR, Gosplan, 1984.

5. "Improvement of the Economic Mechanism. Collection of Documents," Moscow, "Pravda," 1982, pp 95-105.

6. See B. Ul'yanov, "Program of Intensification of the Economy of Leningrad and Leningrad Oblast," PLANOVOYE KHOZYAYSTVO, No 2, 1985.

7. "Target Program for Reconstruction and Technical Reequipment of Existing Industrial Enterprises in the Buryat ASSR During 1980-1990. Indicators, Forms, Methodological Recommendations," Ulan-Ude, 1983.

8. "Improvement of the Economic Mechanism. Collection of Documents," Moscow, "Pravda," 1982, p 273.

9. "First Steps," PRAVDA, 8 January 1984.

10. PLANOVOYE KHOZYAYSTVO, No 1, 1984, p 43.

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INVESTMENT, PRICES, BUDGET AND FINANCE

ACCUMULATION, TECHNICAL ADVANCE IN USSR ECONOMY VIEWED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 85 pp 11-20

[Article by V. Krasovskiy, doctor of economic sciences, professor, and L. Fridman, candidate of economic sciences: "Accumulation and Technical Progress in the USSR Economy"]

[Text] Accumulation is an important factor in expanded socialist reproduction. The effectiveness of accumulation is one of the syntnetic indicators which largely determines the structure of the economy and the rates of development of the entire economic system.

The USSR national economy is oriented toward an optimal combination of accumulation and consumption and toward the latest achievements of technical progress, and it provides for full employment of its able-bodied population. In 1983 the overall volume of accumulation in the country's national economy reached 279.7 billion rubles. Of this amount 60-66 percent percent went for the growth of fixed production capital and the proportion comprising the increase in material circulating capital and reserves was equal to 34.40 percent. During this same year 25.5 billion rubles were allotted for the development of science and technology, or 6.2 percent more than in the preceding year.

But the rates of increase in capital investments have dropped appreciably in recent years. While under the 9th Five-Year Plan as compared to the 8th the increase amounted to 41.7 percent, under the 10th it was 28.7 percent, and under the 11th Five-Year Plan--only 10.4 percent. This reduction can be explained to a considerable degree by the significant deterioration of the conditions for the extraction of mineral raw material and fuel, the inadequate utilization of means of land reclamation in agriculture and the unfavorable weather conditions in recent years.

Additionally, there has been a tendency for products of the investment branches to become more expensive. There has also been a slower increase in expenditures on science. Some of the capital investments have been diverted for reproducing outdated technical equipment and constructing facilities that are not efficient enough. Therefore it was necessary to change the proportions in the direction of creating progressive technology.

The investment complex of branches in the USSR is oriented toward solving major problems: technical reequipment of existing enterprises and their construction, the creation of new industrial and agroindustrial centers, and also the construction of new transportation and energy systems and the latest research centers for biotechnology; space research, microelectronics and robot equipment. The resources of accumulation in these areas are not all utilized to the same degree. The existing production apparatus is being updated simultaneously with the utilization of funds for reimbursement and capital repair, while new scientific-technical and regional programs and scientific centers are being created completely through accumulation funds.

Planning the optimal proportions between accumulation and consumption is an important requirement of the economic policy for capital investments. As early as at the 15th Party Congress it was pointed out that one cannot proceed from unilateral interests of accumulation or one-sided development of consumption. But from the standpoint of the growth of socialist production over the extended period these interests generally coincide and it is necessary to take into account an optimal combination of both of these aspects.

The communist society "...in the future must calculate," wrote Marx, "how much labor, means of production and means of living it can expend without any damage on such branches of production which, like, for example, the construction of railroads, for a relatively long period of time, of a year or more, will not deliver either production capital or living funds and in general throughout the course of this time will not produce any useful effect but, of course, will take away from all annual production, labor, means of production and means for living."[1]

At first the socialist society could not provide for a proportion between accumulation and consumption which, without diminishing current consumption, would make it possible to expend considerable funds on long-term capital work. But long-term planning of an optimal combination of accumulation and consumption long ago became the guiding policy for our party.

Under modern conditions planning is increasingly approaching a rational combination of accumulation and consumption. This is indicated by the ratios achieved between the dynamics of capital investments (the main part of accumulation), the effective demand and commodity turnover. Capital investments are planned in time in such a way that they are accompanied at each given moment by an increase in output, especially of consumer goods for satisfying the growing effective demand of the population.

Technical Progress and Tasks of Accumulation

In economic literature one finds a tendency toward isolated consideration of issues of scientific and technical progress and the realization of resources of accumulation. At the same time economists engaged in the investigation and planning of capital construction and the investment process concentrate most of their attention on traditional aspects of reproduction. Still the problem

consists in correct interaction and coordination between the scientific-technical and investment areas.

At the present time the resources of accumulation in each planning period should be increasingly used for the development of scientific and technical progress. Investments in complexes that contribute to carrying out the fundamental tasks of modern science, territorial-production and agroindustrial complexes, and unified energy and infrastructural systems, including transportation and communications, urban construction complexes and so forth, are becoming very significant.

Scientific production complexes are being given priority development. Expenditures on their development are reaching large amounts and can sometimes be compared with the expenditures on entire branches of industry. Such, for example, are the investments in the formation of centers for space research or in the assimilation of powerful accelerators for solving problems of high-energy physics. And the capacities of the accelerators are constantly increasing. The complexity of the creation of such scientific objects is no less than that of the construction of modern industrial complexes.

Capital investments are being allotted for new productions and branches that are based on modern scientific research. As distinct from objects of the first group, the technological diagrams, production apparatus and equipment for all productions have already been developed. Examples are the enterprises for producing electronic computers of various generations, calculating equipment, space and vacuum equipment, integrated circuits and so forth.

Capital investments in this group of branches are intended for a long period, which is brought about by the need for preparing a number of related productions and essentially recertifying the capital construction. Of great significance here are the readiness of the capacities for machine building, the creation of experimental shops and applied research, and the training of skilled personnel. The period of "delayed effect" is shorter here than in the first group but it requires careful assimilation of many completely new units and productions and, consequently, is characterized by a certain time lag.

Finally, they are planning capital investments related to the replacement of outdated equipment, the updating of existing enterprises, their technical reequipment on a modern basis, the introduction of new technologies and the modernization of the entire production apparatus. Capital investments in this area have become especially important. But the resources of accumulation should be used primarily for the formation of principally new investment objects which do not duplicate existing capacities and the creation of a production apparatus of a modern type. The greatest synchronism between expenditures and the effect that is obtained is achieved in the group of investments in technical reequipment.

The most complicated task is the coordination of these three aforementioned investment areas. Here it is necessary to synchronize capital investments and their effect, taking into account the peculiarities of the implementation of large scientific plans, plans for the development of new branches that have been formed during the course of the technical revolution, and also capital

investments in modernization of existing production and enterprises that have been updated in connection with the intensification. It is also necessary to direct the efforts of labor collectives toward obtaining large final results without limiting initiative to intrabranch and intraplant achievements alone. Thus the collectives of agricultural machine-building plants must reach a point where their products correspond to the greatest degree to the improvement of the economies of the kolkhozes and sovkhozes and do not lead to an unjustified increase in the cost of fixed capital in agriculture. The enterprises that produce construction materials should not be oriented only toward an increase in the gross output or profit if these achievements involve the production of bulky or heavy items which only increase the cost and mass of the new structures and require additional raw and processed materials.

Substantiated evaluations of the amount of the social product and the effectiveness of accumulation to the development of a scientifically substantiated program for increased effectiveness of public production.

The so-called intangible expenditures should become a new component in the investment structure. In a capitalist economy these expenditures are understood to mean funds used for advertising, commercial operations, expenditures related to fictional capital and other purposes. Under the conditions of socialism this term can be used for another type of expenditure: the fund for inventions and patents, standard plans, original design decisions, new methods of construction planning in the designing of architectural components of buildings, and so forth. The documentation, which reflects the immense technical experience of our enterprises, research and planning institutes, inventors and architects, are of great value and should occupy a certain position in the investment structure and the structure of exports.

In light of the tasks for introducing technical progress intangible expenditures prevail among the factors that provide for the utilization of the most valuable and economic planning and design decisions.

Capital investments related to the development of the scientific and industrial complex become especially important. They include expenditures on experimental plants and shops, testing grounds and stands, laboratory buildings, planning and design bureaus, control and testing stations, adjustment services for automated instruments, and also computer centers that are equipped with electronic computers.

Accumulation and Investment Programs

The investment process consists of a number of short-term, medium-term and long-term construction programs which are distinguished according to the number of branches involved and the time periods for carrying them out. Some programs include enterprises that are implementing a complete cycle--from the extraction of raw material to the output of the final product--and have several sequential stages. Other, more complicated programs envision the construction of enterprises that are far from the final stages of production and are not directly related to the output of the final product.

In the first stages of industrialization in the USSR investment programs of the second type prevailed, which brought about certain difficulties because further economic development required the creation of new related productions and additional capital investments.

With the completion of the investment programs of the first five-year plans there appeared the immense capacities of new electric power stations, chemical and metallurgical plants, and enterprises of machine building and the construction industry. Thus the amounts of the final product and objects of consumption also increased.

An essential share of accumulation and material production was directed toward the implementation of large-scale investment programs. Under modern conditions the investment program for the construction of the Baykal-Amur Railroad Mainline (BAM) and the economic assimilation of the zone around it is equated to such large programs as the creation of the Ural-Kuznetsk Combine or the extremely large petroleum and gas complex in Western Siberia. Here, on an immense territory where more than 80 percent of the land is marshy, where there are thousands of shallow lakes, marshes and bogs, under complicated and unusual engineering-geological and hydrogeological conditions they completed large volumes of construction work, constructed a multitude of drilling towers, laid large petroleum and gas lines with pumping and compressor stations, and constructed new cities and villages. In essence, by the hands of the construction workers the image of the entire region was transformed.

The construction of the BAM also entailed the assimilation of an immense territory with an overall area of about 1 million square kilometers on which territorial production complexes will be formed, and first and foremost the Southern Yakutsk, on the basis of the utilization of the large supplies of coking coals and the complex on the basis of the Leno-Vilyuyskiye gas deposits. Many areas of this region are in the zone of eternal frost and there is a high level of seismic activity.

In Tyumen Oblast they have developed the construction of large petrochemical complexes in the region of Tobolsk and Tomsk, energy capacities have been started up at the Surgutskaya GRES, construction has been completed on the Tyumen-Tobolsk-Surgut-Urengoy Railroad as well as other facilities.

During the course of the formation of the immense territorial production complexes the latest technical decisions and technologies were applied. Thus methods were suggested for engineering utilization of peaty ground and peat as a basis for the foundations of buildings and structures, which produced a great economic effect and made it possible to reduce labor expenditures and capital investments by 30-40 percent. They extensively introduced less reinforced designs of pilings, drill set piles, lightweight foundations for equipment and so forth. At the Tyumen gas construction sites the degree of industrialization of work exceeded 90 percent. For the first time they used transportation on an air cushion.

The Technical Level of Production and the Dynamics of the Work Stations

Planned maintenance of the correspondence between labor resources and implements of labor is one of the most important conditions for the proportionality of socialist production and increased effectiveness of capital investments, fixed capital and new technical equipment. Under the conditions of intensification of the economy the rise in the technical level of production should not involve extensive creation of new jobs.

At the present time the imbalance between the number of jobs and the number of workers is appreciable in USSR industry as a whole and in individual republics. As has been noted in the literature, during the years of the 9th Five-Year Plan in the country's industry we created more than 2 million new jobs and under the 10th Five-Year Plan--more than 1 million jobs which were not provided for with labor resources. As research of the Institute of Economics of the Ukrainian SSR Academy of Sciences shows, at enterprises of the Ukraine which were put into operation during 1971-1980 the underutilization of production capacities was related to the lack of provision of a contingent of workers. Moreover the imbalance between the number of jobs and the labor resources in many branches is sharply increasing. For example, in the sewing industry of the republic the stock of equipment increased by 10 percent during the past five-year plan while the number of workers increased by 1.7 percent. As a result, many new jobs have remained unfilled.

Separate planning of the startup of new equipment and recruitment of new workers is not justified under conditions where there is a shortage of labor resources. It would be preferable, in our opinion, to keep accounts of the actual jobs on the basis of the coefficient of shift work for workers and to determine the overall number of jobs taking into account their elimination because of obsolescence and the increase in the number of jobs. It is necessary to arrange statistical accounting of the overall number of jobs and their cost, and also accounting for the coefficient of shift work, and to coordinate the planning of capital investments with the planning of labor resources and technical progress.

Under modern conditions the elimination of the imbalance is related not only to the increased labor force, but also to improvement of its utilization and perfection of the system of planning and management of labor resources. While during the period of extensive development of the economy the quantitative factor dominates in the reproduction of labor resources, the intensive path requires a higher quality level of the labor force whereby the increase in products is provided as a result of increased labor productivity and not an increased number of employees. Moreover there is a retardation of the growth of the number of employees in the national economy and greater requirements are made on the level of professional skill training.

With the intensive path of reproduction of the labor force there is a simultaneous rise in the standard of living (particularly an increase in the production of consumer goods and the development of trade, public health and culture) and also the level of education, which in the final analysis has a favorable effect on the growth of labor productivity. Thus intensification brings about expanded reproduction of the skilled labor force.

In order to maintain the necessary correspondence between the increase in production apparatus and the training of skilled personnel it is necessary to take into account the peculiarities of this process, one of which is the length of the cycle for reproduction of skilled personnel. In this connection the planning of their training is forward-looking by nature. Thus the training of specialists with higher education takes an average of 15-17 years (school, VUZ) and with a secondary specialized education--12 years (school, technicum). The active production activity of the specialist is determined within a period of 35-40 years throughout which he must study and increase his skills in keeping with the growing requirements of scientific and technical progress. But the training of a specialist should be preceded by the training of the teachers.

The change in the structure of the needs for skilled personnel which is brought about by the development of the national economy is not reflected in the same way in school education, on the one hand, and higher and specialized education, on the other. Improvement of the nature of school education is not directly related to the dynamics of the national economy and its structural changes. But a change in the needs of the national economy should be taken into account immediately in higher and secondary specialized education.

But even taking this circumstance into account one can say that the duration of the training and the activity of the specialists, which must be kept in mind when planning and predicting industry, exceeds the time of reproduction of the majority of fixed capital, giving way only to costly structures such as bridges, dams and road banks. Consequently, the 5-year period is inadequate for planning the training of specialists.

Speaking of economic plans of a long-term nature whose implementation goes beyond the framework of five-year plans, the majority of economists point out the need to create industrial complexes, to assimilate new territories and so forth. They basically link the expediency of long-term planning prospects to the solution to these problems. In our opinion, the advantage of long-term predictions consists primarily in the possibility of implementing large-scale programs for comprehensive improvement of the training of skilled personnel. It is precisely here as in no other area that an important role should be played by expansion of the planning horizon.

A second specific feature of the problem consists in that the training of skilled personnel has not only economic but also social aspects. In order to provide for expansion of the training of specialists in one occupation or another it is necessary to be concerned about its popularity. As we know, in order to establish popularity for an occupation sociologists use special cables of the prestige or social status of the occupations. Each occupation is characterized by a coefficient of prestigiousness.

It is not difficult to trace the degree to which the prestige and social status of an occupation influence the training of personnel from the example of training specialists for the sphere of services. Until recently there were not enough specialists in this area, and the occupations of workers in public

catering, trade and municipal services stood at the very bottom of the table of prestige.

When predicting the long-term tendencies in the development of the national economy and the need for skilled personnel in one specialty or another in the future it is necessary to provide for prompt occupational orientation of youth and the corresponding preparation of public opinion.

In order to solve the basic problems of reproduction of skilled labor it is necessary to maximally utilize the advantages of the long-range future as compared to the ordinary 5-year period. In each stage of the development of the national economy in the long-term prediction it is necessary to envision the optimal combination of expenditures on increasing capital availability and the availability of knowledge. Increasing production capacities without the corresponding occupational and skill preparation of personnel not only does not provide the desired results, but even leads to a drop in the output-capital ratio.

A certain lack of balance between the training of skilled personnel and the requirements of the branches of the national economy is one of the reasons for inefficient utilization of them. Thus a shortage of middle-level technical personnel forces specialists with higher education to waste time on functions which have nothing to do with their direct responsibilities. At certain enterprises specialists work as skilled workers. Here we are not speaking about those jobs which actually require the labor of specialists with higher and secondary specialized education, but about sections where the work can be done by skilled laborers.

The lack of correspondence between the structure of the training of skilled personnel and the public needs not only causes material harm to the society, but also makes it impossible to fully realize the socialist principle "From Each According to His Abilities, To Each According to His Labor," causes dissatisfaction among the workers of the given occupation, and reduces public labor productivity.

The state spends immense amounts of money on training skilled personnel. At the present time the educational potential (the indicator which characterizes the amount of education accumulated by all workers employed in the national economy) is estimated, according to rough calculations, in an amount of more than 400 billion rubles, which is an amount comparable to the value of fixed production capital. It does not make any difference to the national economy how this potential is used. Therefore there is a need to increase the balance of labor resources with the requirements of the country's growing production potential. Special attention was devoted to this problem in the speech at the meeting of the Politburo of the CPSU Central Committee on 15 November 1984 by Comrade K. U. Chernenko: "It is necessary to analyze in depth how the workers are distributed, how effective their work devices, how each hour of working time is utilized. During preceding years we have accumulated an immense potential in which the labor of millions of Soviet people is embodied. And we can no longer put up with a situation in which during the course of the working day in machine building 14 percent of all the equipment is not operating, and every third truck is not on a trip. This is inadmissible

inefficiency and squandering of public labor. And at each enterprise it is necessary to examine the situation in detail and achieve better utilization of existing capacities."[2]

Circulation of Accumulation Funds

Circulation of production accumulations is a part of a longer cycle of circulation of fixed capital of the socialist economy. It covers a period of 15-25 years. Over the longer-range period one can see a considerable acceleration in the replacement of means of technology and technological systems, even taking into account the opposing tendencies in the form of aggregate concentration and also concentration of enterprises. The time it takes to wear out production complexes can be reduced to 13-18 years, the economic deterioration of individual elements of complexes--to 8-12 years, the replacement of technological systems--to 6-8 years, and the replacement of models of equipment in production--to 3-6 years.

One of the mandatory conditions for achieving these long-range time periods for the operation of enterprises, technical equipment and technological systems is a sharp reduction of the time periods for the capital construction of new production complexes, including their reconstruction, and also a reduction of the time required for producing equipment. At the present time the construction period has been inadmissibly prolonged. The extended time periods for construction go beyond the limits of the normatives for the duration of the construction of enterprises and parts of them. Yet the period of construction and installation work is an important and perhaps even the key period of the entire investment cycle.

Prompt and rapid construction determines the degree of innovation and how economical the facilities that are being constructed and installed are. One situation exists when one puts into operation an advanced enterprise or technical complex which has great advantages over the average level of economic indicators in the corresponding branch. Another situation is created if the object is started up very late, when the technical equipment has already begun to be outdated and it is not at all at the level of the advanced achievements of scientific and technical progress. Here instead of the expected high effectiveness it is possible to have unfavorable economic indicators and they can drop below the average levels already achieved in the branch. In this case one cannot rule out the possibility that the enterprise that has just been put into operation will soon require modernization or reconstruction.

Above all it is necessary to keep in mind that the planned effectiveness of new enterprises and new technical equipment is stable with any time periods for construction. The indicators of the effectiveness of enterprises which are late in going into operation, on the contrary, can in a number of cases be less than was initially intended.

The time periods for the assimilation of new enterprises are also predetermined in the capital investments. Incomplete work and a lack of coordination of individual parts and sections and also the poor quality of

installation work are the main reasons for prolonged time periods for assimilation.

Unjustifiably long time periods for the construction and assimilation of facilities change the balance ties among the branches and enterprises and force the consumers to switch to other materials, to replace technical equipment that has not been delivered and to solve a number of economic problems in a different way. Therefore by the time of the completion of construction sites that are lagging behind the proportions of the branches and their balance ties can change and be different from what they were as envisioned in the drafts and the plans. For such facilities there is a change not only in their intraproduction economy, but also in the conditions for the sale of products, the geography of the deliveries of raw material and other factors. Thus the assimilation of the timber industry and aluminum combines in Bratsk almost 10 years later than planned led to a situation in which the energy from the Bratsk hydroelectric station had already been distributed and the new facilities had to wait for electric energy from the Ust'-Ilimskaya GES whose construction had been started.

All this shows that one should not determine the economic effectiveness of new enterprises in the stage of operation alone. One cannot be diverted from the investment stage if only because it is precisely in this process that the technical and economic indicators of the new facilities are formed, as is their ability to be successfully included in economic circulation and achieve progressive indicators of economic effectiveness.

The powerful construction potential of the USSR forms the technical level and economic effectiveness of future enterprises. Further increase in the effectiveness of fixed production capital depends on the rates of capital construction. This is determined by half and possibly by three-fourths during the first stage of the investment cycle. There has been an unjustified underestimation of the significance of the construction sphere when determining the reserves for economic growth and the effectiveness of the country's production apparatus.

Intensification of the USSR economy requires the achievement of compactness of facilities and economy in areas, the expenditure of materials and designs. This direction of technical progress is crucial for capital construction where there is still an extremely great mass of buildings, which increases the scope of the work of the zero cycle, and the construction of foundations requires powerful transportation, heavy parts and so forth.

In recent years decisive measures have been earmarked for extensive application of metal framework and lightweight panels made of aluminum, asbestos cement and sheet steel with insulation made of plastic foam, fiberglass slabs and other light fillers. The implementation of these measures will be make it possible to considerably reduce the overall material-intensiveness of construction items and expenditures on their transportation. At the same time possibilities will open up for more extensive conveyor assembly and block installation of coverings--the most complicated and labor-intensive part of buildings. These methods will increase labor productivity by 20-25 percent, and for the installation of metal structures--almost 1.5-

fold. The amount of time required to install the coverings is reduced by one-third. As a result, the overall time periods for the construction of industrial buildings can be reduced by 15-20 percent.

Acceleration of the production and the delivery in sets of lightweight metal structures for constructing industrial buildings will be an important stage on the path of further industrialization of construction. Conditions are thus created for changing over to better technology for construction production and the introduction of highly productive means of large-block assembly of buildings. The solution to this complicated problem will contribute to reducing the mass of the structures to one-fifth to one-seventh the previous amounts, to the dissemination of conveyor assembly and large-block installation of the basic elements of industrial buildings, to the reduction of the time periods for construction and to the acceleration of the introduction of construction facilities into operation.

Lightweight metal elements should be used primarily for constructing facilities for light, the food and the meat and dairy industries, enterprises for technical servicing of transportation, and warehouse facilities. It would also be expedient to use them in regions of the North, Siberia, the Far East and other regions where a great national economic effect can be achieved.

The chemical and petrochemical industry have been given the task of increasing the production of insulation materials based on polystyrene foam, polyurethane and other plastics, sealants, items made of slag and glass wadding, and also perlites and asbestos, anticorrosion and heat-resistant coatings, and high-quality dyes.

Recently, on the initiative of a number of planning institutes, planning has been organized for capital construction objects with individual completed blocks and sections. As a result, the enterprises under construction will begin to produce products even in the year after the beginning of the construction work, and the national economy will receive a rapid return on its money.

The practice of constructing plants designed according to the sectional module principle has produced a positive economic effect and has also significantly accelerated the startup of sections as a result of sequential construction.

Under modern conditions in the policy for accumulation and in the investment policy new approaches have been revealed, which have been brought about by the requirements of developed socialism, intensification of the economy, the increased role of scientific and technical progress and new ways of increasing the effectiveness of public production. A question has been raised concerning the need for concentration of resources in the main areas and the sequence in solving national economic problems. All this requires essential changes in the indicators of the plans for capital investments, in the changeover to progressive construction technologies and the improvement of methods of planning, and in the coordination with scientific research institutes, and it also requirements improvement of material and technical supply and rapid assimilation of new capacities and facilities.

FOOTNOTES

1. K. Marx and F. Engels, "Soch." [Works], vol 24 ,p 354.

2. K. U. Chernenko, "Completing the Five-Year Plan in a Worthy Manner and Accelerating Intensification of the Economy," speech at a meeting of the Politburo of the CPSU Central Committee of 15 November 1984, Moscow, Politizdat, 1984, p 10.

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RESOURCE UTILIZATION AND SUPPLY

STRICT PLAN ADHERENCE TO COUNTER RESOURCE LIMITATIONS URGED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 85 pp 3-10

[Article by S. Anisimov: "Improvement of Planning and Organization of Deliveries"]

[Text] The implementation of party decisions directed toward accelerated development of public production and increased effectiveness of the economy requires efficient interaction among various branches of the national economy.

The measures that have been adopted for strengthening discipline, increasing responsibility and introducing order in all areas of the economy are exerting a marked influence on improving the smoothness in the work of the associations and enterprises and they are contributing to the achievement of good results. An analysis of the work of industry shows that in 1984 the rates of public production increased and its effectiveness also rose. The majority of ministries, departments, associations and enterprises have kept up with the planning assignments, achieved an improvement in qualitative indicators and saved on many kinds of material resources.

There has also been a certain amount of progress in the fulfillment of contractual commitments for the delivery of products. Here a large role was undoubtedly played by the decree of the CPSU Central Committee and the USSR Council of Ministers adopted in April 1983, "On Serious Shortcomings in the Observance of Contractual Commitments for the Delivery of Products and Increased Responsibility of the Ministries, Departments and Enterprises in This Matter." As a result of stepping up organizational, economic and political-educational work, in industrial enterprises, ministries and departments they began to pay more attention to filling the consumers' orders. The number of enterprises that did not meet the commitments they had made decreased by almost 1,500. The volume of undelivered products under agreements that were concluded decreased by several billion rubles. A number of ministries achieved more than a 99 percent fulfillment of the plan for deliveries.

At the same time there is a significant number of enterprises that are not fulfilling their contractual commitments. Some of them are continuing as usual to overfulfill volume indicators to the detriment of the agreements that have been concluded. They do not always devote the proper attention to

fulfilling the production plan in the established products list. In a number of cases the enterprises are working sporadically and a considerable proportion of the monthly program is fulfilled in the third 10 days of the month. As a result their associates have interruptions in their production and fail to fulfill the socialist commitments they have made.

In his speech at the meeting of the Politburo on 15 November 1984 General Secretary of the CPSU Central Committee K. U. Chernenko said: "...It is necessary to provide for rhythmic work and strict observance of contractual commitments for the delivery of products. One must say that during the past 2 years we have managed to rectify the situation somewhat. But the task consists in achieving complete fulfillment of contracts everywhere."[1]

In our multibranch national economy with its many billions of rubles circulating through economic ties strict observance of delivery discipline is of immense significance. Any shortage of delivery under agreements can lead to serious interruptions in the work of the branches and a violation of the entire rhythm of production. This is precisely why the requirement concerning prompt and complete fulfillment of contractual commitments for the delivery of products is especially important.

As we know, under the conditions of the changeover of the enterprises of a number of branches to the large-scale economic experiment, complete fulfillment of contractual commitments is one of the major criteria for evaluating the activity of the enterprises. The bonuses for engineering and technical personnel and the supplementation of the material incentive fund depend to a large degree on the fulfillment of this indicator.

The course of the large-scale experiment being conducted in industry shows that attaching primary significance to the indicator of deliveries forces the enterprises to struggle to fulfill each order, each point of the agreement. Previously when there was a lack or a shortage of any particular material resources the enterprise could switch to manufacturing those kinds of products which at the given moment were fully provided with the necessary raw materials, processed materials and batching items. It fulfilled its planned volume indicators and, as a result, frequently ended up among the leading enterprises. Under the conditions of the experiment, when it has switched to manufacturing products that have not been ordered during the current period the enterprise, because of the failure to fulfill contractual commitments, loses a considerable proportion of its incentive funds and, as a result, its economic situation deteriorates.

Thus the conditions of the experiment force its participants to search for reserves for improving the organization of production and increasing technological discipline and responsibility for filling each order. Not all problems have been solved here, and there is a good deal that still has to be done. But in fulfilling the plan for deliveries much depends on the quality of material and technical supply and the elimination of shortcomings that exist in planning.

Balancing the production plan with its material and technical supply and the reliability of supply are of primary significance under the conditions of the experiment.

In the first stage of the experiment when the number of its participants was not large they managed to achieve certain positive changes with respect to these issues. As a result of the large amount of organizational and methodological work conducted by the USSR Gosplan, the USSR Gossnab, the ministries, departments, associations and enterprises for preparing for and conducting the experiment, the plans for production and deliveries and the normatives established for 1984 were submitted to practically all of the enterprises participating in the experiment 2 months earlier than in preceding years. This enabled them to improve the preparation for production, to adopt the necessary measures for providing for fulfillment of the established planning assignments and basically to resolve problems of providing production with material and technical resources before the beginning of the year. USSR Gossnab agencies satisfied all the demands of the participants in the experiment for accessories and the delivery of raw and processed materials.

But notifying the participants in the experiment of the plan earlier and improving the material and technical supply for enterprises was achieved through the creation of preferential conditions for the ministries and departments that were working in the new way and these were not accompanied by changes in the system of planning and organization of material and technical supply. They were the first to be notified of the production plan, long before the overall plans were drawn up, and they were allotted material resources without the delays caused by a situation in which there was a lack of correspondence between the needs of the national economy and resources, on the one hand, and the assortment, on the other. Orders for deliveries were submitted to them before the production and distribution balances were obtained. Later on workers of the USSR Gossnab system had to overcome on the spot numerous cases of a lack of coordination and the plans for production and distribution, omissions on the part of the ministries and all-union production associations, and mistakes of the enterprises themselves. Material resources were provided and advances were given not only from supplies existing in the bases and warehouses of territorial agencies of the USSR Gossnab, but in a number of cases also as a result of failing to delivery products to consumers of other ministries that were not participating in the experiment.

In 1985 the boundaries of the experiment will be expanded. It will include another 21 union and republic ministries. Moreover, consumer service enterprises of many oblasts are being changed over to the new conditions. Material and technical supply agencies have been given the task of providing the enterprises of all these ministries with resources necessary for fulfilling the production plan. Additionally, the volumes of deliveries for the increasing number of participants in the experiment will also increase sharply. It will not be easy to solve this problem since there is still a disbalance between the demand for resources and the provision of these for the needs of production. The attempt to create preferable conditions for participants in the experiment can have an effect in the provision of material resources for other enterprises, which in the final analysis will be reflected in interbranch proportions.

The solution to the situation that has been created can be seen in solving the problems that have accumulated in the planning and organization of material and technical supply.

The practice of the operation of industrial enterprises, construction organizations and supply-sales agencies shows that it is precisely shortcomings in planning, the imperfection of the plans themselves and their lack of balance that frequently become the primary causes of the difficulties in material and technical supply. It is no longer a rare situation when the sum of funds allotted is not fully provided with the actual resources, and the consumers are forced to look for various ways of making direct contact with the suppliers.

Additionally, there is an imbalance between the need in the national economy for a particular assortment of materials and the planned volume of production.

When analyzing the practice of developing plans for material and technical supply, one can single out three large problems which exert a large influence on providing production with material resources. The lack of the proper coordination of the plans that are developed, especially production plans and their material and technical supply; the poor quality of the balances that are drawn up and the fact that they are not consolidated, which is also true of plans for distribution; the lack of scientific development of methods for determining the optimal time periods for completing the development of plans for the distribution of material resources and informing all interested parties of them as well as retention of the numerous channels in the distribution of products.

All this complicates the work of industrial enterprises and construction organizations. A break in time between the beginning of the ordering of products and the delivery of plans for production and distribution as well as their inadequate balance create significant difficulties in providing the enterprises with material resources, which in the final analysis has a negative effect on the fulfillment of the delivery plans.

The practice of delivering material balances for timber products can be used as an example. For a number of years the assignments for shipping timber have been established in an amount of several million cubic meters less than the plan for the production and delivery of timber. This situation is repeated from year to year. They try to justify it by saying that the Ministry of Railways under the current conditions is incapable of increasing the shipments of timber, but the USSR Ministry of the Timber, Pulp and Paper and Wood Processing Industry is still not keeping up with the production plan. But this being the case there is no point in including in the plan an exaggerated amount of timber procurements. And if precisely this quantity of timber is necessary to satisfy the country's needs one should take concrete measures to provide for an increase in the volume of production of timber products and coordinate this with plans for shipments.

In the material balances for timber products there is always an increase in the quantity of timber remaining with the suppliers in an amount of 5-6

million cubic meters, which makes the plan for deliveries unrealistic. Each year in the plans for distribution the demand of the supply ministries for commercial timber to satisfy the needs of milling and for the production of containers is not fully taken into account. They do not devote the proper attention to balance of the assignments for producing timber from various kinds of trees with the possibilities of procuring timber on the basis of felling areas that have been allotted. These and other shortcomings in planning comprise the cause of the failure to fulfill delivery agreements.

The example that has been given shows that in order to increase the feasibility of the plans and the reliability of material and technical supply of timber materials there is no point in searching for ways of perfecting the methodology of planning, and what is needed is a sober evaluation of the actual possibilities of production and shipments. In places where the imbalance is obvious this must be eliminated without hoping that it will take care of itself during the process of implementation of the plan. Annual practical shows that miracles do not occur.

These shortcomings are also inherent in the balances for rolled ferrous metals, in which they also increase the resource part either through unrealistic sources or as a result of imprecise calculation of the possibilities of production. In a number of cases the volume of product output is planned without taking into account the need for assortment, especially when satisfying this need involves reducing the production volumes. Frequently they plan the volumes of output of effective kinds of rolled metal without considering the capabilities of the consumer. Thus the production of rolled metal from low alloy steel is planned without taking into account the needs for various kinds of it (high-grade and sheet). As a result, although the capacities for producing low-allow sheet steel are not fully utilized, when it comes to producing high-grade steel they are overloaded, and the need is not satisfied for either one of them.

For machine-building products, when forming the plans for production and deliveries, they do not always take into account the volume of carryover orders from the preceding planning period, which absolutely must be manufactured. The plans for distribution include residuals of annual output remaining with the suppliers, without properly taking into account the necessary carryover supplies envisioned by the normative for circulating capital.

Consequently, the shortcomings in the formation of the plans can be grouped in the following areas:

incomplete accounting for production capabilities of the suppliers and expected residuals of planned products with the suppliers and the consumers;

not always substantiated augmentation of resources;

errors made in determining the demand for the planned kind of products, especially in the cross-section of the assortment;

a reduction of the needs and the capital allotted to the supply branches for the planned products.

The effect of the aforementioned factors is conditioned largely by the separation of the participants in the development of the plans, on whom the quality of the plans and their balance depend. Take, for example, the work for determining the volume of industrial production, which is the basis of the resource part of any material balance. Frequently the enterprises, ministries and departments solve their own local problems without always taking state interests into account.

The enterprises for which the volume of output is planned on the basis of the level that has been reached in a number of cases frequently strive to reduce their production capabilities and at the same time increase their demand for material resources, thus ensuring themselves against any unexpected events related to shortages in supply or the lack of the proper delivery discipline. The ministries frequently do not exhibit the proper consistency in eliminating such phenomena. The result of this is a disparity between the declared need for material resources and the production capabilities of satisfying them. If the establishment of a difficult but realistic plan, one which maximally satisfies the assortment need of the national economy, requires well-arranged work on the part of all participants in planning. The ministries must have a deep knowledge of all production capacities of their enterprises and USSR Gossnab agencies must be aware of the assortment need while the USSR Gosplan must take all this into account when drawing up the plans. Unfortunately, in practice this requirement is not always met. As a result, the plans include unsubstantiated volumes of production and sources of resources, which brings about various additional assignments, and the need is still not fully taken into account while the balance is fairly conventional, which brings into question the fulfillment of the plan for deliveries, increases the unsatisfied needs and continues the sequence of uncoordinated actions.

Along with the subjective factors that influence the drawing up of the plans there are a number of objective factors which are reflected in the precision of material balances. It becomes clear that when they are formed there is a lack of the necessary information about the expected introduction of production capacities and the structure of capital investments. A good deal depends on the fulfillment of production plans during the months remaining in the year before the plan is to be implemented. As a result, when developing material balances it is necessary to rely on predictions. But the greatest negative effect is produced by the circumstance that the declared need is frequently greater than the available resources. Under the influence of this factor there is an increase in the resource part of the balances and, consequently, also the production plans and the ensuing assignments for economizing on raw materials, processed materials and fuel which are not always substantiated. In turn, there is a reduction of the funds for resources to fulfill the production plans.

Hence one of the immediate problems in providing for balance of plans for production and supply is a more precise determination of the need. The normative method is now being used for this. Therefore the precision of the accounting for the need depends upon the substantiation of the norms for the

expenditure of material resources for the given product. There is only one requirement for the norms: technical substantiation. But this is precisely the requirement that is not met in many cases. People's control agencies and the USSR Gossnab, when checking on the utilization of resources have repeatedly found at the enterprises a considerable elevation of the norms for expenditure and, consequently, also of the declared need. Even in 1984, in spite of the fact that better conditions for the delivery of material resources were created for participants in the experiment and they sustained losses from having above-normative residuals, some of them continued to elevate the demand. Thus the Moscow Dinamo Plant in 1984 declared a need for rolled ferrous metals which exceeded the actual level of consumption by 40 percent. But the corresponding increase in the production was not envisioned at the enterprise. As a result, the actual level of supplies of rolled ferrous metals at the plant exceeded the normative by more than 60 percent.

In a number of cases the norms for the expenditure of material resources are excessively elevated when designing machines and mechanisms. In 1970 the proportional expenditure of rolled ferrous metals for producing P-150K tractors, according to the norm, was envisioned in the amount of more than 8.4 tons, but now the norm is half this much.

There are basic reasons for the desire to elevate the norms for expenditures. In the first place this is caused by a lack of confidence in the reliability of the material and technical supply and hence a desire to create somewhat greater reserves. In the second place the inadequate substantiation of the assignments for the average reduction of expenditure norms is sometimes manifested. Yet the enterprise which has a supply in the amount of the norms themselves has the possibility of taking credit for fulfilling the established assignment for reducing them without changing the actual expenditures of material resources on the production of products. This is a very significant defect in the practice of norm-setting and organization of the struggle for economy. But it is widespread, which one can see by analyzing the data concerning economizing on material resources and proportional expenditures on the production of individual kinds of products. It frequently turns out that the assignments for reducing expenditure norms are being fulfilled, but the expenditures of resources are not decreasing.

Apparently a greater result can be produced not so much by an assignment for the average reduction of expenditure norms as by stable allotment to enterprises with an established production process of funds for the majority of kinds of material resources in order to provide for an increase in the volume of production as a result of economizing on the resources that are consumed. Knowing that there will be no additional allotment of resources and that it is necessary to increase production volumes, the enterprises will be forced to step up their search for ways of introducing the achievements of scientific and technical progress and better utilizing design thought and progressive technologies for creating reserves for economizing on raw materials which will provide the opportunity for further increasing production.

In addition to this it is now important to combine the efforts of planning and supply agencies for a deeper study of the declared needs for material

resources. An important role here can be played by territorial agencies of the USSR Gossnab which are closest of all to the consumer and are best-informed about the situation with respect to resources at enterprises of the region which are to use them, and these agencies can analyze them more carefully. It is also necessary to step up the work for monitoring the development of normatives and to give it a better direction. It is necessary to have regular planned investigations of the enterprises and associations as well as the work of the ministries in order to reveal cases of elevation of orders for resources and to put a stop to this practice. At the same time the central planning agencies must raise the level of administrative work. It is necessary to receive prompt and correct executive balances from the ministries and departments. They should be considered carefully and parties guilty of utilizing resources for nonplanned needs should be made to answer for this.

One of the important problems affecting the quality of the material balances that are developed and the fulfillment of assignments for deliveries is the development of optimal time periods for the completion of the development of annual plans for material and technical supply. Unfortunately, the five-year plan with the breakdown for the various years has not become the basic form of planning as was envisioned in the decree for improving the economic mechanism. We are not taking advantage of the possibilities of five-year planning of the distribution of material resources. Industry is not achieving the planned volumes of a number of products, which disturbs the stability of supply. The five-year plans for supply are not provided even for enterprises with stable production which have been changed over to direct long-term economic ties. In practice there are only annual supply plans. Here the development of plans for production and distribution is annually completed after the material and technical supply agencies have completed their basic work for assigning consumers to suppliers. The interests of the matter require that the plans for the distribution of material resources be submitted for consideration along with the plans for production and that the ministries and departments be informed of them before adopting the plan. For the work that is being done for assigning consumers to suppliers requires time and begins no later than 4 months before the beginning of the planned year and the ordering of products must take place long before the plans for production and distribution are received. This creates great difficulties in solving problems of providing the enterprises and construction sites with material resources. Moreover the lack of approved funds makes it impossible to check on the correctness of the orders.

The enterprises and construction organizations, in turn, not having established plans for production and construction or planning estimates and not knowing how the suppliers will fulfill their contractual commitments for the delivery of products before the end of the year, are unable to draw up precise orders for material and technical resources and frequently elevate them "just in case." The USSR Gossnab agencies, having received elevated order whose volumes exceed available resources which are based on preliminary data concerning the earmarked volume of production, are forced to solve a difficult problem: how to divide up the resources that are short supply and promptly issue orders for delivery.

As a result, the circumstances take form in such a way that the production plan is developed separately from the plan for material and technical supply, which makes it necessary to coordinate them by means of all kinds of changes and adjustments. In January-February agencies of the USSR Gossnab, having received approved plans for distribution, make changes in the deliveries. At the same time the consumers adjust their orders in keeping with the arrival of resources from supplies for the preceding year. Then in April-June they see the results of the transfer of residual resources as of 1 January and the work of refining the orders begins again. And since the removal of residual resources is delayed, the enterprises for which it is necessary to add resources in keeping with the results of the inventory receives most of them in the fourth quarter. A frequent result of such work is an imbalance between the production plan and its material supply. Some have a critical shortage of resources while others have surplus supplies.

In this situation it is frequently suggested that we bring the time periods for the completion of the development of plans for production and distribution closer to the beginning of the ordering of the products. The advantages of this policy can be seen in the fact that by basing the work on the plan for production one can determine the need for resources with greater reliability, monitor the orders and do a better job of issuing the schedule orders. In our opinion, as early as May of the year before the one being planned the ministries and departments should submit the drafts of the plans for production to the enterprises under their jurisdiction and at the same time announce the funds for material and technical resources according to the existing base. Having sufficient time before the beginning of the planning year, the industrial associations in conjunction with supply and sales organizations of the USSR Gossnab, production associations and enterprises, will be able to work out the assortment plans for production better, to formulate the scheduled orders for products and to conclude agreements.

In April 1984 the CPSU Central Committee and the USSR Council of Ministers adopted the decree entitled "On Improving Planning, Organization and Management of Capital Construction" which envisioned that the USSR Gosplan would develop a plan for the introduction of production capacities and facilities for the planned year and the one after it in April of the year preceding the planned year. At this same time it would be necessary to distribute the limits on capital investments and the construction and installation work taking into account the capacities of territorial construction organizations.

The implementation of this decree presupposes a change in the policy and the time periods for the development of plans. The formation of the plan for capital construction and the startup of capacities in April before the year being planned makes it possible to submit the production plans to the enterprises at an earlier time which will also contribute to better coordination of the plans for production with material and technical supply.

At the same time it is necessary to step up work for long-range planning. It is necessary to achieve greater substantiation of the production plans for the five-year period with a breakdown for the various years of its implementation

as well. The volumes of production envisioned in it should be the basis for the resource part of all material balances.

It will be necessary to raise the role of direct long-range economic ties among enterprises to a higher level. These ties should exert a greater influence on the formation of the assortment plans for production. Today the plans for assigning consumers to suppliers are drawn up for 5 years but they do not have the necessary force since they are not supported by funds for this period. Therefore in practice annual scheduled ordering of products prevails and this deprives the production enterprises of the opportunity of concluding effective long-term agreements and independently solving delivery problems.

It is known that large enterprises with stable production and consumption of resources have been changed over to direct ties. And this being the case it is time to allot funds to enterprises for 5 years with the breakdown for the various years, taking into account the fact that the increased volumes of production should be achieved mainly through economizing on resources. The allotted funds will serve as a basis for assigning consumers to suppliers and granting them the opportunity to display economic independence.

One more consideration has to do with priorities in deliveries. Today the supply enterprises received numerous instructions concerning the sequence of deliveries which are reflected in the rhythm of the work, especially for realizing the allotted funds. Frequently their implementation is accompanied by a readjustment of equipment and a reduction of the rates of production. This weakens both funding discipline and delivery discipline.

Experience shows that questions of priority should be solved only in the plans and as they are being fulfilled. This way of posing the problem will increase the responsibility not only of the enterprises, but also of the ministries for the fulfillment of the plan for production and deliveries.

The problems presented above do not exhaust the entire range of issues that affect improvement of planning and organization of deliveries. Their solution will contribute to increasing the reliability of material and technical supply, providing for stable growth of public production and increasing its effectiveness.

FOOTNOTE

1. K. U. Chernenko, "Completing the Five-Year Plan in a Worthy Manner and Accelerating the Intensification of the Economy," speech at a meeting of the Politburo of the CPSU Central Committee on 15 November 1984, Moscow, Politizdat, 1984, p 8.

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INTRODUCTION OF NEW TECHNOLOGY

NEW TECHNOLOGY IMPACT ON ITS PRODUCERS, CONSUMERS WEIGHED

Moscow EKONOMICHESKIYE NAUKI in Russian No 3, Mar 85 pp 69-78

[Article by V. Khaykin, docent, candidate of economic sciences (Kharkov): "The Introduction of New Technology: The Interests of Its Manufacturers and Consumers"]

[Text] The decisions of the 26th CPSU Congress and subsequent plenums of the party Central Committee concerning an all-around increase in the effectiveness of production and better utilization of the scientific and technical potential that has been accumulated orients the national economy, and above all the associations and enterprises of machine-building branches, toward intensive updating of products and the most rapid creation and assimilation of the output of new, highly effective machines, equipment and apparatus. "We absolutely need," emphasized Comrade K. U. Chernenko, "to provide for rapid and continuous updating of all branches of the national economy on the basis of modern achievements of science and technology. This is one of our essential tasks. Without this the progress of the society is simply unthinkable."[1] Moreover, we do not yet have reason to think that all the necessary conditions have already been created for the development, introduction and rapid growth of the output of new, more effective items. Regarding this, at the July (1983) Plenum of the CPSU Central Committee it was pointed out: "...With the introduction into practice of the achievements of science and technology we...have a fairly bad situation. The businessman who has taken a 'risk' and introduced new technology at his enterprise or applied or produced new equipment frequently is at a disadvantage and the one who avoids innovations loses nothing."[2] In other words, as of today the production and utilization of new technical equipment are frequently economically disadvantageous. It is fair to say that this is a kind of temporary phenomenon which has arisen because of certain imperfections in the arrangement of the economic mechanism which in no way ensues from the laws of our system. But this does not remove from the agenda, but, on the contrary, it makes it even more critical to solve the problem of the development and effective implementation of measures for eliminating this phenomenon.

Overcoming the arrears and bringing the economic interests of the enterprises that are the producers and consumers of the new technical equipment into line with the needs of the national economy for the most rapid creation and introduction of advanced technical equipment and technology constitute one of

the most important tasks in improving the methods of management in the modern stage. As is pointed out in the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Measures for Accelerating Scientific and Technical Progress in the National Economy," special attention should be devoted "to implementing economic and moral measures which would motivate all participants in the creation of new technical equipment and technology and their introduction into production to update these."[3] This sets for economic science and practice a number of problems toward whose solution the most serious efforts should be devoted.

Let us begin with the problem of determining the expediency of introducing new products from the standpoint of their influence on the effectiveness of the work of the consumers, and hence on the entire national economy.

The process of the development of new items (including the generation of a new idea of such an item, the creation of the necessary technical specifications, and the manufacture and testing of the experimental model) can have two essentially different points of departure. In the first place, this includes the needs of the users of the new item, in other words, the immediate needs of the client (say, for work in mines under conditions with a high gas content and the concomitant danger of fire and explosions made it necessary to have explosion-proof modifications of electric engines, and they were created by electrical machine builders). The system of interaction between developers and clients (consumers) of new technical equipment in situations like this is such that the latter set the task and display the initiative in the development of the new items while the former respond to it and suggest their solution, which is subject to coordination with the client. The advantage of this system is the initial direction of all work on the creation of new machines toward the satisfaction of real needs of the national economy (in the form of the client) and the solution to concrete problems which face the consumer. Therefore no doubts should arise about the need itself for creating new technical equipment (we are not considering cases in which the client when submitting the assignment is guided by narrow departmental interests which do not correspond to national economic needs). And the shortcoming of the type of relations described above for creating new items lies in the fact that it does not rule out the possibility of a utilitarian approach to the matter in which they strive to solve only the problem that is apparent at a given moment, without looking into the future, because of the inability of the client to predict and utilize long-range paths of development of technical ideas.

The other point of departure for the development of new technical equipment can be the scientific research of its developers who suggest new items on the basis of their ideas of the general needs of the consumers and the logic of the development of technical equipment in general and of facts and figures concerning machines and mechanisms in particular as well as the capabilities and requirements of new technology both in the consumer branch and in the branches that manufacture equipment. In this case the new machine, as if of its own accord, goes to the consumer and seeks it out, and its developers find the possible client (consumer, purchaser) and must then prove to him that their brainchild has a right to exist. In the best case the "go-ahead" for series manufacture of the new item should be given by its future consumer, and

this should serve as a guarantee of the actual advantageousness of the item both for the national economy as a whole and for specific enterprises that consume the new technical equipment. One must take into account that the innovative aspect of a product in and of itself, even if it is better than the one it replaces in terms of the majority of parameters, still does not guarantee its actual advantageousness to the society as a whole. We know of many cases in which new machines which have better characteristics than the old ones turn out to be disadvantageous to the consumer for the simple reason that, while they take advantage in practice of only one or two improved characteristics, they must pay for all of the improvements that have been made in general. Therefore when determining the expediency of changing over in production from former items to new ones one must obtain the approval for this from the consumers.

Because of the aforementioned circumstances it is not always advantageous to pay increments for the Emblem of Quality. Thus, for example, improvement of the qualities of some material or batching item can provide nothing for the producer of the new item since he is not able to utilize these properties because they do not correspond to other materials or batching items, because technology has not been developed for the new materials, or because changes have not been made in the design of the components that are manufactured for them. Therefore the consumer must make a choice: to acquire an improved item with the Emblem of Quality or to utilize the previous item which was quite satisfactory or (for the corresponding price) to obtain the new item which is fully or partially improved.

In general when solving the problem of updating products, which is based primarily on actual economic interests of the immediate consumers of the products, one should be oriented toward an actually feasible and not a hypothetical reduction of the production cost, increase in profit, or reduction of capital investments of the clients. Periodically one should also determine actually obtained effect from the new technical equipment for the consumer and take into account deviations that have been revealed both when evaluating the work of the associations and enterprises and when determining the further destiny of the innovations. Such daily monitoring of the effectiveness of new technical equipment on the part of the consumer in combination with state monitoring of the condition of the generalizing indicators for updating will be more effective than merely orienting the enterprises toward meeting various indicators for updating, which are far from reliably reflecting the true situation.

And so new technical equipment should be advantageous for its consumers and produce an additional effect for them, and through them, for the entire society. The position of the consumers of new technical equipment is thus simple to determine in principle. The situation is much more complicated for the creators of new machines and mechanisms, which is also true of any other new items for production and technical purposes--materials, batching instruments, means of automation, cable and so forth. The fact is that under the conditions of the economic separation of enterprises it is becoming increasingly significant to have mutual interests of the participants in the process of the production and utilization of new technical equipment for effective continuation of this process. Moreover, the broader the rights of

the enterprises, the greater the opportunities they have influencing these plans and the more dangerous it becomes not to have this interest. The most constant attention should be devoted to increasing this interest on the part of all participants in the processes of the creation and assimilation of new technical equipment under the conditions of the current expansion of rights and strengthening of the responsibility of the enterprises.

The problem consists in that, when implementing measures for accelerating scientific and technical progress at enterprises, one cannot separate the current cost-accounting interests of the producers of new technical equipment from the economic effect which will be realized for the consumers in the future. Obviously, the greater this effect and the sooner it is obtained, the greater should be the economic advantages to the producers of the corresponding machines and equipment. To accomplish this it is necessary to develop measures of an economic and organizational nature which provide for growth of the material incentives of the producers of new technical equipment as part of the overall system of incentives of enterprises for the results of their economic activity.

In order to solve the problem that has been raised it is necessary, first of all, to clarify how under the existing conditions the production of new products influences the indicators of the economic activity of manufacturing enterprises. Without knowing the mechanism of this influence it is difficult to formulate the measures for improving incentives as well. Moreover, the consequences of the introduction of new technical equipment for the enterprises that produce it are still far from being fully investigated. Let us consider this problem in greater detail.

The probable initial influence of the updating on the indicators of the economic activity of the enterprises that manufacture the new technical equipment can be imagined as is done in the table given below, which includes three levels. The first of them is formed by factors that are directly related to the changeover to the output of the new products. The second level includes the main quality indicators of the economic activity of the enterprise which are formed under the influence of updating the product. Finally, the third level reflects the final economic consequences for the enterprise of the changeover to the new products.

Let us consider the table below. The changeover to the output of new items is related primarily to changes in the fixed and circulating capital of the enterprises. As a rule, the manufacture of new items requires new machines, equipment and fittings. Most frequently in machine building one encounters situations in which new items are manufactured according to improved technology which saves on labor and materials and the acquisition of the new equipment cannot be avoided. For example, for the production of the new A-4M series of electric engines, the Kharkov Institute VNIITElektromash developed a principally new technology and designed the corresponding automated and slow lines which were manufactured by the plant's experimental institute. The work was conducted in direct contact with the client--the Ukrelektromash Production Association--and this made it possible to reduce the time periods for introducing the new series into production by a year or a year and a half and to save the state millions of rubles on the cost of the engines. One can also

give other examples of rapid creation and introduction of new equipment in order to provide for the production of new machines, mechanisms and apparatus.

Possible Initial Influence of Updating Products on the Economy of the Manufacturing Enterprise

First Level		Second Level		Third Level	
1.1	Need for new equipment	2.1	Reduction (retardation of growth rates) of labor productivity--(investigation--1.8-1.11)	3.1	Underfulfillment of plan and socialist commitments
1.2	Need for new materials and batching items	2.2	Increase in expenditures per 1 ruble of output (investigation --1.6-1.9)	3.2	Difficulties with maintaining wage fund at necessary level
1.3	Planning and creation of new technological fittings	2.3	Violation of contractual commitments (investigation--1.2, 1.6, 1.7)	3.3	Reduction of cost-accounting incentive funds
1.4	Increase in length of new production scale	2.4	Difficulties with certification of products (investigation--1.2, 1.6, 1.7)	3.4	Retardation of improvement of well-being of collective (investigation 3.1-3.3)
1.5	Taking away personnel for preparation and organization of the production of new items	2.5	Reduction of mass of profit (investigation --1.9, 1.11, 2.2-2.4)	3.5	Decline of prestige of enterprise and growth of difficulties (investigation 3.1, 3.4)
1.6	Increase in production risk	2.6	Drop of output-capital ratio and increase in payments for funds (investigation--1.1, 1.4)	3.6	Replacement of enterprise management as an expression of its inadequacy
1.7	Increase (appearance) of defective work in first period of production				
1.8	Increase of direct labor-intensiveness as compared to replaced products or reduction of their profitability				
1.9	Increased production cost of items as compared to replaced products or reduction of their profitability				
1.10	Increased labor expenditures per 1,000 rubles of output (investigation--1.3, 1.5, 1.7, 1.8, 1.9)				
1.11	Reduction of volume of production in physical or value terms (investigation --1.4, 1.6, 1.10)				

Nonetheless, as a rule, the acquisition of new equipment and also the dismantling of old machines and and the assembly of new ones which are related to this, the rearrangement of the areas and other work of this kind increase the expenditures of the enterprises that manufacture the new technical equipment, create additional problems (will they or will they not succeed in obtaining the new equipment, how will it be shipped in on time, installed, assimilated and so forth), and this does not contribute to increasing the motivation of the collectives to produce the new technical equipment.

In the majority of cases the production of new items requires also the acquisition of new materials and batching items, the arrangement of additional cooperation and so forth. Moreover, in each new item the developers try to include the best possible materials and, as a result of this, to improve the consumer qualities of the item or reduce expenditures on its production in order to stay within the price limit. And since in practice not all necessary materials can be obtained within the established time periods frequently the manufacturing plants have to search for substitutes (take, say, thicker profiles of rolled metal), which also involves great difficulties in supply and additional expenditures.

A new item also requires the creation of new technological fittings especially for it, which leads, in turn, to additional expenditures on its design and manufacture. Moreover, as a result of the fittings, depending on the unit cost, residual circulating and fixed capital increase, and this entails an increase in the capital-output ratio of the products and increased payments for funds.

The manufacture of new items also involves undesirable changes in the length of the production cycle. It is good, of course, if this length decreases because of the application of the new technology. But it frequently happens that at the beginning of the production of the new item the technology of its manufacture, regardless of how well thought out it may be, is still poorly assimilated and therefore the length of the cycle is temporarily increased. For example, in the Zaporozhtransformator PO the length of assembly work for new items as compared to already assimilated ones is increasing: for the assembly of the magnetic drive of the power transformer--1.5-fold, winding--2.1-fold, production testing--11-fold, releasing the product--2-fold, and on an average for all assembly work the length of the cycle increases approximately 2-3-fold. It is clear that such a situation has a negative effect on many indicators of the operation of the enterprise, and above all on the dynamics of the output-capital ratio, labor productivity and the volume of production, which in general decreases.

The next factor involved in the assimilation of new products, which exerts a great influence on the economic indicators of the enterprise, is the fact that personnel are taken away for preparing for and organizing the output of new items. In addition to workers of design and technological divisions, instrument services and shops, for whom this activity is a direct responsibility, there are also many categories of workers who are taken away for the assimilation of the new product from the work they traditionally perform. For example, in a situation in which new items are being introduced the management of the enterprise and its technical services are actively

involved in this process, and if the situation did not exist they could be engaged in improving the quality of items that are already being produced, introducing advanced organization of labor and production, and so forth. As pertains, in particular, to machine tool operators, assemblers, and other categories of workers who are involved in the process of the creation of new technical equipment, under other conditions they could be improving their skills in labor operations for producing items and thus increasing labor productivity. All of the aforementioned circumstances cannot but influence the economic indicators of the enterprises.

An extremely important factor which accompanies the changeover of enterprises to the output of new products involves the concept of the so-called production risk. What does this mean? The category of "risk" has so far been little involved in the description of the economic phenomena and therefore there is some point in discussing it in more detail here.

Perhaps the only section of the organization of production in which the concept of "risk" has been and is applied is the statistical (selective) monitoring of product quality, and here is there is a distinction between the risk of the producer and the risk of the consumer. In the former case one has in mind the probability that the annual output will be rejected because of the results of the selective monitoring of the batch of items (the inadequate quality of the sample that is selected from the batch is then explained by random fluctuations). The consumer's risk means the opposite situation: products that are unsuitable because of the results of selective testing of the quality of the batch will be called suitable (and so as a result of random fluctuations). Thus the concept of "risk" in both cases is related to the probability of obtaining a negative result.

Apparently this connection between risk and undesirable consequences can also be transferred to the concept of production risk with the changeover to the output of new products. In this case the risk will be characterized as a possibility of a worsening of the enterprise's situation, a reduction of its economic indicators, a failure to fulfill the plan and so forth as a result of the changeover to the output of new items. Here the risk is related primarily to the fact that the new item is not created at all or it is manufactured in violation of directive time periods or with deviations from the planned qualities. In all of these cases the economic situation of the enterprise should deteriorate.

Closely connected to the processes of assimilation of new items is the process of production rejects. It is clear that if the production of any particular product has already been assimilated the chances of the appearance of defective work is not great or else it does not exist at all. But with the changeover to the output of new items the possibility of defective work is much greater. And hence follows also the possible reduction of the production volume, additional expenditures and difficulties with the certification of the products.

Updating the products that are produced can also lead to another important (perhaps even the most important) consequences for the economy of the enterprises: increased labor-intensiveness and production cost of products,

and reduced profitability. At the beginning of the period of the "life" of the item introduction, when it is just changing from an experimental series to ordinary series output, expenditures on its manufacture, because of understandable reasons, as a rule, are great, and then they gradually decrease. The process of assimilation usually takes place unevenly; it is more intensive at the beginning, when the reserves for reducing expenditures are especially great, and then as these reserves are utilized the rates of reduction of the production cost and labor-intensiveness slowed down until their level approximately stabilizes (until there is a large new change in technology and production organization), which also means the completion of the economic assimilation of the items. Quantitatively these processes can be studied by various methods, particularly correlation-regression methods, and the factors that are arguments in the regression equations in this case are time (the number of years of the "life" of the items in production), the output of items in pieces, their accumulated output, and so forth.

A reduction of expenditures as the products are assimilated is essentially reflected in the economies of the enterprises: there is a reduction of the production cost of individual items as well as the generalizing indicator--expenditures per 1 ruble of output; the production volume increases since with the same number of personnel and reduced labor-intensiveness it is possible to produce more products; and profit and profitability increase. Under these conditions it is extremely advantageous for the enterprise to continue to produce already assimilated items and, conversely, it is disadvantageous to change over to new ones. The relative labor-intensiveness of the products increases, production costs increase, and profit decreases.

The list of factors of the first level presented in the table is completed with the growth of labor expenditures per 1,000 rubles of output and the reduction of the production volume in physical and value terms. It is as if they mediate the influence of other factors of the first level on the qualitative indicators of the work, although they themselves are more related to volume indicators.

The reduction of profitability that is initially involved with the changeover to the output of new items means at the same time a reduction in the volume of output in value terms, for profit goes both into the wholesale price and into the normative net output. A reduction of this, consequently, necessarily leads to a drop in the volume both in terms of value and in terms of normative net output, and in the latter case it is even greater since the proportion of profit in the normative net output is much greater than in the wholesale price. Consequently, a reduction of the profitability of the products leads to a reduction of the value volume of the output of products and simultaneously to an increase in the relative labor-intensiveness of this output.

Qualitative indicators of the work of the enterprises, and above all those such as labor productivity, expenditures per ruble of output, profit, fulfillment of deliveries, the level of product quality and output-capital ratio, are directly related to the aforementioned factors in updating production.

Take, for example, labor productivity. Without even mentioning the increase in the direct labor-intensiveness of the items when changing over to new models of them, also in effect here (and on the negative side) are the growth of relative labor expenditures per 1,000 rubles of output, the reduction of production volume in physical and value terms, and a number of other factors. As a result, at enterprises that are actively updating the technical equipment they produce, there is frequently a tendency toward reduction of the output of products per 1 worker. With this updating there can also be an increase in the expenditures per ruble of output. Also influencing in this direction is the increased production risk if the ensuing losses for reserve resources and the appearance of defective work during the first period of production of new items as well as increased labor and material expenditures and a reduction of production volume.

Further, in the series of indicators of the second level whose deterioration can be affected by a changeover to the output of new items there is the fulfillment of contractual commitments which is, as we know, one of the most important characteristics of the work of enterprises. For an overall evaluation of the influence of the process that is being studied on the interests of the enterprise it is extremely important to determine the nature of the influence of updating products on the fulfillment of this indicator. Unfortunately, this influence today can be characterized namely in a negative way.

Let us begin with the fact that, as was already noted, an increase in production risk can lead to outlays in the output of products, and hence to a violation of contractual commitments. And the greater the proportion of new products in the overall output, the greater the amount of risk, and along with it there is also an increase in the probability of violations in deliveries. This means that from the standpoint of providing for fulfillment of the most important evaluating indicator of the work, it is more advantageous for collectives of enterprises and associations not to change over to producing new products or at least not to increase the production of these. Therefore it is necessary to develop and realize in practice a system of measures for reducing production risk and reducing to a minimum the possibilities of violating deliveries when changing over to the output of new products.

One of the leading evaluating indicators of the work of associations and enterprises under modern conditions is product quality. The influence of updating on a change in the proportion of products of the highest quality category is not simple. On the one hand, a replacement of outdated items with more effective ones expands the base for obtaining products of the enterprise to be awarded the state Emblem of Quality. On the other hand, without even mentioning the increased production risk and the appearance of defective work, which was mentioned earlier, obtaining the Emblem of Quality for newly assimilated products involves a great deal of additional work for certification, which requires funds and the diversion of resources and does not always lead to the expected result. Moreover, in a number of cases the latest products turn out to be more effective than the new ones for which the certification has already taken place and which are still in effect, and then the changeover to new products means refraining from obtaining economic incentive funds for the output of already assimilated products. Therefore the

difficulties in conducting the certification of the new products can be a kind of impediment to their assimilation.

Among the other quality indicators of the operation of enterprises which can be affected by the changeover to the output of new products one should include output-capital ratio and profit, and the latter acts as a generalizing indicator of production and economic activity. Their main tendencies in connection with the effect of factors of the first level are given in the table and there is apparently no need to comment on these.

Let us go now to a consideration of the economic consequences of updating products and an evaluation of their influence on the interests of the collective, that is, to the elements of the third level that are presented in the table.

The first in this series are the possible underfulfillment of the plan and socialist commitments, the reduction of the cost-accounting incentive funds and difficulties in maintaining the wage fund at the necessary level. The main consequences of the deterioration of the economic indicators of the enterprise can apparently be reduced to precisely these three phenomena if one considers them from the standpoint of the interests of the collective. It is not difficult to show that all these phenomena are most directly linked to the main quantitative and qualitative indicators of the work of the enterprise, and this means also to the factor of updating products. Thus the amount of the wage fund is directly connected to the production volume and the growth of labor productivity, and frequently also to the level achieved in the preceding (base) year. It is clear that a changeover to producing new products, by causing an increase in the absolute and relative labor-intensiveness of the items, a reduction of labor productivity and an overall reduction (retardation of the growth) of the production volume will lead (or can lead) to a shortage of the wage fund under these conditions.

Another economic consequence of updating products at the enterprise, along with the difficulties with the wage fund, is the reduction of its economic incentive funds. This amount is affected by the movement of literally all the quality indicators of the operation of the enterprise that are presented in the table. In this connection it is especially important to single out failure to fulfill delivery agreements, which brings about extremely appreciable losses in the economic incentive funds both for each percentage point of underfilfillment of deliveries and as a result of the failure to obtain increments to the material incentive fund for 100 percent fulfillment of deliveries.

Thus the influence of updating products on the amount of cost-accounting incentive funds is great. And this is extremely important because, although these funds themselves are relatively small as compared to the wage fund, their significance for individual categories of workers is extremely appreciable: engineering and technical personnel and employees, for example, receive most of their earnings in addition to their salaries precisely from the material incentive funds. Also of no small importance are the payments from the sum for workers, especially in the form of "13th wages." Therefore the material interests of the labor collectives when reducing cost-accounting

incentive funds are violated in a sensitive way, and this serves as a reason for the undesirability of any actions which could lead to reducing the amount of the economic funds.

The third of the possible consequences of changing over to new products which was noted is failure to fulfill the plan and socialist commitments. It can be the result of the deterioration of any of the aforementioned qualitative and quantitative indicators of the activity of the enterprise. Let us note that in addition to the immediate results for the collective when they fail to fulfill the plan and commitments in the form of their sense of dissatisfaction with their work, moral harm and also deprivation of the right to remuneration for the results of the competition which was mentioned above, other losses are possible for the enterprises, for example, a reduction of the incentive funds envisioned by the policy that is in effect in all branches of industry for fund forming when there are deviations from the plan. Here one should also mention the administrative and party responsibility of the managers of all ranks for the violation of state planning discipline.

The practical result of the aforementioned consequences of the deterioration of economic indicators when changing over to the output of new products will be a retardation of the improvement of the well-being of the collective and a decline in the prestige of the enterprise as a unit of public production and a place of possible application of labor, and also the ensuing further increase in difficulties. It is clear that, on the one hand, at an enterprise with low quality indicators and a slow rate of improvement of the well-being of the workers it is more difficult to maintain people, that is, it is possible to have an eroding of the existing collective here. Such an enterprise is less trusted and finds it more difficult to obtain additional resources, limits and so forth. All this cannot but worsen an already difficult situation. For example, the predictable result of the aforementioned increase in difficulties could be a replacement of the enterprise's management as a reflection of its (the management's) inadequacy.

Of course what has been said does not mean that updating products necessarily leads to negative consequences. This is prevented by the factors that counteract this. If the possibility of such consequences exists, and it should be taken into account in order to develop measures to prevent them. In particular, without going into all the consequences of updating products for the economy of the manufacturing enterprises it is impossible to effectively improve the economic mechanism for managing the updating. Another thing is also clear: in order to ensure the advantageousness of new technical equipment for its producers, this mechanism should envision: a) compensation for losses that result from changing over to the output of new products, including payment of a kind of "insurance" for risk (this will initially provide for it being as advantageous as the old product); b) additional incentives for this product (which makes it more advantageous); c) payment for the compensating and stimulating parts through the real additional effect which is obtained by the actual consumers of the new technical equipment.

Thus an important direction for economic work for controlling the updating of products is to develop measures for stimulating this. They should include, first of all, measures in the area of forming cost-accounting funds for

economic incentives for enterprises and stimulation funds for new technical equipment, the distribution of funds between the developers and manufacturers, price setting for new products and the determination of incentive increments for new, highly effective items, the organization of bonuses for new technical equipment, and so forth. Solving a number of these problems is envisioned in the decree of the CPSU Central Committee and the USSR Council of Ministers concerning accelerating scientific and technical progress, expanding rights and increasing the responsibilities of associations and enterprises for the results of their activity and the normative documents that ensue from these.

In particular, there has been an essential increase in the amounts of incentive increments to wholesale prices for items of the highest quality category, incentives are provided for the creation of temporary collective who are engaged in the development of individual scientific and technical problems, and at enterprises that are operating under the conditions of the large-scale economic experiment it is permitted to combine all of these funds for bonuses into a unified material incentive fund (YeFMP) and to distribute them in order to achieve the best results, the maximum amounts of bonuses for new technical equipment have been increased, and it is permitted to significantly increase the salaries of engineering and technical personnel (through increments) depending on the effectiveness of their activity).

At the same time rapid development of scientific and technical progress is constantly raising problems on which it is necessary to work. It seems to us that it is now time to satisfy, in particular, the need for an immediately solution to certain problems in the area of stimulating the introduction of new technical equipment. It is necessary to increase the reliability of calculations for determining the effect from the utilization of the proposed technical decisions, for without reliable data concerning the amount of the effect it is difficult to organize the proper incentives for the developers and creators of new technical equipment. In turn, this requires increasing the responsibility of the clients for the correctness of the effect they have confirmed. It is possible to do this, for example, by means of an automatic reduction of the established levels of production cost (maximum expenditures per ruble of output) by the amount of this effect, or by adding to the credit of the clients of the new technical equipment. The overexpenditure of state funds is caused by the increased effect.

It is necessary, further, to neutralize the losses of the enterprises in the wage fund and the economic incentive fund that result from the reduction (retardation of growth rates) of the volume of production when updating products. For if they have not managed to solve this problem at least they have come close to a solution in the electrical equipment industry where for several years now when determining the growth rates of production volumes they have taken into account the amount of the effect from the utilization of the newly manufactured technical equipment in the national economy. This positive experience can and should be extended to all branches of industry, the more so since the methods adopted in the electrical equipment branch for solving the difficult problems that arise in determining the relative losses and labor- and wage-intensiveness and relating these to the amount of the effect are suitable for utilization in other branches as well.

One should also balance the sum of bonuses received and paid by the enterprises from various sources. Until recently, for example, economic incentive funds for new technical equipment comprised less than 10 percent of the overall mass of funds, and this in no way contributed to the appearance of correct ideas about the role of technical progress in improving the well-being of the collectives. Along with the creation of the YeFMP, which was mentioned above, it is obviously necessary to differentiate more clearly the systems of bonuses of individual categories of workers, especially technical services of the enterprises, making the remuneration directly dependent on the effectiveness of the technical solutions that are proposed. It is also extremely important to eliminate the anonymity in awarding bonuses to workers for the results of the fulfillment of deliveries. While in always strengthening the link between bonuses and deliveries for those workers on whom their fulfillment directly depends, at the same time one should refrain from making this link excessive for those workers whose activity does not directly affect deliveries. In this case, as in others, one must not forget that bonus funds are limited and their distribution with the simultaneous application of many indicators inevitably weakens the motivation to achieve each of them individually, particularly in the introduction of new technical equipment. In order to eliminate the contradiction between the motivation to create new technical equipment and the fear of failing to fulfill delivery plans as a result of this, it seems useful to refrain from including newly assimilated items of new technical equipment (with a certain level of their effectiveness) in the list of positions from which the fulfillment of deliveries is calculated.

Quite understandably, as they are discussed and further developed, measures of this kind should be appropriately reflected in the normative documents for stimulation of production.

Experience shows that their adoption should be based on an in-depth study of the existing tendencies and modeling of the possible effective normatives, and here there should be the broadest possible application of the results of the analysis of the interconnection between updating products and the economic indicators of the work of the enterprises. On the other hand, these results will also be necessary when preparing the enterprises for changing over to new conditions, when it will be necessary to restructure intraplant systems of cost accounting and stimulation, when it is impossible to do without a knowledge of the patterns in updating. This means that in this case too, on the basis of considerations of improving systems of incentives, it is also necessary to investigate the influence of updating products on the economies of the enterprises--the manufacturers and the consumers of new technical equipment.

Finally, it is necessary to improve the methods of planning the updating of products, beginning with the solutions to such relatively less complicated problems as prompt planning for preparation of production or the development of a normative base for planning calculations (here there can be extensive application of economic-mathematical methods of network planning and correlation-regression analysis), and ending with the economically most complicated ones--the determination of the optimal time periods for updating for the producers and consumers of the new technical equipment.

In conclusion let us note that in and of itself an analysis of factors that influence the motivation of the producers and consumers to introduce new technical equipment, like the disclosure on the basis of this analysis of various quantitative patterns, or even their utilization in economic work produce nothing if they are not combined with a high level of organization and discipline, and the mobilization of the collectives of enterprises and scientific research institutes toward acceleration of scientific and technical progress as is required by the decisions of the July and December (1983) and April (1984) plenums of the CPSU Central Committee.

FOOTNOTES

1. Chernenko, K. U., "The People and Party Are Unified," a speech at a meeting with the electorate of the Kuybyshev Electoral District of Moscow on 2 March 1984, Moscow, 1984, p 10.

2. "Materials of the Plenum of the CPSU Central Committee of 14-15 June 1983, Moscow, 1983, p 10.

3. PRAVDA, 28 August 1983.

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GENERAL

METHODOLOGY FOR ANALYZING OPERATIONS OF EXPERIMENTAL PROGRAMS

Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 85 pp 11-14

["Methodological Recommendations for Analyzing the Results of the Work of Enterprises Under the Conditions of the Experiment" approved by the Commission for General Management of the Economic Experiment of 29 December 1984]

[Text] In the fifth issue of EKONOMICHESKIYE GAZETA for 1985 we announced the "Methodological Recommendations for Analyzing the Results of the Work of Enterprises Under the Conditions of the Experiment," which were approved by the Commission for General Management of the Economic Experiment. In their letters to the editorial staff the workers of many enterprises expressed an interest in the content of these methods. At the request of the readers, the text of these Methodological Recommendations is published below.

Introduction

The present Methodological Recommendations are intended for analyzing the work of ministries, associations and enterprises in the following areas:

formation of the plan;

fulfillment of contractual commitments for deliveries;

labor productivity and wages;

production cost of industrial output;

the material incentive fund;

the fund for sociocultural measures and housing construction;

the fund for the development of production;

scientific and technical progress;

product quality;

finances and profit;

capital construction;

material and technical supply.

The methodological recommendations for analyzing the results of the work under the conditions of the economic experiment, which were developed by the USSR Central Statistical Administration in conjunction with the USSR Gosplan and the Scientific Research Institute of Planning and Normatives Under the USSR Gosplan, are recommended for ministries, departments, associations and enterprises to be used when analyzing their activity under the conditions of the economic experiment.

Formation of the Plan

When analyzing this problem one should show the basic changes in the organization of planning work for the various ministries and production associations (enterprises) participating in the economic experiment, the increase in the role of enterprises in the formation of plans in all stages of planning, and their increased responsibility for fuller satisfaction of the demands of the national economy and the population for the products they produce.

Special attention should be devoted to:

the policy for developing drafts of planning assignments in the various stages, the deadlines for the enterprises to receive the control figures, limits and economic normatives from the higher organizations, the deadlines for the enterprises to submit to the higher organization the drafts of the plan, and also the deadlines for the higher organizations to approve the planning assignments and return them to the enterprises under the conditions of the economic experiment and before it was being conducted;

the observance of the rights of the enterprise regarding approving planning assignments for them according to the list of indicators and informing them of indicators that are not envisioned by the corresponding decrees of the USSR Council of Ministers;

the deadlines for receiving orders for production and delivery of products from the consumers and the correspondence of the earmarked production program to the existing orders for the delivery of products.

Fulfillment of Contractual Commitments for Deliveries

A most important area in the complex of measures envisioned by the economic experiment is increasing incentives and strengthening of the responsibility of enterprises and associations for the observance of contractual discipline.

The fulfillment of contractual commitments is characterized by:

the level of fulfillment of the plan for the sales of products taking into account delivery commitments;

the volume of undelivered products;

the number and the proportion of enterprises that have fully provided for and those that have not provided for the fulfillment of contractual commitments;

the grouping of enterprises in terms of the degree of fulfillment of the plan for sale of products, taking into account commitments for deliveries;

the number of enterprises that have not provided for the fulfillment of the plan for deliveries while having provided for the plan for the overall volume of product sales.

These indicators are analyzed in comparison with data for the corresponding period of the past year, and also for various periods of the report year (for individual months and quarters).

It is necessary to analyze the main factors that influence the failure to fulfill the plan for product sales taking into account commitments for deliveries, devoting particular attention to the following:

fulfillment of the plan for the production of the main kinds of products;

the correspondence of the production plan to the assignments for the delivery of products;

the rhythm of the production and fulfillment of planning assignments for the main kinds of industrial products;

the influence of prompt dispatch of products (provision of means of transportation, fulfillment of the plan for the loading of cargo, observance of the established time norms for loading the cars);

the provision of the enterprises with the allotted material and technical resources according to the list agreed upon with the consumers under the policy of guaranteed comprehensive supply on the basis of long-term agreements.

When conducting the analysis it is necessary to reveal the sums and the dynamics of fines for underdelivery of products and to bring up cases in which, when the plan for product sales taking into account commitments for deliveries was fulfilled by the enterprises, fines were paid for failure to deliver products.

When studying the state of contractual discipline directly at the enterprises on the basis of the existing primary report documentation one should consider:

the correspondence of the agreements to the submitted planning documents (orders), and the plans for assigning the delivery of products, and in case they do not correspond, one must reveal the reasons (the refusal on the part of the consumers to conclude agreements, the late issuance of planning documents, the lack of correspondence between the orders and the production plan, and so forth);

cases of concluding again or shifting the deadline for the fulfillment of agreements to a later period, rejection of the ordered products by the consumer;

the reasons for the failure to fulfill contractual commitments for deliveries of specific kinds of products within the established time periods and according to the list (assortment) and quality;

for enterprises that have not fulfilled contractual commitments but have provided for fulfillment of the plan for the overall volume of sales one should analyze the influence on the fulfillment of the plan in terms of the overall number of sales of products that is exerted by the output and sale of illegal products, deliveries to individual consumers in excess of the quantities envisioned by the contracts and orders, and the performance of work and the delivery of products to which the provisions concerning deliveries do not apply;

the influence on the fulfillment of the delivery plan of the dispatch of products to the consumer under the transit norms;

the degree to which the production plan and the indicators for planning and evaluating the activity of shops, sections and brigades are connected to the plan for the delivery of products;

the influence on contractual discipline of direct long-term economic ties (the number of agreements, clients);

the enterprises participating in the experiment have been granted the right to sell consumer goods manufactured in keeping with agreements which the consumer has refused to trade enterprises at their own discretion and to count these goods toward the fulfillment of the plan for deliveries. It would be expedient to analyze data concerning the volume of these goods and also their proportion in the overall volume of products.

Labor Productivity and Wages

When analyzing these indicators one should reflect the degree to which, under the conditions of the economic experiment, possibilities of accelerating the growth of labor activity, improving the utilization of labor resources, and providing for the increase of products as a result of increased labor productivity are being realized. One should also reveal the degree to which the system of economic incentives motivates the enterprises to increase labor productivity.

Labor productivity is characterized by:

the fulfillment of the plan and the dynamics of labor productivity;

the observance of the limit and the dynamics of the number of workers;

the proportion of increase in output as a result of increased labor productivity;

grouping of the enterprises in terms of the level of fulfillment of the plan according to labor productivity;

grouping of the enterprises in terms of the level of increased labor productivity, singling out enterprises that have allowed a reduction of labor productivity;

savings on the number of workers as a result of increasing labor productivity.

Taking into account the fact that one of the goals of the experiment is to accelerate the rates of scientific and technical progress, one should analyze the degree to which increased labor productivity has been provided for through scientific and technical progress. To these ends it is necessary to analyze the data concerning the savings on the number of workers as a result of the introduction of new technical equipment in comparison with the overall savings achieved through increasing labor productivity. One should point out the degree to which the planning assignments take into account the possibility of increasing the growth rates of labor productivity. To do this it would be expedient to compare with the growth rates of labor productivity and the number of workers during the preceding year not only the actual data for the report period, but also the established planning assignments (limits).

The experiment has expanded the rights of the enterprises to utilize the savings on the wage fund for establishing increments and additional payments to the wage rates and salaries and for increasing the salaries of highly skilled workers. In this connection it is necessary to show the degree to which these rights are being utilized by applying data which characterize the following:

the change in the number and the proportion of workers for whom these increments and additional payments are established and for whom increased salaries are set;

the proportion of savings on the wage fund expended for increments and additional payments and for increasing salaries for highly skilled workers;

the amount and proportion of additional payments to the wage rates and increments for highly skilled engineering and technical personnel and employees, additional payments for combining occupations (jobs) and so forth.

Data concerning additional payments for workers of various wage categories should be analyzed directly at the enterprises.

When analyzing the practice of expanding additional payments to workers of enterprises for combining occupations (jobs) one should pay attention to the data concerning the number of workers who combine occupations (jobs) in the various categories of personnel.

One should also consider indicators that characterize the release of workers as a result of combining occupations, expanding zones of service or increasing the volume of work that is performed.

The analysis of the practice of awarding bonuses under the new conditions should be conducted having devoted attention to the dynamics of bonus payments, the change in their proportion in the wages and the average amount of bonuses both for all personnel and for individual categories.

Taking into account the fact that the conditions of the experiment envision that the enterprises will retain the savings on the wage fund, it would be expedient to analyze the formation of the planned and actual wage during the report period taking into account the conditions of the experiment. To these ends one can conduct a calculation of the wage fund during the report period taking into account and not taking into account the savings on the wage fund during the base year.

It is possible to characterize the condition of norm-setting in labor and particularly the changes as compared to the period preceding the economic experiment on the basis of the indicators of the average percentage of fulfillment of output norms by piece-rate workers, the inclusion of workers by technically substantiated norms, and the number and proportion of the revised norms.

One should consider data that characterize the reduction of the number of people employed in manual labor and the development of brigade forms of labor organization. Data concerning losses of working time and turnover should be analyzed.

In keeping with the conditions of the experiment, the planning of the wage fund of existing enterprises is carried out on the basis of established normatives.

It is necessary to analyze the correspondence of actual data to the established normatives. In order to characterize the difficulty of the normative one can conduct the calculation of the amount of the average wages and the correspondence between the increase in the wages and labor productivity which lies in the normative by comparing them with the actually achieved normatives in the report period and in the base period.

When analyzing the dynamics of wages in comparison with the dynamics of the volume of production one determines expenditures of wages per 1 ruble of output (commodity, normative net) both in terms of the wage fund (including bonuses from the material incentive funds) and without including bonuses from the material incentive fund.

Moreover, taking into account the fact that under the conditions of the economic experiment there were to be changes in the policy for forming and raising the economic incentive fund (as compared to those accepted in industry as a whole), during the course of the analysis of the work of enterprises under the conditions of the first year of the experiment it is necessary to determine this ratio under conditions comparable with the preceding year as well.

For these purposes one should:

for enterprises that have completely fulfilled commitments for deliveries, exclude the increase in the material incentive fund (for 100-percent fulfillment of plans for deliveries) as compared to the conditions which were in effect previously (on the whole for the ministry one determines the difference between the increase and the reduction of the material incentive fund as the delivery plans are fulfilled);

taking into account the fact that under the conditions of the economic experiment there are no reserve sums of bonuses for engineering and technical personnel and employees in order to pay them for the results of the year, the sums of bonuses reserved during the preceding year and deducted during the report year should be excluded from the data for the report year and included in with the data for the corresponding period of the past year.

Moreover, in order to eliminate the influence of the sums of payments that are not directly related to increasing the volumes of production and labor productivity, along with the adjustments that are made when making the conditions comparable it is also necessary to exclude from the material incentive fund (both for the report and for the base period) the bonuses for economizing on material resources.

Moreover, the indicators of the material incentive fund should not be adjusted either when making the conditions comparable or when eliminating bonuses for economizing on material resources.

When analyzing the actually existing (taking into account all payments) ratio between the increase in the average wages and labor productivity one should show the degree to which this relationship has changed as compared to the analogous relationship during the corresponding period of the past year; and determine the influence on this indicator:

of the increase (reduction) of the growth rates of labor productivity;

of the change in the payments from the wage fund;

of the change in the payments from the material incentive fund.

During the course of the analysis of the operation of the enterprises under the conditions of the first year of the experiment, along with a description of the actually existing relationship between the increase in average wages and labor productivity, it is necessary to analyze this relationship in conditions comparable with the preceding year, and also taking into account

the sums of bonuses that are not directly related to the increase in volumes of production and labor productivity.

The policy for adjusting the material incentive fund is what is presented above.

Changes in the average wages of the basic categories of industrial production personnel and particularly changes resulting from payments from the wage fund and payments from the material incentive fund should be analyzed in terms of the main areas of their utilization (bonuses for the basic results of economic activity, one-time incentives).

Production Cost of Industrial Output

During the course of the analysis one should characterize the degree to which acceleration of the reduction of production costs has been promoted by conditions of the experiment and particularly the increase in the role of the indicator of production cost when evaluating the work of the enterprises and ministries and the utilization of this indicator when forming and making deductions into the material incentive fund.

To this end one should utilize indicators that characterize the following:

the fulfillment of established assignments for the production cost of the products;

the change in expenditures per 1 ruble of commodity output as compared to the preceding year;

the number of enterprises that have not fulfilled planning assignments for the production cost of the products;

savings (overexpenditures) as compared to the planned production cost (not including savings that are not taken into account when evaluating the fulfillment of the plan);

the change in material expenditures per 1 ruble of commodity output, savings from the reduction of material expenditures and their proportion in the overall sum of savings from the reduction of the production cost.

These indicators should be compared with analogous ones for the corresponding period of the preceding year.

Taking into account the fact that under the conditions of the experiment there should be an increase in the influence of scientific and technical progress on the main indicators of the work, one should determine the influence on the reduction of the production cost of products exerted by measures for introducing new technical equipment on the basis of a comparison of data concerning savings from the reduction of production costs because of the introduction of new technical equipment and the overall savings from the reduction of the production cost in the enterprise (ministry) as a whole. The existing accountability makes it possible also to determine the influence on

the reduction of the production cost of individual areas of scientific and technical progress (see introduction of progressive technology, mechanization and automation of production, and so forth).

In order to evaluate the role of the reduction of production costs when forming profit under the new conditions, one should analyze the proportion of profit obtained as a result of reducing production costs in the overall sum of increase in profit. To do this one uses the indicator that is determined as the ratio between the savings from reducing production costs of products and the increase in the balance profit.

The Material Incentive Fund

When analyzing the material incentive fund one should give a characteristic of the changes in its amounts as compared to the period before the economic experiment was conducted, utilizing, in particular, indicators of the increase in the material incentive fund and payments from it (both in the overall volume and per one worker) and a comparison of the planned and actual amounts of the material incentive fund.

Taking into account the fact that under the conditions of the economic experiment there has been an essential change in the policy for forming and making deductions into the incentive fund, one should analyze the change in this fund as compared to the plan for individual fund-adjusting indicators. Basic attention should be devoted to an analysis of the dependency of the amounts of this fund on:

the fulfillment of assignments for product sales taking into account the fulfillment of commitments for deliveries;

the fulfillment of assignments for improving product quality;

the reduction of the production cost as compared to the plan;

the overfulfillment of the plan for profit;

the additional profit obtained through reducing the production cost as a result of the introduction of new technical equipment;

the increased output of consumer goods per ruble of wage fund.

One should evaluate the degree of influence of each of the fund-adjusting indicators on the overall amount of the material incentive fund and the interconnection between the fund and the fulfillment of assignments in terms of these indicators.

For enterprises that are implementing large measures for introducing new technical equipment and technical reequipment, one should analyze the degree of influence on the material incentive fund exerted by deductions from the additional profit obtained through the reduction of the production cost from the introduction of new technical equipment, comparing these data with the

overall amount of the material incentive fund and also the overall savings from the introduction of new technical equipment.

One should evaluate the change in the proportion of additional deductions into the material incentive through deductions from the sums of incentive increments obtained from the sale of products with the Emblem of Quality and new highly effective products.

When evaluating the utilization of the material incentive fund special attention should be devoted to changes in the sums of the utilized funds and changes in the residuals.

In order to reveal the influence on the formation of the material incentive fund exerted by the main fund-forming indicators applied under the conditions of the experiment, it is expedient to compare the planned amount of the fund during the report period with the planned fund of the past year which is used as a base year, and also with its actual amount in the past year (with the exception of sums that are not taken into account when planning the material incentive fund).

One should analyze the main areas for the expenditure of the material incentive fund: current bonuses for the basic results of economic activity, one-time incentives and remunerations for the results of the year.

During the course of the analysis it is necessary to compare indicators of the dynamics of the material incentive fund with the dynamics of the balance profit of the enterprise, keeping in mind that the more rapid increase in the balance profit should correspond to an increase in the material incentive fund.

Fund for Sociocultural Measures and Housing Construction

Taking into account the fact that under the conditions of the economic experiment this fund should be one of the important sources of improving social, housing and domestic conditions for workers of the enterprises, one should analyze the degree to which this fund is used for housing construction and the construction of facilities for cultural and domestic purposes and characterize the fulfillment of the plan for housing construction as a result of decentralized capital investments and the fulfillment of the plan for the introduction of dwelling space.

During the course of the analysis one should draw conclusions about whether or not essential changes in the utilization of this fund during the course of the economic experiment and the degree to which the amounts of the aforementioned fund make it possible to satisfy the needs of the enterprises for housing and cultural-domestic construction.

When studying this issue at the enterprises it is necessary to analyze the degree to which they are realizing the provisions envisioned by the conditions of the experiment concerning supporting the measures through this fund with the necessary material resources and volumes of contract work, and how the

work is being done--by the internal method, by contracting organizations and so forth.

Fund for the Development of Production

Under the conditions of the economic experiment the rights of the enterprises have been considerably expanded for utilizing the fund for the development of production and material and technical support for measures implemented through this fund.

During the course of the analysis one should characterize the change in the amount of this fund both in terms of the overall amount and in terms of the sources of its formation as well as its actual utilization in the main areas. Here main attention should be devoted to the utilization of this fund for technical reequipment of the enterprises. In particular, one should show:

the proportion of expenditures on technical reequipment financed from the fund for the development of production in the overall amount of the fund for development;

the proportion of expenditures for technical reequipment financed from the fund for the development of production in the overall volume of capital investments for technical reequipment for the enterprise and the ministry as a whole;

the introduction of production capacities as a result of technical reequipment, including from the fund for the development of production.

These figures should be compared with the corresponding indicators for the preceding year and conclusions should be drawn concerning the changes as a result of the changeover to the economic experiment.

When analyzing what has been accomplished by the experiment one should pay attention to the following questions:

does the enterprise have long-range plans for technical reequipment;

has the enterprise been provided with material and technical resources for technical reequipment through noncentralized capital investment;

does the enterprise take advantage of the right it has been granted to take out long-term credit from the USSR Stroybank in excess of the allotted limits;

what organizations are developing plans for technical reequipment.

Taking into account the fact that the money of the fund for development is the main source of noncentralized capital investments, in this section it is necessary to give a brief description of the fulfillment of the plan in terms of the limit on noncentralized capital investments and the introduction of fixed capital from this source.

Scientific and Technical Progress

Among the major tasks of the economic experiment are acceleration of the development and introduction of new technical equipment, increased rates of technical reequipment of production, and implementation of assignments in the scientific and technical programs. In this connection one should analyze the degree to which the changeover of the enterprises to the conditions of the economic experiment has contributed to carrying out these tasks.

During the course of the analysis one should analyze the data concerning the fulfillment of the main tasks for the introduction of scientific and technical progress in terms of the main areas envisioned by the plan, including:

the assimilation of new kinds of industrial products;

the introduction of progressive technologies;

mechanization and automation of production;

the main indicators of the technical level of production and the most important kinds of products produced;

the fulfillment of assignments of scientific and technical programs.

One should compare the indicators of the fulfillment of the plan for the report period with the indicators for the corresponding period of the preceding year.

In order to characterize the updating of the products that are produced when analyzing the work of machine-building ministries one should compare the data for the report period with the data for the corresponding period of the preceding year in terms of the following indicators:

the proportion of products assimilated for the first time in the USSR (updating of the products that are produced);

the proportion of products assimilated 10 years ago and more;

the number of outdated kinds of products that have been removed from production;

the structure of products of the enterprises and ministries for the various years of the assimilation of their production.

It is also necessary to analyze the indicators that characterize the changes in the time periods for the development and assimilation of models of new technical equipment, particularly in terms of the indicators on the statistical accounting form No 5-nt, "Report on the Fulfillment of the Plan for the Assimilation of New Kinds of Industrial Products" and the annual one-time investigation, "Information on Models of New Types of Machines, Equipment, Apparatus and Instruments Manufactured in the USSR for the First Time":

the duration of the development of models of new technical equipment;

the length of the period from the creation of the model until the beginning of production.

It is necessary to analyze the utilization of funds allotted to the enterprises from the unified fund for the development of science and technology of the ministry in the corresponding period of the preceding year and in the analyzed period in terms of the basic areas. Here special attention should be devoted to the utilization of money from the fund for:

planning and design work showing initiative in the creation of new technical equipment;

compensation for increased expenditures during the period of its assimilation.

In order to analyze the influence of the conditions of the economic experiment on the acceleration of technical reequipment of production, one should show the changes in the rates of updating and removal of fixed industrial production capital and compare the actual indicators for the withdrawal of fixed capital with the withdrawal of fixed capital calculated on the basis of norms of amortization deductions for renovation.

For individual branches of industry one should analyze the change in the structure of the stock of installed equipment, the intensiveness of the removal of obsolete and worn-out equipment, and its replacement.

In this section one should characterize the changes in production capacities as a result of technical reequipment.

For purposes of a generalizing description of the effectiveness of scientific and technical progress it is necessary to utilize (in comparison with the base figures) the figures available in statistical reports concerning the influence of the introduction of new technical equipment on the following indicators:

labor productivity (the number of conventionally released workers and their proportion in the overall savings on the number of workers achieved as a result of increased labor productivity and increased productivity in general, including as a result of the introduction of new technical equipment);

the production cost of products (savings on production cost from the introduction of new technical equipment and their proportion in the overall savings from the reduction of production cost);

profit (proportion of profit obtained as a result of the introduction of new technical equipment in the overall increase in profit);

effectiveness of expenditures on measures for introducing new technical equipment (actual expenditures, economic effect and increased profit per 1 ruble of expenditures).

These data should be analyzed not only for the entire totality of measures, but also for individual areas of scientific and technical progress.

On the basis of these data conclusions should be drawn regarding the degree to which, under the conditions of the economic experiment, there has been an increase in the influence of scientific and technical progress on the main indicators of the operation of the enterprises and the effectiveness of expenditures on measures for the introduction of new technical equipment.

Product Quality

During the course of the analysis it is necessary to consider the following indicators which characterize the quality of the industrial products:

the proportion of products of the highest quality category (for the food branches--high quality) in the overall volume of products subject to certification;

the quantity of products for which complaints have been accepted and their proportion in the overall volume of products;

losses from defective products;

production of consumer goods with the index "N."

Special attention should be devoted to analyzing the indicators of products of the highest quality category that are manufactured for export and one should also analyze the number of kinds, the volume of products and their proportion in the overall volume of output.

These indicators are compared with analogous data for the corresponding period of the preceding year.

One can give data concerning the results of the inspection of the quality of consumer goods by trade organizations. Attention should be devoted to cases of complaints against products that have the state Emblem of Quality.

It is also necessary to analyze data that characterize the guaranteed repair of household equipment, including repair in excess of the established expenditure norms.

Finances and Profit

During the course of the analysis one should give a general evaluation to the fulfillment of the plan for profit and its dynamics as compared to the base period. Here one should show the degree to which the fulfillment of the plan for profit was provided as a result of individual factors:

incentive increments for the quality of products and consumer goods with improved quality that are not taken into account in the plan;

reduction of the production cost of products;

application of fines and sanctions (fines, penalties, forfeitures) and above all sanctions related to the failure to fulfill contractual commitments.

When analyzing profit for the ministry as a whole one should provide a characteristic of the changes in the dynamics of the number of enterprises that do not fulfill the profit plan and the amount by which they fail to acquire profit as compared to the plan.

Special attention should be devoted to changes as compared to the period preceding the economic experiment in the distribution of profit among specific areas. Here for analytical purposes, in addition to a description of the distribution of profit among the various areas, one should analyze the overall amount of profit left at the disposal of the enterprises. It is necessary to show the change (as compared to the plan and the base period) in the amount and proportion of this part of profit in the overall volume of balanced profit and to draw conclusions concerning the ratio between the growth rates of profit left at the disposal of the enterprise and the growth of all profit.

One should give a description of the fulfillment of assignments for payments into the budget and also changes of this indicator as compared to the preceding period.

Because the conditions of the economic experiment envision the creation of a financial reserve at the enterprises, in this section one should give data concerning the amount of the aforementioned reserve in absolute terms and in percentages of the balance profit and show the areas for the utilization of this reserve.

It is necessary to analyze the condition of internal circulating capital, its dynamics and its correspondence to the established normative. One should introduce data that characterize the degree to which the work under the conditions of the economic experiment contributes to bringing the amount of internal circulating capital up to the normative level.

One should analyze the dynamics of above-normative nonproduction supplies of commodity and material values as a whole and in terms of the groups of normed circulating capital. It is necessary to show the course of the fulfillment of assignments for accelerating the turnover of circulating capital. One should reveal the number of enterprises that are operating with a shortage of internal circulating capital.

It is necessary to compare the growth rates of production with the indicators of the dynamics of the supplies of commodity and material values.

Taking into account the increased role of credit under the conditions of the experiment, in order to implement measures for new technical equipment it is expedient to conduct an analysis of the utilization of credit for expenditures that are financed from the unified fund for the development of science and technology and long-term credit to the enterprises for reconstruction and technical reequipment of fixed capital, and one should utilize data concerning

the amount of this credit in comparison with the base period and the change in the proportion of credit in the overall amount of money in this fund.

It is necessary to analyze the amount of paid interest for the utilization of credit, comparing the plant and actual sums of paid interest and their influence on the amount of the calculated profit.

During the course of conducting the analysis attention should be devoted to the amount of payments into the budget for the availability of above-normative commodity and material values and above-normative supplies of uninstalled equipment.

In the analysis it is also necessary to consider the question of the fulfillment of assignments for payments into the budget and the turnover tax in comparison to the analogous indicators for the corresponding period of the preceding year.

Capital Construction

In the area of capital construction the economic experiment should stimulate successful fulfillment of assignments for the introduction of fixed capital and the utilization of limits of state capital investments and construction and installation work. Taking this into account, in the analysis it is expedient to consider the course and the results of the fulfillment of planning assignments for construction both during the given year and in comparison to the preceding periods.

Under the conditions of the experiment the enterprises have considerably greater possibilities of utilizing money from the fund for the development of production which is envisioned in the state capital investments as noncentralized capital investments along with centralized capital investments.

In this connection, during the course of the analysis, along with an analysis of the fulfillment of the plan for the startup of fixed capital and the limit of capital investments for the enterprise as a whole, the ministry should analyze in greater detail:

the fulfillment of the plan and the dynamics of the introduction of fixed capital from noncentralized capital investments;

the degree to which the plan for the introduction of fixed capital of various facilities for production purposes is fulfilled through noncentralized capital investments, including those intended for technical reequipment using money from the fund for the development of production and facilities for nonproduction purposes--from the fund for social and cultural measures and housing construction;

the utilization of the limit of noncentralized capital investments, the change in the reproduction structure of capital investments as compared to the period preceding the economic experiment and, in particular, an analysis of the proportion of expenditures for technical reequipment in the overall volume of capital investments for the various facilities for production purposes;

the change in the proportion of noncentralized capital investments in the overall expenditures for technical reequipment;

analysis of the technological structure of capital investments and the proportion of construction and installation work carried out by the internal economic method in the overall volume of construction and installation work for technical reequipment;

the enterprises' utilization of their right to use amortization deductions intended for capital repair and additional expenditures for technical reequipment of fixed capital in excess of the limits of state capital investments.

Material and Technical Supply

In order to evaluate the changes in the supply of material and technical resources for enterprises operating under the conditions of the economic experiment, one should analyze the following indicators:

the fulfillment of the plan for deliveries;

the dynamics of the volumes of deliveries;

the changes in the level of fulfillment of the plan for deliveries (as compared to the corresponding period of the preceding year) of products of the funded list.

Special attention should be devoted to the changes in the residuals of raw materials, processed materials and fuels at the beginning and end of the report period and the utilization (sales) of allotted funds in comparison with analogous data for the corresponding period of the preceding year.

When studying changes in material expenditures it is expedient to utilize data concerning the fulfillment of assignments for economizing on material and fuel-energy resources. The one provides an evaluation of the fulfillment of assignments for economizing and additionally reducing the expenditures, including through the average reduction of the norms of the expenditures of boiler and furnace fuel and thermal and electrical energy. An analysis of the course of the fulfillment of assignments of the annual plan for economizing on boiler and furnace fuel and thermal and electrical energy is done through comparing the actual indicators of the savings for the corresponding period of the year (quarter, 6 months, 9 months) with the assignments of the annual plan.

In this same section it is also necessary to give an evaluation of the fulfillment of assignments in terms of the average reduction of the norms for the expenditure of raw and processed materials during the report here as compared to the norms of the preceding year as a result of the introduction of organizational and technical measures. An analysis of the course of the fulfillment of this assignment is carried out through comparing it with the amount of the average reduction of the actual proportional expenditures for

the corresponding period of the year as compared to the norms of the preceding year.

The level of fulfillment of assignments for economizing on material and fuel and energy resources established for the preceding year can be expediently compared with analogous indicators for the period preceding the economic experiment.

In addition to this it is expedient to compare the actual proportional expenditures of material and fuel-energy resources with their actual proportional expenditures for the corresponding period of the preceding year.

Methodological Recommendations for Analyzing the Results of the Work of Enterprises Under Conditions of the Experiment

In the appendix to the Methodological Recommendations presented on pages 1-7 there are examples of tables which are drawn up on the basis of the forms from existing statistical and bookkeeping reporting. They are recommended for utilization in economic analysis for the following subjects:

1. The time periods for the higher organization to approve the indicators, limits and economic normatives.

2. Economic normatives.

3. On the correspondence of the production program to existing orders for the delivery of products.

4. The fulfillment of the plan for the volume of sales of products taking into account the fulfillment of assignments and commitments for deliveries.

5. The grouping of industrial enterprises in terms of the degree of fulfillment of the plan for sales of products taking into account commitments for deliveries.

6. The fulfillment of the plan for the production of products in physical terms.

7. The fulfillment of the plan and the growth rates of labor productivity and the number of industrial production personnel.

8. The increase in average earnings and labor productivity.

9. The utilization of the savings on the wage fund.

10. The number of workers receiving additional payments and increments (at the end of the period).

11. Losses of working time and fulfillment of output norms by piece-rate workers.

12. Economic incentive funds.

13. The movement of the material incentive fund and the fund for social and cultural measures and housing construction.

14. Deductions into the material incentive fund.

15. The movement of money in the fund for the development of production.

16. The utilization of the fund for the development of production.

17. The movement of money in the unified fund for the development of science and technology.

18. Data concerning the fulfillment of the plan for the development of science and technology.

19. Expenditures on the introduction of new technical equipment and their economic effectiveness.

20. The fulfillment of the plan for the production cost of products.

21. The fulfillment of the plan for profit.

22. The condition of internal circulating capital and capital on an equal footing with this.

23. Supplies of uninstalled equipment in warehouses for capital construction.

24. Fulfillment of the plan for deliveries of raw materials, processed materials, fuel and equipment.

25. Distribution of products among quality categories.

26. Fulfillment of the plans in terms of the proportion of products of the highest quality category.

27. Sale of goods which the consumer has refused to accept.

28. Fulfillment of the plan for the startup of fixed capital.

29. Fulfillment of the plan for the startup of fixed capital from noncentralized capital investments.

30. Utilization of the limit of state capital investments and construction and installation work.

31. The utilization of the limit of noncentralized capital investments.

32. Startup of fixed capital with the utilization of the limit of noncentralized capital investments for technical reequipment with money from the fund for the development of production.

33. Fulfillment of the plan for the construction of residential buildings and facilities for sociocultural purposes.

34. Startup of production capacities.

35. Technical reequipment of existing enterprises from the fund for the development of production.

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END