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JPRS L/10070

23 October 1981

USSR Report

ECONOMIC AFFAIRS

(FOUO 16/81)



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PLANNING AND PLAN IMPLEMENTATION

MAIN GOALS OF 11TH FIVE-YEAR PLAN REVIEWED

Moscow VOPROSY EKONOMIKI in Russian No 7, Jul 81 pp 9-19

Article by F. Kotov: "The Main Tasks, Rates and Proportions of the 11th Five-Year Plan"

Text The 26th CPSU Congress specified the strategy and tactics of USSR economic and social development for the 1980's as a new stage in the creation of the material and technical base of communism, the development of social relations and the formation of the new man. The continuity of the strategy and tactics in this area and the further development of their principles as applied to the conditions of the new 10-year planning period so as to overcome the noted tendency for the rate of economic growth to slow and to make qualitatively new gains in the socio-economic development of the country, are characteristic. During these years the changeover to the primarily intensive path of the development of the economy will be accomplished owing to the more complete utilization of the potentials of technical progress, the increase of the level of management of the economy, the improvement of planning, the stepping up of the influence of the economic mechanism and social factors on the development of physical production, the improvement of the labor and moral training of the workers, the improvement of the use of the socialist principle of distribution according to labor and the increase of the role and importance of labor collectives and local soviets of people's deputies.

The goals of the long-range economic policy, which creates the prerequisites for the further economic and social development of the country, are specified in the Main Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990.

On the basis of the economic and social development achieved in past years with allowance made for the peculiarities of the planning period, the 26th party congress formulated the main task of the 11th Five-Year Plan. Its accomplishment presumes the implementation of a series of measures which cover all aspects of the labor, life, living conditions and cultural level of the Soviet people. The most important of them are: the complete meeting of the demands of the entire population for foodstuffs and nonfood consumer items; the improvement of the housing, cultural and everyday living conditions of the population; the accomplishment of profound changes in labor, the improvement of working conditions, the provision of extensive opportunities for creative activity; the further development of education and culture; the improvement of the health and the efficient use of free time of the workers on the basis of the improvement of trade and personal service, the development of the

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recreation industry, tourism and physical culture, the network of medical institutions and so on; the promotion of moral education and a communist attitude toward labor; the overcoming of the socio-economic differences in the living, working and everyday conditions of all categories of workers.

An entire series of measures has been outlined for the achievement of the ultimate goals of the five-year plan. The emphasis is being placed on the development of social production, the improvement of its pattern and the economical use of all production resources, the improvement of product quality, the reorganization of management and planning first of all for the purposes of the timely and more complete utilization of the achievements of science and technology, equipment and working time.

The country has an enormous production, scientific and technical potential and skilled personnel. The fixed production capital of the USSR in 1980 amounted to 1,149,000,000,000 rubles, that is, it was twofold more than in 1970. The volumes of the extraction of raw materials and fuel and the output of construction materials increased. The areas of irrigated land and the number of livestock and poultry increased. Having 35 million hectares of reclaimed land, the country has begun to depend less on weather conditions in arid regions. The fixed nonproductive capital has increased considerably. The number of those employed in the national economy came to 112.5 million, including 27 million specialists, about 1.4 million scientists, approximately 900,000 planners and 500,000 designers. For the accomplishment of the set national economic tasks in 5 years 13 million skilled workers will be trained at vocational and technical schools and 10 million specialists with a higher and secondary specialized education will be trained. More than 10 million people are studying at the higher and secondary educational institutions of the country. The participation of the USSR in the world and the international socialist division of labor has increased. The foreign trade turnover of the USSR in 1980 came to 94.1 billion rubles.

Such major national economic problems as the construction of the Baykal-Amur Railway Line and the development of the natural resources of the regions adjacent to it, the formation of industrial centers on the basis of the Ekibastuz, Kansk-Achinsk and Southern Yakut coal basins, the development of the West Siberian Petroleum and Gas Region, the strengthening of the material and technical base of nuclear power engineering, the creation of the robot equipment industry, the changeover of agricultural production to an industrial base and an advanced technology and others will be solved during the 11th Five-Year Plan. However, the accomplishment of all these tasks will take place under the conditions of the slowing of the growth rate of the able-bodied population in many regions of the country; the shift of the extraction of fuel and many types of raw materials to northern and eastern regions, where major material expenditures, especially in the infrastructure, and large expenditures on the transportation of the raw materials and fuel extracted here to the Urals and the European part of the country are required; the commitment to production of less rich deposits in developed regions; the remoteness of the lands to be irrigated from sources of water; the need for the more significant increase of the resources for simple reproduction and environmental protection and other factors requiring major additional expenditures. The offsetting of these expenditures is possible on the basis of the complete utilization of scientific and technical progress and the improvement of administration and management as applied to present conditions.

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The difficulties of changing over the economy to the primarily intensive path of development were discovered during the 10th Five-Year Plan. With the abrupt reduction of the extensive factors of growth, it was indicated at the 26th CPSU Congress, violations of discipline, displays of mismanagement and the inadequate preparation of managerial personnel for work under the conditions of the sharp decrease of the effect of extensive factors of growth and the placement in the forefront of the qualitative characteristics of production activity took place. "But, perhaps, the main reason is," L. I. Brezhnev said at the 26th CPSU Congress, "that the force of inertia, the traditions and habits, which formed during the period when not so much the qualitative as the quantitative aspect of the matter came to the forefront, have not yet been completely overcome." The nonfulfillment of the assignments on the output of resource-saving equipment was noted; a relatively small proportion of the capital investments was allocated for the renovation and retooling of operating enterprises. The socialist principle of pay according to labor was violated at many enterprises and organizations. Many tasks, which were set by the 25th CPSU Congress, in the area of planning, management, especially when introducing and assimilating new equipment, the organization of labor and wages were not accomplished. All these shortcomings could not but adversely influence during the 10th Five-Year Plan the growth rate of labor productivity, the use of productive capital and material resources, the times of the placement into operation and the assimilation of new production capacities and, consequently, the output of many types of products of industry and agriculture.

On the basis of the critical interpretation of the experience of the 10th Five-Year Plan the 26th CPSU Congress outlined a series of measures, which are aimed first of all at the quickest possible elimination of the disproportions and "bottlenecks" in the national economy and the achievement of the optimum ratio between the consumption fund and the accumulation fund, which ensure the solution of a wide range of social problems and the steady increase of the production potential of the country.

An important place in USSR economic and social development for 1981-1985 and the period to 1990 is assigned to the problem of the rate of economic development of the country. In recent times the inadequately efficient use of reproduction resources and the existing discrepancies between the achieved level of development of the productive forces and the management and planning of the development of the economy, which lagged behind it, as well as the economic mechanism were the cause of the slowing of this rate. The workers of planning organs and economics scholars dragged out the fulfillment of the assignments of the 24th and 25th CPSU Congresses on the preparation of scientifically sound suggestions on the solution of the ripe problems.

The 26th CPSU Congress appraised these negative phenomena, outlined measures, which are conducive to the increase of the rate of economic development of the country, and outlined the further increase of the absolute increments for the most important indicators. During the 11th Five-Year Plan the significance of each percent increase of the resources for current consumption and sociocultural construction will increase substantially.

During the 11th Five-Year Plan as compared with the 10th Five-Year Plan the absolute increases of the national income will be 9 billion rubles more, including the consumption fund--more than 13 billion rubles, the output of industry--44 billion rubles, the output of group B--18 billion rubles, the output of agriculture (average annual production)--7.5 billion rubles, the retail commodity turnover--more than

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8 billion rubles. The decrease of the absolute increases according to these indicators, which occurred during the 10th Five-Year Plan, is thereby being overcome.

	1971-1975	1976-1980	1981-1985
National income.	80	74	84
Output of industry	152	127	171
including:			
group A.	114	98	124
group B.	38	29	47
Output of agriculture (average annual production).	13	10	18
Retail commodity turnover.	58	52	60

The increase of the indicators of the material stimulation of social production is planned. It is envisaged to increase the wages of workers and employees by 13-16 percent and the pay of kolkhoz farmers by 20-22 percent. As a result the proportion of the population with a per capital income of 100 rubles and more a month will increase considerably. These indicators are being coordinated more closely with the tasks of the development of production and the increase of its efficiency, the improvement of product quality, the more complete utilization of production capacities, the strengthening of the stability of labor collectives, especially in the regions of Siberia and the Far East.

Much attention is being devoted to questions of stimulation for the end results of work, as well as to the improvement of the brigade form of wages. The main thing is the combination of collectivity in work with the proper incentive for the specific contribution of each member of the brigade. An important role belongs to the councils of brigades. The departments of labor and wages of production associations, enterprises, ministries and organs of the State Committee for Labor and Social Problems should give them assistance. Here the planned increase of wages during the 11th Five-Year Plan will take place under the conditions of the stability of retail prices for basic foodstuffs and nonfood consumer items, which will lead to a substantial increase of the real income of the workers. As resources are accumulated first of all by means of the utilization of the reserves of the increase of labor productivity, a new stage of the increase of the minimum wage, the rates and salaries of workers will begin. As in the past, the payments and benefits received by the population from public consumption funds, which will increase during the 5-year period by 20 percent, will play an important role. They are being linked to a greater extent with the solution of the problems of the changeover of the economy to the path of primarily intensive development, the introduction of new equipment and the increase and improvement of production.

The importance of passenger transport and communications in solving the set of social problems will increase. All types of passenger transport will be supplemented with new vehicles, which will make it possible to shorten the time en route, especially when traveling to work.

The formation of the unified automated communications network of the country on the basis of the latest data transmission systems will be continued, color television and stereo radio broadcasting will undergo development. Artificial earth satellites will be used more extensively for the organization of multichannel television

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and radio broadcasting. The length of long-distance telephone channels will increase approximately 1.8-fold, while the number of telephones in cities and villages will increase 1.3-fold.

The rapid development of the sectors, which produce consumer goods and the raw materials for their production, will be the material basis of the backing of the increase of the real income of the population. Thus, the growth rate of the output of the food industry will increase from 7 percent during the 10th Five-Year Plan to 23-26 percent during the 11th Five-Year Plan, local industry--from 31 to 40 percent, light industry--to 18-20 percent. Particular attention will be devoted to the utmost development of agriculture--the main raw material base of the food and light industry and the supplier of trade organizations with fresh produce which does not require industrial processing. The planned acceleration of the growth rate of the output of agriculture is connected with the strengthening of its material and technical base. In 1985 kolkhozes and sovkhozes will be supplied with 1.4-fold more mineral fertilizers as compared with 1980 with improved quality characteristics, 1.8-fold more feed additives and more than 1.5-fold more electric power. The deliveries of diverse equipment, tractors, agricultural machinery, machines for animal husbandry and fodder production, motor vehicles and so on will increase.

Under present conditions, when agriculture is saturated with many types of equipment, the main attention should be devoted to the quality of the equipment being produced and the improvement of its structure so as to change over more rapidly to industrial methods of work with allowance made for the improvement of breeding, the boosting of production and the increase of the quality of mineral fertilizers, especially herbicides. This will ensure an increase of the yield of crops and will increase labor productivity.

Agriculture will continue development in the unified agro-industrial complex. An important role is being assigned to the complex food program, which will be a component of the five-year plan. In this program much attention is devoted to the development of the production and social infrastructure, which will promote the preservation of the grown produce and its delivery to the consumer. The development of the hotbed and hothouse system, first of all in the regions of Siberia, the Far East and the European north, also merits attention.

The role of heavy industry in the production of goods for the population is increasing. Thus, the output of chemical fibers and filaments will increase 36 percent. It is planned to increase by approximately 1.4-fold the production of cultural, personal and household goods with the substantial enlargement of the assortment and the increase of quality. It is envisaged to increase the volume of personal services to the population by 40-50 percent with the significant improvement of the standards of service and the increase of the number of services which are in demand. The material and technical base of trade will be strengthened, warehouse facilities and vegetable bases will be mechanized.

In the materials of the 26th CPSU Congress much attention is devoted to the development of heavy industry, first of all to the strengthening of the material and technical base of the fuel and power complex, the sectors which produce construction materials, the chemical industry and machine building. All types of transport and first of all rail transport, which in recent types has become a "bottleneck" in the national economy, will be further developed. It will be supplemented with a more efficient fleet of locomotives and cars.

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The planned 12-15 percent increase of capital investments in the national economy (711-730 billion rubles) will make it possible, with the decrease of the proportion of unfinished construction to the standard level and the observance of the set period of the construction of facilities, to increase the fixed production capital in the national economy by approximately one-third. The nonproductive fixed capital will also increase substantially with an increase of its quality. Thus, with the retention of the volume of the placement of living space into operation, which was achieved during the 10th Five-Year Plan, the capital investments for these purposes will increase considerably, which will make it possible to build apartment houses according to new, improved designs which create greater conveniences for the residents.

The realization of the social program and the rate of development of the economy, which have been outlined for the 11th Five-Year Plan, and the decrease of the effect of extensive factors of growth are possible on the basis of the utmost intensification and the increase of the efficiency of social production. Labor productivity is the most important indicator of production efficiency. The acceleration of its growth rate in all the sectors of physical production is called for during the new 5-year period (see the table).

	1976-1980	1981-1985
Industry.	17	23-25
Agriculture (average annual production in public sector). .	15	22-24
Rail transport.	0.5	10-12
Construction.	11	15-17

By means of this indicator there has to be obtained 85-90 percent of the increase of the national income, more than 90 percent of the increase of the output of industry and the entire increase of the output of agriculture and construction and installation work. In many sectors of industry it is envisaged to ensure the increase of the output of products entirely by means of the increase of labor productivity. The most important factors of the accomplishment of this task will be: the more rapid introduction and assimilation than before of the achievements of technical progress at operating enterprises; the increase of the level of the mechanization and automation of production processes, especially in auxiliary, subsidiary, loading and unloading and warehousing operations; the rapid development of the robot equipment industry, which is being created, for the output of various manipulators; the increase of the number of workers who have acquired an occupation in all forms of resident educational institutions, and so on. The level of the electric power-worker and capital-labor ratios will increase substantially. The capital-labor ratio will increase in 5 years in industry by 32 percent, in agriculture by 38 percent and in construction by 20 percent. Approximately 35 percent of the fixed production capital in industry and more than 40 percent in agriculture will be replaced during this period. Much attention is also being devoted to the improvement of the organization of labor and wages, the creation of the conditions for the elimination of the turnover of personnel, the tightening up of labor discipline, the introduction of the brigade form of the organization of labor and the increase of the role of the councils of brigades in organizational and educational work and the improvement of the rate setting of labor. As a whole in physical production during the 11th Five-Year Plan not less than 20 million people can be conditionally released due to the enumerated factors of the growth of labor productivity.

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The changeover of the economy to the primarily intensive path of development requires the efficient consumption of material resources and the more complete utilization of fixed capital and production capacities. Particular attention is being devoted to the saving of fuel and energy resources, which during the 5-year period will amount to 160-170 million tons of conventional fuel. Important tasks have been set for the sectors, which produce and use construction materials, on the improvement of the quality characteristics and their more efficient use. Thus, in machine building and metalworking the specific consumption of rolled ferrous metal products should be decreased on the average by not less than 18-20 percent, steel pipe--10-12 percent, rolled nonferrous metal products--9-11 percent. A 7-9 percent saving of rolled ferrous metal products and a 5-7 percent saving of cement will be provided in construction.

For the achievement of the outlined saving of material resources there are needed: the introduction of fuel- and energy-saving technological processes, including waste-free technology; the complete processing of raw materials and materials; the increase of the output of economical units of large unit capacity, especially for thermal and nuclear electric power stations; the development of the central heat supply of cities; the reuse of material, fuel and energy resources, as well as by-product resources; the decrease of the weight of machines and equipment per unit of useful effect; the replacement of metals with plastics, and so on. The outlined measures on the intensification of the policy of economy, the improvement of the rate setting of material resources, accounting and monitoring of their use, the improvement of the stimulation of the economical use of resources and the imposition of strict penalties for the display of poor management should play an important role in this. All this will promote a decrease of the materials-output ratio of the national product, which in many sectors continues to remain high.

The increase of the shift coefficient of equipment and the time of its utilization during the week is an important factor of the overcoming of the decrease of the output-capital ratio along with the preferential increase of the productivity of the new equipment being produced over the increase of its cost. Experience has been gained in this area, especially in the textile industry, but for the present it is being disseminated slowly in machine building and other sectors with a discontinuous nature of production. In this connection the workers who work in sectors with a continuous nature of production have been placed under unequal conditions, which creates a turnover of personnel and expenditures of time for retraining. This, in turn, adversely affects the increase of labor productivity, the quality of the output being produced and, in the end, the increase of the national income.

The consistent implementation of the measures elaborated by the party on the improvement of management, planning and the economic mechanism and the strengthening of the comprehensive approach in planning and in the making of management decisions in the process of their implementation will promote the increase of the efficiency of social production. This appears in the elaboration and implementation of comprehensive goal programs on the most important and difficult problems, the solution of which requires the participation of many organs of management and scientific institutions.

More than 15 comprehensive goal programs on such economic and social problems as the food problem, the fuel and energy problem, the development of the production of consumer goods, the reduction of the use of manual labor, the assurance of the complete

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utilization of material resources, the development of machine building, transportation and others have been included for the first time in the 11th Five-Year Plan. In the union republics comprehensive goal programs were drawn up on many socio-economic problems. The goal program method on the realization of scientific and technical problems is being improved. Programs are being elaborated on 160 problems, which will be a most important factor of the acceleration of the rate of scientific progress, which will conclude with the mass production of new types of products, the introduction of advanced technology and methods of prospecting for minerals and so on. All these programs will be a basic component of the five-year plan. A number of new indicators, for example, the standard net output, a system of mechanical and economic norms and standards and others, which create the conditions for the increase of the efficiency of social production, will be used in it.

The indicators of industry are being elaborated for a more extensive products list, they reflect high quality and technically improved types of items; the measurers of the indicators for many types of machine building, which are aimed at the decrease of the weight of equipment per unit of its capacity, have been made more precise. A plan of the production and deliveries of complete sets of technological equipment is envisaged for the first time, the list of products, in accordance with which the material balances are drawn up, has been enlarged. Moreover, in the five-year plan the distribution of the most important types of products among users will be envisaged, which will create great stability of the plan, especially in construction, as well as the conditions for the early conclusion of contracts between the enterprises which supply and use these products. The assignments characterizing the economic impact from the adoption of scientific and technical measures are specified in the five-year plan. The capital investments and material resources for the retooling and renovation of operating enterprises will be stipulated, their proportion in the processing sectors will be increased. All this will create the prerequisites for the more accurate calculation of the material stimulation funds of enterprises and the strengthening of the contractual relations of the producers and users of products.

The accomplishment of the main tasks of the five-year plan requires the improvement of the national economic, intersectorial and intrasectorial proportions. The closer link of science with production and the efficient use of material and manpower resources should promote this. The increasing absolute increments of the national income on the basis of these factors are making it possible to envisage the leading growth of the consumption fund and the increase of its proportion in the national income from 75.3 percent in 1980 to 77.3 percent in 1985. The growth rates of both subdivisions of social production are approaching each other. The proportions of industry will change in favor of consumer goods. Whereas during the Ninth and 10th Five-Year Plans the growth rate of the output of industry of group A exceeded the growth rate of the production of group B, during the 11th Five-Year Plan the preferential development of group B is planned. In the production of the national product and the national income a further increase of the proportion of industry will occur, including due to the increase of the volume of the industrial processing of agricultural raw materials.

The implementation of the set of measures being outlined on the increase of the effectiveness of capital investments and the more complete utilization of the created production potential of the country will make it possible to change such an important proportion as the ratio of the growth rates of the amount of capital investments and the national income. During the Ninth Five-Year Plan the growth

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rate of capital investments exceeded the growth rate of the national income by 1.46-fold and during the 10th Five-Year Plan by 1.38-fold; an increase of capital investments by 12-15 percent and of the national income by 18-20 percent is planned for the 11th Five-Year Plan. This is a difficult task, and its accomplishment depends on the efforts of scientific, planning and economic organs at all levels of management.

The preferential increase of the volume of the retail commodity turnover and personal services as compared with the increase of the income of the population has to be envisaged for 1981-1985, which will make it possible to improve the established proportions between monetary income and its backing with resources. At the same time it is necessary to eliminate the cases observed during the 10th Five-Year Plan of the lead of the growth rate of wages as compared with labor productivity, especially in construction, agriculture, a number of sectors of industry and rail transport. The optimality of this proportion should be achieved by the improvement of the organization of production and labor and of material and technical supply, the strict observance of contractual obligations between the enterprises which produce and use the products, as well as the strengthening of the cost accounting relations between kolkhozes and sovkhozes, on the one hand, and the enterprises of the sectors of the national economy, which send workers and equipment to participate in agricultural operations, on the other. Here it is necessary to specify the sources of the wages of the workers being enlisted from nonagricultural sectors.

Important measures on the improvement of the proportion between the increase of the capital-labor ratio and labor productivity have to be implemented. However, the ministries of a number of sectors in their plans are still retaining the preferential growth of the capital-labor ratio over labor productivity. This concerns first of all agriculture and the extractive sectors of industry. The increase of production efficiency requires research and organizing work on the overcoming of the formed trend.

The changes in the number of those working in physical production and the nonproductive sphere should also take place on the basis of the mechanization and automation of production processes and the increase of labor productivity. It is planned to increase the growth rate of the number of those employed in the latter by more than threefold as compared with the sectors of physical production.

The further development of the structure of exports by the increase of the proportion of the output of the sectors of the processing industry, semimanufactures and enriched raw materials is envisaged.

The policy of the preferential development of the sectors which govern the acceleration of the rate of technical progress in the entire national economy, especially machine building and instrument making, the chemical and petrochemical industries, will be continued in industry. The proportion of the output of the enumerated sectors in the overall industrial production will be increased to approximately 38 percent in 1985 as against 30.2 percent in 1975 and 34.5 percent in 1980. Major structural changes will occur in all complexes and sectors. Thus, in the agro-industrial complex along with the development of the sectors which ensure the increase of the yield of agricultural crops and the productivity of animal husbandry, measures will be implemented on the keeping capacity of products during harvesting, transportation, processing and storage. In recent times the losses of agricultural products, first of all vegetables, frequently have amounted to 20-30 percent.

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In the fuel and power complex it is planned to make structural changes in the direction of the increase of the role of atomic energy and water power, natural gas and coal which is mined by the open-cut method. With the further increase of the production of petroleum the latter will be used first of all not as a source of fuel, but as a raw material for the chemical industry. The use of atomic energy for the central heating of cities is being expanded. The construction of nuclear TETs's and nuclear heat supply stations is envisaged for these purposes. Significant changes will also occur in the regional proportions of this complex. The share of the eastern regions of the country in the production of fuel and the generation of electric power, which is produced on the basis of inexpensive coals and water resources, will increase substantially. The construction of large thermal electric power stations for the transmission of electric power to the Urals and the regions of the European part of the country is planned on the basis of the use of the coals mined by the open-cut method at the Ekibastuz, Kansk-Achinsk and Kuznetsk coal basins. All this is setting important tasks for pipeline and rail transport. The transmission of electric power over long distances is acquiring especially great importance. During the 11th Five-Year Plan only nuclear electric power stations and stations for heat supply will be built in the European regions.

The increase of the role of aluminum, synthetic resins and plastics, composition materials, laminated wood structural members and advanced types of rolled ferrous metal products will be the main direction of the change of proportions in the construction materials complex. As a result of the expansion of the assortment and the improvement of the structure of metal products and the substantial increase of their quality characteristics it is planned to obtain in 1985 a saving of metal in the national economy in terms of rolled products of 7-8 million tons, which is almost threefold more than during the preceding 5-year period.

In the chemical industry the increase of the output of the latest types of products of the small-scale chemical industry, the highest grades of synthetic rubbers, as well as efficient construction materials and thermoplasts is being placed in the forefront.

The production of the most complicated instruments in machine building, including for scientific research, mechanization equipment and control systems, machines and devices for jobs and operations, which until now were performed manually, numerical control machine tools, computers and automatic manipulators for use in difficult and monotonous operations will increase. The list of machines and devices for the output of consumer goods will be enlarged.

Particular attention is being devoted to the improvement of the structure of capital investments. They will be allocated for new construction to the sectors which ensure the stability and balance of the economy, for the construction of facilities which make it possible to expedite the elimination of the existing disproportions and "bottlenecks," for the strengthening of the material and technical base of the fuel and raw material sectors, for the development of the sectors which produce consumer goods, and first of all for the solution of the food problem. The technological structure of capital investments will also be improved. Their proportion in the development of the active portion of the fixed production capital will increase.

More than one-third of the total amount of capital investments is being channelled into agriculture with allowance made for the sectors which promote its development

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(agricultural machine building, machine building for animal husbandry and fodder production, the production of mineral fertilizers and plant protecting agents, the microbiological and mixed fodder industry and others).

The task is to use more effectively the enormous resources which it is planned to allocate for the development of agriculture and the entire agro-industrial complex. Here it is necessary to develop the sectors belonging to the complex proportionately and in a balanced manner. Cases of the use of expensive reinforced concrete livestock barns must be eradicated, proper attention must be devoted to the development of the fodder base. It is necessary to eliminate the existing disproportions between production and the infrastructure, the availability of raw materials and the insufficient capacities for their processing, which is leading to large losses and the decrease of the quality of the products being delivered to the consumer.

Unfortunately, intrasectorial disproportions are occurring to one extent or another in nearly all sectors, which is explained both by shortcomings in the planning of capital investments and especially by the violations of planning discipline. The pattern of the output of metal working equipment and its distribution between machine building and the other sectors of the national economy require serious improvement. Often new, highly productive equipment is sent not to the enterprises of machine building ministries, but to other sectors where it is used for the repair of not very complicated equipment.

It is also necessary to study the problems which arise in repair. The analysis shows that the repair of obsolete equipment with respect to the ultimate indicators is more expensive than the production of new equipment of better quality.

Important changes will also occur in the territorial proportions of the distribution of the productive forces of the country. Here the efficient combination of comprehensiveness with the specialization of economic regions and union republics with allowance made for the increase of manpower resources, the availability of mineral reserves and climatic conditions is the main direction. The continued development and formation of territorial production complexes, especially in the eastern regions of the country, will promote this.

As a result of the transmission of inexpensive electric power from the east to the western part of the country, as well as the development of pipeline transport (including all-product pipelines) the location of not only the labor-consuming, but also the power-consuming extractive sectors, especially in the regions of Siberia, should be approached in a new way. This enormous region has three zones: the extreme northern, the central and the southern zones.

It is feasible to develop the raw material resources of the first zone primarily by the work shift method, in the second zone it is feasible to develop the sectors which refine raw materials, while in the southern zone it is feasible to carry out development comprehensively with the emphasis on the utmost strengthening of the social infrastructure and the development of the hotbed and hothouse system, which will promote the influx of skilled personnel into this region.

The 26th CPSU Congress set strategic tasks not only for a 5-year period, but also for a lengthy period. Firm foundations for their successful accomplishment should be laid during the 11th Five-Year Plan. In this connection a five-year plan of scientific research on the most important economic directions has been drafted.

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During the 11th Five-Year Plan the conditions also have to be created for the solution of such most important problems as the continuation of the development of the Western Siberian Petroleum and Gas Complex, the formation of territorial production complexes on the basis of the use of the Kansk-Achinsk and Ekibastuz basins and the raw material resources in the zone of the Baykal-Amur Railway Line, the further development of the material and technical base of nuclear power engineering, the construction and designing of powerful hydroelectric power stations in the eastern regions of the country, the development of all-product pipeline transport, the performance of the preliminary operations for the transfer of water of northern and eastern rivers to the Volga basin, Kazakhstan and Central Asia, as well as the continuation of much scientific research and others. Economics scholars should give effective assistance to planning organs in the drafting of the five-year plan and particularly the comprehensive goal programs, as well as should increase the social orientation of the plans so that this would promote an increase of the national income and the productivity of national labor.

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INVESTMENT, PRICES, BUDGET AND FINANCE

IMPACT OF BANKING SYSTEM ON PRODUCTION ANALYZED

Moscow VOPROSY EKONOMIKI in Russian No 7, Jul 81 pp 73-83

[Article by I. Levchuk: "The Banking System and Production Efficiency"]

[Text] During the period of mature socialism the task of actively influencing by all the economic tools at their disposal the increase of the efficiency of social production and work quality is coming up for banks. The main problem of those which encompass all the spheres of the national economy, L. I. Brezhnev emphasized in the Accountability Report of the CPSU Central Committee to the 26th party congress, is to complete the changeover to the primarily intensive path of development. The congress advanced the demand: "To increase the role of financial and credit levers in the intensification of production, the strengthening of cost accounting and the tightening up of the policy of economy."

The influence of banks on the increase of the efficiency of the economy begins already at the stage of the drawing up of drafts of the five-year and annual plans. In economic literature almost no attention is devoted to this question, while much depends on the activity of banks. Banks study the drafts of the state plan of economic and social development and the state budget and prepare suggestions on the main proportions of the national economy, the ratio of groups A and B of industry and of the monetary income and expenditures of the population, the development of trade and the sphere of personal service, the monitoring of the expenditure of wage funds and so on, which, as a rule, are then reflected in these state documents.

The All-Union Bank for Financing Capital Investments and Gosbank take an active part in the preparation of the drafts of plans of capital construction and in the checking of the title lists and intraproject title lists of construction projects. Here the attention is focused on questions which ensure the increase of the effectiveness of capital investments. By taking part in the preparation of drafts of the balance of the monetary income and expenditures of the population, as well as by drawing up drafts of the cash and credit plans, the institutions of the banks influence the formation of the volume and pattern of production, construction and circulation.

The importance of the work of the banks in the area of planning is increasing in light of the decisions of the 26th CPSU Congress. Now a consolidated financial balance with a breakdown of revenues and expenditures by years is elaborated within the five-year plan, while an annual financial balance is elaborated within the annual plan. In connection with this Gosbank and the All-Union Bank for Financing

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Capital Investments prepare estimates of the short-term and long-term credits for the 5-year period with a breakdown by years. This work requires the thorough analysis of economic and social phenomena.

The extensive opportunities to influence the efficiency of social production are connected with the performance by Gosbank of the function of the cash-issuing center of the country.

The 26th CPSU Congress set the task to adopt during the 11th Five-Year Plan the set of measures on the improvement of the economic mechanism, which are contained in the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979. Among them, in particular, it is envisaged to elaborate within the state plan of economic and social development a 5-year balance of the monetary income and expenditures of the population, which takes into account the needs of the Soviet people for goods and paid services, on the basis of the steady increase of their monetary income.

In this connection in the process of preparing the plan projections one must take more completely into account the socio-economic processes which influence the money circulation. It seems that it is especially important to do this when determining by republics and oblasts the disposable income of the population and the volumes of the retail commodity turnover and paid services.

One should aim at the formation of the volumes of the retail commodity turnover on the basis of the extensive search for opportunities to meet more completely the consumer demand of the population, and not just on the basis of the available commodity resources. In the decisions of the 26th CPSU Congress for the 11th Five-Year Plan, first, a faster growth rate of the production of consumer items than of means of production is called for; second, the output of cultural, personal and household goods at heavy industry enterprises will increase; third, the necessary masses of commodities should additionally be sought locally by the increase of the output of consumer goods made from local raw materials and materials and the waste products of industrial and agricultural production. The measures of the party and the government on the improvement of the economic mechanism not only give room for the display of initiative locally, but also extend the rights of local organs and the managers of associations and enterprises, make it possible to make more complete use of bank credit for increasing the output of goods and so on.

The complete balance of the monetary income and expenditures of the population at the stage of the elaboration of drafts of the plans serves as one of the factors of the successful functioning and planned development of the money circulation. The economically sound formulation of the balances of the monetary income and expenditures of the population and, on their basis, of the cash plans and the achievement of the proportions incorporated in these balances and plans make it possible to meet the effective demand more completely and promote the enhancement of the role of money in the stimulation of the growth of labor productivity.

Monetary levers serve as an important tool of the monitoring of economic life. The banking system has effective methods of monitoring the money turnover, which, as practice attests, is of substantial importance for effective management and the improvement of work quality.

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In analyzing from this standpoint the emission function of USSR Gosbank, it can be noted that the steps on fulfilling the cash plan, which is an integral part of the state plan of economic and social development, function here as the main steps. Here the monitoring of the expenditures of wage funds and the development of the commodity turnover, as well as of personal service, which cannot be separated from each other, since the payment of assets for wages is the main item of expenditure of the cash plan, while the receipt of the proceeds of trade is its main item of income, serves as the decisive directions from the point of view of the influencing of the intensification of production.

During the present five-year plan it is planned to ensure the leading growth of labor productivity as compared with wages. This requires that the standards of the wage per ruble of output, which are subject to planning, the amounts of the wage funds and material incentive funds and the amounts of the monetary payments to kol-khoz farmers should reflect more completely and take into account the increase of the efficiency of social production. The monitoring of the banks should promote more actively the observance of the proportions incorporated in the plans and should thereby be conducive to the intensification of production.

In recent years in some republics, krays and oblasts the unjustified exceeding of the planned wage fund has been allowed due to the presence at some enterprises of an above-plan number of workers and employees, a faster increase of the average wage than was planned, the nonfulfillment of the assignments on the increase of labor productivity and so on. In this connection in 1980 the assets for the payment of wages began to be issued to associations and organizations in conformity with the production volumes which were approved by the ministries and departments, and not by the enterprises themselves. It is well known that now a limit of the number of workers and employees is established for ministries, associations and enterprises and the use of standards of the wage per ruble of output, which coordinate the wage more closely with the production volumes, is being extended. The wage, which was approved previously by the associations and organizations themselves for above-plan construction and installation work, as well as for the repair of buildings, structures and local roads, is now stipulated by the state plan. The indicated measures are increasing the importance of bank monitoring of the expenditures of the wage fund and are increasing its influence on production efficiency.

The bank has received the opportunity to influence more effectively the precise observance of the state standards and specifications of the output of products. The point is that if a portion of the output is produced with a deviation from the standards and specifications, its value is excluded from the volume of sold output, the amount of wages due for the corresponding period is recalculated and the assets issued in excess to the economic organ are withheld by the institution of Gosbank when issuing money for wages when making the final settlement for the current quarter.

The assignments on and the means of increasing the production of consumer goods and developing the commodity turnover are specified in the Main Directions. In this connection the importance of the work of Gosbank on the realization of the income portion of the cash plan and first of all on increasing the receipts of proceeds from trade organizations is increasing. Bank organs should constantly keep track of the fulfillment by trade organizations of both the main plans and the additional assignments on the volume of the retail commodity turnover, should strive for the expansion of trade in industrial goods and foodstuffs, the development of the network of trade and public dining enterprises and so on.

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It is well known that the plan assignments for the sectors of industry, which produce consumer goods, are regarded as the minimum assignments. Therefore, bank institutions jointly with associations and enterprises need to seek more actively opportunities for the increase of the output, the enlargement of the assortment and the increase of the quality of goods which are in demand. Bank credit will promote the setting up and development of the production of such goods not only in light and the food industries, but also at enterprises of heavy and local industry.

In the process of regulating the money circulation and realizing the assignments established by the plan, Gosbank can try more effectively to see to it that the items, which warehouses and bases have in a sufficient amount, would always be on sale, that goods would be better distributed among oblasts and that the violation of the work schedule of trade enterprises would not be allowed. The development of the entire sphere of consumer service and the improvement of the quality of its work are a substantial reserve for the increase of the well-being of the people and the strengthening of the money circulation of the country.

The 26th CPSU Congress advanced the demands to increase the level of organizing work, business ability and efficiency in all the links of the economy. This demand imposes on Gosbank, as the cash-issuing center of the country, the duty to ensure the more efficient organization of the cash flows and to expedite the turnover of monetary assets. The level of all emission and cash operations should be increased in order to increase their impact and to decrease the expenditures on their performance.

The enhancement of the role of local soviets of people's deputies in solving questions of economic construction is of great importance for money circulation, the use of money as one of the economic levers of the increase of production efficiency and the exercise of control. At present they draw up and approve the consolidated five-year and annual plans of the production of local construction materials, the output of consumer goods and housing, municipal, cultural and general construction and monitor their fulfillment. The saturation of the market with the necessary goods, the provision of the population with paid services and the increase of the purchasing power of the ruble largely depend on this activity.

The migration of money¹ remains a major problem. It is clear that this process as a whole must not be considered justified. In part it stems from objective factors, which are caused by the development of the economy, scientific and technical progress and the increase of the well-being of the people. However, the significant transfer of money in a number of instances is connected with shortcomings in the operation of services and first of all trade. The improper distribution of marketable commodities among cities and rayons, the poor consideration of demand and the lack of some types of goods lead to the unjustified movement of money from many rayons to oblast cities and capitals of the union republics. The strengthening of the influence of the bank on the more complete meeting of the effective demand will make it possible to improve trade and to decrease the migration of money.

The improvement of the savings business, the task of the further development of which is set in the Main Directions, is an important factor of the increase of the

1. By the migration of money there is understood its transfer from one economic region or city to another, from one republic or oblast to another.

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efficiency of management. Savings banks save workers time and facilitate the making of many types of monetary transactions. With respect to the scale of the money turnover, the degree of branching of the network and the number of clients served the system of savings banks in the USSR is one of the largest in the world. At the beginning of 1980 in the country there were nearly 81,000 savings banks, at which there were 136 million deposits for a total amount of 146.2 billion rubles. Savings banks offer the population 60 types of services. In recent years new promising forms of consumer service have emerged and been developed. Among them are: the transfer of wages and other types of monetary income of the population to accounts at savings banks; the issuing of wages through them to workers and employees (by 1980 13,000 enterprises paid wages in this way to more than 4 million workers); noncash transactions with trade organizations and municipal enterprises; the repayment of state loans and others. It is important to take more completely into account the demands of the population and to develop advanced forms of settlements and other types of monetary transactions, including the combination of the payments for rent, municipal services, gas, electric power and telephone in a single payment document.

The decisions of the 26th CPSU Congress require the more active use of financial and credit levers for increasing the efficiency of social production. Bank credit helps to increase the scale of the production and circulation of the national product. By means of it the growth of the monetary and physical assets of associations and enterprises, which is necessary for increasing the output of products, is formed, the financial base of the formation of the stockpiles and stocks of materials, unfinished work pieces and equipment, which are necessary for industrial and agricultural production, is provided, and the output of consumer goods increases.

At the same time credit promotes the improvement of the sectorial proportions of social production, since considerable amounts of credit are channelled into the sectors of industry, which ensure to the greatest extent technical progress and the increase of the well-being of the people, as well as into the base sectors--the fuel and power sectors, ferrous and nonferrous metallurgy and agriculture.

Credit Investments of Banks in the National Economy²
(balances of loans at the end of the year, billions of rubles)

	1965	1970	1975	1979	Increase in 1979 as against		
					1965	1970	1975
Credit investments, total	74.0	126.2	204.0	300.4	4.1-fold	2.4-fold	1.5-fold
including:							
short-term	66.7	104.7	160.5	225.0	3.4-fold	2.1-fold	1.4-fold
long-term	7.3	21.5	43.5	75.4	10.3-fold	3.5-fold	1.7-fold

Industry, agriculture, trade and construction accounted for the bulk of the credit investments.

The stimulating influence of credit on production and circulation increases under the conditions of mature socialism. It is actively involved in the formation of

2. "Narodnoye khozyaystvo SSSR v 1979 g." /The USSR National Economy in 1979/, Izdatel'stvo "Statistika", 1980, p 557.

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the fixed and working capital of associations, enterprises and organizations. More than 46 percent of all the circulating assets of the national economy are formed by means of short-term credit. In industry credit covers 47.4 percent of the working capital, in agriculture (kolkhozes)--54.5 percent, in trade--57.2 percent.³ The proportion of bank loans in the sources of capital investments of enterprises and organizations has also increased considerably. The use of credit is oriented to a greater and greater extent toward the improvement of the end results of production and construction: the fulfillment of the plan of deliveries of products, the placement of finished construction projects into operation and the increase of the results of the use of material, manpower and financial resources.

In capital construction it is planned to complete in 1981 the changeover to settlements between clients and contractors for enterprises and projects which have been totally finished and put into operation in accordance with the estimated cost of the commodity production of construction. The issuing by clients of advances to contracting organizations for expenditures on the unfinished performance of construction and installation work is being ceased with the introduction of this procedure. The meeting of expenses up to the placement of projects into operation will be achieved by means of loans. All this will increase the interest of contracting organizations in shortening the periods of construction and in increasing its quality.

The acceleration of scientific and technical progress required the increase of the effectiveness of cost accounting levers with respect to the development, assimilation and introduction of new technology. In connection with the changeover of scientific research organizations of industry to cost accounting they make settlements with clients for the completely finished and accepted work instead of payment for it by stages. The expenditures of these organizations until the expiration of the planning period are covered by bank credit. If the deadline of the delivery of the work is exceeded, the issuing of credit is continued with the levying of a higher interest rate for the use of the loan. The changeover to such a system should increase substantially the effectiveness of the work of the scientific institutions of industry.

A significant portion of the credit resources of the banking system is used by enterprises and associations for the implementation of measures on the technical improvement of production and the expansion of the output of consumer goods. By means of Gosbank loans for these purposes in 1980 10,565 production facilities were put into operation; the measures implemented by means of credit made it possible to produce in terms of a year additional output worth 2.3 billion rubles and to derive a profit in the amount of more than 250 million rubles.

In recent years the procedure of issuing and repaying such credits has been improved. Gosbank and the All-Union Bank for Financing Capital Investments are permitted to grant loans to production associations, enterprises and organizations for the implementation of highly efficient measures on the output of new products and the increase of the quality of the items being produced, as well as for the expansion of the production of consumer goods and the improvement of personal service to the population on the condition of the recovery of the expenditures and the repayment of the debt within a period of 2 years. Moreover, such credit is granted over

3. "Narodnoye khozyaystvo SSSR v 1979 g.," pp 542-543.

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and above the limit of state capital investments. Thus, credit has ceased to be just an additional source of assets of enterprises when there are not enough resources in the production development fund. It has become an independent tool of the stimulation of technical progress and the increase of the output of goods for the population.

All this makes it possible to make greater demands on the use of credit. In conformity with the Main Directions credit levers, like financial levers, should be more actively involved "in the solution of the problems of expediting the development and introduction of highly efficient new equipment, as well as the removal from production of obsolete equipment, of increasing the output of consumer goods and the rendering of services to the population, of mobilizing internal economic reserves and eliminating unproductive expenditures and losses."

It should be noted that the methods of influence of the banks by means of credit on the improvement of the work of associations, enterprises and organizations should be developed and strengthened. The state of credit relations in the national economy and the possibilities of improving the planning of credits and the mechanism of lending attest to this.

Some liberalization of the conditions of the granting of credit has been accomplished in recent years. Bank loans have begun to be used not only for the making of the planned expenditures of economic organs, but also for the meeting of their unforeseen needs. The expansion of lending from special loan and special current accounts, the introduction of new types of loans and objects of credit and its extensive use for the making of settlements and the meeting of expenses, which do not have material backing, had the result that the development of credit took place more rapidly than its "return" increased. The volume of output and national income per unit of bank investments decreased. Whereas in 1965 there were 6.5 rubles of gross national product and 2.9 rubles of national income per ruble of average annual credit investments (with respect to short-term loans), in 1970 these indicators were respectively 6.2 and 2.8 rubles, in 1975--5.6 and 2.3 rubles and in 1979--4.8 and 2.0 rubles.⁴

The demand of the 26th CPSU Congress: "To steadfastly implement the immutable principle of economic construction--the achievement in the interests of society of the best results with the least expenditures," fully applies to the use of bank credit by associations and organizations. It is important for banks in their activity to implement the named principle more completely. The economical expenditures of assets should be specified already in the credit plans; at the stage of planning it is necessary to stipulate that the growth rate of credit, all other things being equal, should not be greater than the rate of increase of the gross national product and the national income. A similar correlation should be observed in the formation of working capital with respect to these general economic indicators. Thus, the increase of the efficiency of the use of working capital and bank credit will be stipulated already in the plans. Such an approach should become the most important principle of the planning of credit.

4. Calculated according to the statistical collections of the USSR Central Statistical Administration "Narodnoye khozyaystvo SSSR" /The USSR National Economy/ for 1965, 1974, 1975 and 1979.

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It is also necessary to step up the organizing and monitoring work of the banks in the lending process: to adopt a sterner approach to associations and enterprises which do not fulfill contractual obligations, production assignments and plans of accumulations, produce unsaleable products and low quality goods, drag out the construction periods, have above-plan stocks of physical assets and allow losses, unproductive expenditures and waste. If the banks extend credit to these plants, factories and construction organizations, they are objectively supporting them and are as if covering with their own resources the gaps which have formed at them. Such a situation must not be allowed. The banks, in our opinion, should restrict the issuance of loans or refuse them entirely to such associations and enterprises. The making of the approach to the issuance of credit more stringent will force superior economic organizations to take effective steps to put right the operation of the lagging enterprise.

This measure stems from the need to develop and strengthen cost accounting in every possible way, which is specified by the decisions of the 26th CPSU Congress. As is known, the sectors of industry during the 11th Five-Year Plan are being converted as they become ready to self-sufficiency; the assets (from the profit), which are necessary for the implementation of expanded reproduction, will remain at the disposal of the ministries. The ministries and industrial associations should bear full responsibility for the work of their economic organs, including the provision of assistance through their own resources and the taking of organizational, economic and financial steps to improve their activity.

The need has arisen to increase the profitability, to eliminate the unprofitability of production and to increase the profit, first of all by the reduction of the production cost, the increase of labor productivity and the improvement of product quality. By strengthening the control by the ruble and making the approach to economic organs more stringent when issuing and repaying credit, the banks can do much in this direction.

The question of the expediency of preserving some prevailing types of loans or of the change of the procedure of granting them, apparently, should also be examined. For example, the shortcomings of lending with respect to the turnover are well known: the ease of obtaining bank resources here to a considerable extent is achieved due to the weakening of the monitoring of their use. It is expedient to halt the extension of loans to sugar refineries for covering losses against the so-called fallout earnings. Apparently, credit should not be extended against excess, unnecessary and old physical assets, in order to promote their sale. The amount of the loans to each given economic organ should be decreased by the amount of the excess assets, considering that the capital invested in these assets has been used unwisely.

The solution of the problem of enhancing the special-purpose nature of preferential payment credits, which are granted to enterprises and organizations which operate well in case of temporary financial difficulties, is of great importance. It is expedient to allocate them only for the payment for physical assets and services, and not for the payment of wages and the making of payments to the budget. Economic organs need to have their own resources for these purposes.

Apparently, the time has come to erect barriers in the way of the consumerist attitude toward credit for all economic managers who are rolling in bank credit, to hold negligent managers more strictly accountable and to strengthen bank influence

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on enterprises and associations which permit gaps in their work. This would conform to the decisions of the 26th party congress on the increase of the level of management in all the links of the economy, thereby promoting the increase of the intensification of production.

To stimulate the better use of credit the banks in recent years have begun to improve the procedure of paying for it. The interest for credit was differentiated subject to the types of loans and the periods for which they are issued. The average level of interest increased, while the rate for overdue short-term loans came to 10 percent. However, this did not yield the desired results. Practice shows that the interest for planned credit does not have an adequate influence on its use (by this credit there are understood the loans which ensure the normal planned circulation of the assets of the economy). The point is that enterprises and associations stipulate in the financial plans the portion of the profit, which is for the payment of interest on planned loans. In a number of instances this portion also covers the interest on unforeseen loans. Therefore, as a rule, enterprises pay the interest without detriment to the formation of economic stimulation funds.

In conformity with the decree of the CPSU Central Committee and the USSR Council of Ministers on improving the economic mechanism steps have been taken to increase the influence of the interest for credit on the results of the work of associations and enterprises. The differentiation of the rates by types of loans subject to the nature and period of their use has been increased. The interest for credits, which cover various unforeseen needs, has been increased, the rates for long-term loans for capital investments have been differentiated considerably on the basis of the principle--the more rapidly a measure is completed, the lower the interest rate is (the difference between the planned and actual interest is turned over to the construction organization or is exacted from it), the average level of interest has been increased. All this makes it possible to use the interest for credit more flexibly in the interests of the improvement of the results of the activity of the economy.

The problem of enhancing the role of interest also has to be further worked on. It is now already possible to say that the effectiveness of the interest for unforeseen loans henceforth has to be increased. Apparently, for the purposes of strengthening it as a penalty measure it should be "weighted." However, it is not a matter of further increasing the amount of interest for such loans. The interest should be exacted not from the profit, but from the material incentive funds, reducing the bonuses for the managers who are responsible for the organization of production and the use of financial resources. This measure even in the case of a comparatively small amount of interest will discipline the administrative and managerial staff of associations and enterprises in the obtaining and expenditure of bank loans.

Noncash transactions, which are organized and carried out by the banking system, are playing an important role in the system of economic levers of influence on production efficiency and work quality. Such settlements for goods, services and performed work and with respect to noncommodity transactions mediate practically the entire economic turnover of the country and the movement of the national product. In carrying them out, the banks verify the legality of the transactions, the marketability of monetary documents, the conformity of deals to the terms of the contract and others. Consequently, they promote the strict observance of socialist legality in economic relations. At the same time noncash transactions and their

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organization are of great importance in the mutual monitoring by economic organs of the delivery of commodity stocks, the timeliness and completeness of payment, in the achievement of the greatest conformity between the movement of goods and money in payment for them, in the economical expenditure of the assets of buyers and bank credit for the payment for goods and services. Noncash transactions decrease the amount of money necessary for the economic turnover and thereby reduce the marketing costs.

At the present stage it is important to fully utilize the mechanism of settlements, just as other economic levers and stimuli, for increasing production efficiency and work quality. The certificate of payment, which is carried out on behalf of the supplier (contractor) by the buyer (client), is at the same time verification of the conformity of the produced commodity (or service rendered) to the terms of the contract. This check, as a rule, is made on the basis of the monetary payment documents, which are received by the buyer and at the bank institution serving him. Thus, the mechanism of settlements makes it possible to monitor the conformity of goods and services to the requirements of the plan and contract of deliveries; payment confirms the meeting of these requirements. Therefore, the more extensive the opportunities of economic organs are to monitor the fulfillment of mutual obligations and, hence, to influence each other in the interests of their most complete fulfillment, the more successfully the mechanism of settlement works and the greater its influence on the increase of the efficiency of social production is.

The improvement of the acceptance method of payment is the most important direction, in which, in our opinion, the strengthening of bank influence on the results of the work of associations and organizations should proceed. Its proportion in the payment turnover of Gosbank in 1980 was more than 47.3 percent. The real influence of this form is connected with the fact that before delivering monetary claims to the bank for payment the supplier should meet a number of conditions and should reflect them in the documents. Otherwise the bank will not accept the documents and, hence, the supplier will not receive the amount indicated in them from the payer.

The supplier should ship the commodity, and precisely the one, in the amount and at the price, which are stipulated by the contract, which is certified by reference in the payment claim to the numbers and dates of the shipping and other documents. The payment documents should be delivered to the bank only after the shipment of the commodity. The bank, after receiving the claim for the payer, verifies it and accepts it for execution, if the economic transactions behind it meet the terms of the contract. True, the comparison of each document with the contract is not among the functions of the bank; if doubts arise, the bank has the right to demand the contract from the supplier and to verify the legality of the transaction. When the unscrupulousness of a supplier is detected, for example, if he delivers documents to the bank without having shipped the commodity, and such instances, unfortunately, are not rare, the bank imposes financial sanctions against the violator of contractual discipline and can discredit him, not having accepted the payment claims for encashment. Then the supplier, even in case of the observance of all the terms of the contract, will have to resort to other forms of settlement, coming to an agreement on this with the buyer. The buyer in this case can increase his demands in the process of fulfilling the contractual relations. Apparently, the banks must be granted more extensive rights in the imposition of sanctions, especially for the delivery of claims for unshipped goods.

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It is necessary to make more coincident the time of the receipt by the buyer of the commodity stocks and the entry of the payment into the current account of the supplier. To solve this problem the organization of business at the enterprises must be improved, their efficient and smooth operation, the timely and complete shipment of the commodity and its delivery to the consumer and the good operation of transportation and other economic links must be ensured. The banks should make their contribution to the solution of this problem, by improving and simplifying the organization of the paper flow on payment transactions and the tightening up of the monitoring by the buyer of the quality of the products being delivered and the work being turned over.

In recent years much has been done to increase the influence of noncash transactions on production efficiency and to improve the effectiveness of sanctions for the breach of contractual obligations. Thus, the fine for the late payment for delivered commodity stocks, services rendered and performed work has been increased. It is now 0.04 percent of the amount of the overdue payment for each day of delay (this is approximately 15 percent per annum). The former rate of the fine of 0.03 percent has been retained only for kolkhozes. In all instances the client should now exact from the supplier fines and forfeits, if the latter delivered the ordered products late, violated their assortment, the quality or the date of performance of the contractual operations. However, this is still not always done, and here it is important to make bank monitoring stricter.

Relying on the experience of the use of the credit system of our country and the banks of the socialist countries, it is possible to outline a number of other measures on the strengthening of the role of noncash transactions. It would be feasible, in our opinion, to introduce the acceptance of goods instead of the acceptance of monetary payment documents. This form must be used first of all for consumer goods. As a transitional measure it is possible to use the replacement of subsequent acceptance by preliminary acceptance. Of course, this will slow to a certain extent the transfer of payment to the account of the supplier, but then the opportunity will arise for the payer to carry out before payment the more careful inspection of the raw materials, materials, semifinances and other types of resources, which he is receiving and which are necessary for the production process. The payment of the penalty and fines for the violation of contractual discipline should also be linked more closely with the economic stimulation funds and the amount of the bonuses to production organizers at the associations and enterprises.

The decisions of the 26th CPSU Congress require the stepping up of the monitoring of the results of management in the different links of the economy. Control by the ruble has served and does serve as an effective lever for increasing the influence of the banks on production efficiency. The extension of credit to the national economy gives the greatest room for it. The economic credit work of the institutions of the bank is based on the systematic analysis of the economic and financial activity of associations, enterprises, construction projects, kolkhozes, sovkhoses, trade organizations and other economic organs. The materials of the analysis enable the banks to make on economic organs demands concerning the elaboration of specific measures on the increase of the volumes of the output of high quality products, the shortening of the construction periods, the increase of labor productivity, the mobilization of reserves, the tightening up of planning discipline and finance and the elimination of shortcomings. The need has arisen for the tightening up of the monitoring of the purposeful and efficient use of credit and

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the assurance of its timely return and for making stricter the economic sanctions for the violation of the principles of the use of bank resources by enterprises and organizations.

The task to seek "the radical improvement of construction, the increase of the effectiveness of capital investments" is set in the Main Directions, which were adopted by the 26th CPSU Congress. The banks can do much in this respect. Bank monitoring of capital construction should be focused first of all on the determination of its legality, the correctness of the use of the allocated assets and the payment for the performed work. Such monitoring is based on the system of the financing and extension of credit for capital investments, which stipulates the need for the concentration of financial, material and manpower resources at decisive projects, the observation of the construction dates and the stimulation of a high quality of construction and installation work. It is important to achieve the utmost concentration of forces on the quickest possible completion and start-up of those enterprises which are capable of ensuring the largest increase of output, to undo the bottlenecks and to carry out more actively the renovation and expansion of operating enterprises.

One of the most important measures of bank influence is the special conditions of lending, to which enterprises and organizations, which do not fulfill the plan indicators, can be converted. This measure provides for the possibility of imposing a number of sanctions up to the halt of the extensions of some types of credit, and if this does not help, the cut off from lending and the recovery of previously extended loans. The changeover of economic organs to these conditions is a very effective measure. Practice shows that approximately 60-70 percent of these enterprises and associations as a result of the implementation of the necessary measures improve their operation in the next half a year. However, enterprises are still not always changed over to the special conditions when this is necessary, or they are cancelled before their production and financial activity has been firmly stabilized. In recent years the banks have begun to use measures of economic influence more often. Thus, whereas in 1975 the proportion of associations, enterprises and organizations, on which Gosbank imposed the special conditions of lending, was 2.7 percent, in 1980 it was 4.5 percent.

The bank measures, as a rule, yield the necessary results; nevertheless some enterprises are again committing violations of state planning discipline. In light of the decisions of the 26th CPSU Congress the banks should step up the work with such associations, enterprises and construction and installation organizations. Here the measures should be aimed not so much at the extension of the measures of economic influence as at the increase of their effectiveness. Here it is important to achieve a quick impact and to consolidate it for a long time. The steady improvement of the quality indicators of the work of enterprises and organizations and the increase of the efficiency of social production should be the end results.

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INDUSTRIAL DEVELOPMENT AND PERFORMANCE

RETOOLING, REPAIR IN INDUSTRY EXAMINED

Moscow VOPROSY EKONOMIKI in Russian No 7, Jul 81 pp 31-41

/Article by V. Krasovskiy: "The Retooling of Production and the Effectiveness of Repair"

/Text The timely updating and retooling of the production apparatus of all the sectors of the national economy are a major reserve for increasing the effectiveness of the mighty economic potential which has been created in the country. The enormous scale of the created fixed capital is responsible for the considerable expenditures on its maintenance. At the same time the accumulation of obsolete and worn out means of labor is hindering the improvement of the economic indicators of enterprises, is diverting great manpower resources for their maintenance and is increasing substantially the expenditures on repairs, especially those performed on a low technical basis. The need "to improve the use of production capacities and fixed capital, to increase the shift coefficient of machines and equipment. To create with allowance made for the peculiarities of individual sectors and works and to use advanced systems of the repair and modernization of equipment" is outlined in the Main Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990.

Progressive Decisions in the Sphere of the Replacement and Modernization of Means of Labor

At the first stages of industrialization the increasing rate of expanded reproduction and the relatively large amounts of new production capacities being put into operation overshadowed at times the problem of the age structure of the means of labor and, consequently, their replacement on a progressive basis. At that time it was believed that the more rapidly the amount of fixed capital increases and the younger the production apparatus is, the relatively less importance the retirement of means of labor due to their decrepit state or obsolescence has.

At present many sectors, which previously were regarded as leading sectors and were distinguished by large increases of capacities (ferrous metallurgy, the coal industry, the cement industry, railroad car building, tractor building and others), are being developed much more slowly than new priority sectors--the petroleum and gas industries, nuclear power engineering, cybernetics, electronic engineering and laser technology, modern machine building and others. The capital investments in the coal and mining industries, ferrous and nonferrous metallurgy, the construction materials industry and other "old" sectors are being allocated to a greater

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extent for the replacement and not the expansion of production capacities. Even in the case when new enterprises or mines are being built, their output goes not for the increase of the volume of sectorial output, but for the offsetting of the capacities being retired. In urban construction a portion of the area of new apartment houses and entire blocks goes for the offsetting of the demolition of old and dilapidated housing, which is still carried on the balance of cities and settlements.

In a number of capitalist countries the proportion of the replacement in capital investments amounts to 70-75 percent of their total amount. In the USSR the proportion of the capital investments made at the expense of amortization by way of simple reproduction is considerably less, but now in the extractive sectors of industry and in agriculture it is 40-60 percent. The specific nature of the replacement of capacities in the extractive sectors consists in the fact that here the restoration of a larger share of the productive capital by means of repair is absent. The exhausted work areas in mines, pits, logging areas and so forth are not restored at the previous sections, rather a shift of the mining (or the logging areas) occurs. Only some underground (mine shafts, ventilation shafts, tracks of underground transport and so forth) and surface structures wear out in approximately the same way as in the processing industry.

The insufficient consideration of the role of replacement in capital investments often makes it difficult to properly assess the accumulation fund and its effectiveness. Precisely because replacement is taking on greater and greater dimensions, it is important to determine the efficient direction of such expenditures, having increased the proportion of investments in modernization and retooling.

The amount of amortization deductions in the USSR national economy was equal in 1970 to 29.1 billion rubles, in 1979--67.6 billion rubles, that is, it increased during the 1970's nearly 2.3-fold. The assets allocated for major repair increased from 14.6 billion rubles to 27.8 billion rubles, or 1.9-fold.

In industry in 1979 the assets for major repair were up to 32 percent of the total amount of capital investments, and in some cases were even more. For example, in ferrous metallurgy, according to estimates of the Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin, the capital investments in enterprises of the sector were equal in 1970 to 2.2 billion rubles, while the expenditures on major repair were equal to 693.8 million rubles, or 31.8 percent. In 1978 they were respectively 3.1 billion rubles and 1.28 billion rubles for major repair, or 41 percent.

In many instances the assets for major repair were allocated for keeping in operation obsolete, unproductive and inefficient equipment. It turned out that instead of replacing the old equipment with new equipment, which was dictated by economic necessity, it was repaired and reconditioned repeatedly on the old technical basis. As a result obsolete and worn out equipment was often used in production, meanwhile there were not enough assets for effective renovation measures. For example, at the Magnitogorsk Metallurgical Plant mill No 1150 of blooming mill 3 was repaired 39 times, at the same time the expenditures on repairs exceeded its basic cost by 2.1-fold, while sinter plants No 1 and No 2 were overhauled respectively 16 and 28 times. The cost of repairs exceeded the basic cost by 8.7- and 16.9-fold. At the Kuznetsk Metallurgical Plant the roughing mill 1100 during its service life (46 years) was repaired 38 times with the exceeding of its basic cost by 1.9-fold. In the petrochemical industry, particularly the rubber footwear subsector, the

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basic cost of a glue mixer was equal to 3,600 rubles, rollers--9,900 rubles, the calender roll--17,500 rubles, while the expenditures on their repair came to respectively 13,900, 36,300 and 47,000 rubles, that is, they were 3.8-fold, 3.6-fold and 2.7-fold more. At the same time the outlays for the purchase of new equipment were in this sector not more than 2 percent of the amount of assets used for major repair.¹

In the mining industry of the Ministry of Ferrous Metallurgy 31.4 percent of the assets from the funds for major repair were issued to the Ore Administration imeni Dzerzhinskiy alone for the purchase of new equipment. The majority of ore administrations did not receive assets at all for the purchase of new equipment. At the Zaporozhstal' Plant in recent years not more than 15-20 percent of the assets were allocated for the replacement of obsolete equipment. In a number of sectors of industry the equipment is kept in working order only by means of major repair, by which the initial capacity, it is true, is not fully restored, the old technical parameters of means of labor are being retained, which, of course, is hindering technical progress.

One of the important means of increasing the effectiveness of the amortization deductions being allocated for major repair is its combination with the modernization of the equipment in use. This makes it possible to carry out modernization in a short time and is an economical means of replacing fixed capital. Such a combination of major repair and modernization is called for in the instructions on the planning and use of amortization deductions. At the same time the monitoring of the timely reconditioning of operating means of labor and steps against the use of amortization funds for the needs of new construction are required.

Modern Problems of Amortization Policy

The dependence of the relative amount of expenditures on replacement on the intensity of the expansion of the production apparatus has already been emphasized in Soviet economic literature. Thus, in the studies of Ya. Kvasha it has been demonstrated that the relative amount (percentage) of the fixed capital being retired (in physical terms) in the case of certain service lives of means of labor is a variable and depends on the rate of social reproduction: with an increasing rate of reproduction the percentage of capital being retired (in physical terms) will decrease, while in the band of stabilization it will increase.

At the initial stages of industrialization particular attention was directed to the acceleration of the growth rate. The intensification of the already created material and technical base and the stabilization of the rate of its development acquire a timely importance for a highly developed economy. At present power engineering, the chemical industry, electronics and the infrastructure are being developed most rapidly, while the rate of other, previously priority sectors, which have achieved a large capacity, has decreased appreciably.

It is important to emphasize that an excess of amortization deductions over the capital outlays, which are necessary for the replacement of retired means of labor, forms with an increasing rate of development of production and capital construction. However, with the stabilization of the rate or its decrease this excess, of course, decreases and a situation arises, in which an excess (preponderance) of the expenditures on replacement over the amortization deductions is possible. At

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present precisely such a situation is being created in a number of sectors of industry.

For a long time both the planning of capital investments and their financing, as well as the practice of utilizing amortization funds in the sectors of the national economy and at enterprises were based on the regular and considerable diversion of the amortization assets, including a portion of the assets of major repair, for the needs of new construction and major renovation. Such a practice began to be perceived as a kind of law, which is characteristic of not only the early stages of economic development, but also a mature socialist economy.

On the basis of such notions a number of economists proposed even to exclude the amounts of amortization from the production costs, believing that these amounts, which are used entirely for the building of new enterprises, will provide there an additional impact. On the basis of such suggestions it was proposed to discount the amortization, that is, to decrease its amounts automatically with the passage of time, relying on the future liquidation of the amount of the impact from the productive use of the new facilities. Material and technical supply, the output of machine building products and the orientation of the capacities of construction organizations, which were aimed first of all at the development of major new investment programs and projects, were also developed in this direction. Such a situation, of course, created unfavorable conditions for the regular replacement of fixed capital on a modern technical basis.

The amounts of retirement, which do not exceed 1.5-2 percent a year, are approximately half as much as the necessary amounts. But even these obviously inadequate amounts of retirement in practice are unfulfilled, and major repair and, consequently, the keeping of the available capital at the previous technical level are becoming the main means of maintaining the production apparatus.

Primarily irregular material and technical supply is hindering retooling and the replacement of capital and its modernization. Inadequate reliability in the valuations of old and new capital, especially in connection with the fact that the former is calculated in statistical collections usually at an understated value with a discount for obsolescence, while new equipment is characterized by increased prices, at times improporionately as compared with the increase of the capacity and technical characteristics of the machines being newly installed, is also conducive to this. In a number of instances the purchase of such machines is unprofitable for enterprises and moderates the demand for new equipment.

Over a comparatively long period the reinvestment process in the Soviet economy was accomplished primarily by means of repeated repairs and renovations and to a much smaller extent by the replacement of old equipment with new equipment. Here the more productive equipment was sent, as a rule, to the new enterprises, while the equipment for operating plants in many instances differed little from the equipment being replaced with respect to productivity and the standards of service by workers. Such a nature of the reinvestment process promoted the overloading of the pools of equipment with obsolete machines, which increased the tightness in the balance of manpower resources and led to a decrease of the number of shifts of operation of the machines, and not just old but also new machines. In this connection in economic literature recommendations have been made on the gradual elimination of obsolete machines with the changeover of more productive machines--technological duplicates--to three-shift operation in order to do without the

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additional recruitment of workers. Of course, here not only should the operating schedule of operating enterprises be changed, but the output of more productive equipment, especially automatic equipment, should increase continuously.

However, it is hardly possible to carry out only the purchase of new equipment instead of major repair. The reorganization of machine building--both general and special technological--for the assurance of the retooling of the operating fixed capital would be required for this. Ya. Kvasha correctly noted that "the attempt to coordinate on a broad front the rate of retirement of the pool of means of labor with the period of the change of models, even if this latter is estimated not at 7 years, but more conservatively, would lead, taking into account the uniqueness of the reproduction of fixed capital, to such an expansion of the production of means of production and an increase of the standard of production accumulation, which did not exist even during the initial period of industrialization."³ It is another matter if the convergence of the proportion of items, which are new for an enterprise (with an annual assimilation of 10-12 percent), with the proportion of items, which are being produced for the first time in the country (with an annual assimilation of 4 percent), occurs in the commodity production of machine building. Such a convergence is necessary for the implementation of the achievements of scientific and technical progress, and is also dictated by the acceleration of the economic aging of machines in the case of a tight balance of manpower. Moreover, this convergence is possible owing to the existence in the country of developed machine building.⁴

The consistent reduction of major repair and the equalization of the ratios between the expenditures on the restoration of the initial properties of worn out equipment and the expenditures on the production of new machines with advanced technical parameters should be carried out only gradually and to the extent of the reorganization of investment machine building. The decrease of major repairs is necessary, but it is feasible only on the condition that in the balances of equipment the increase of its proportion is envisaged in the deliveries for the replacement of obsolete and worn out means of labor within the fixed capital.

The Directions of Reproduction and the Solution of the Problems of the Replacement and Modernization of Capital

The advanced experience of the investment complex attests to the diversity in the methods of accomplishing retooling and the modernization of capital and capacities. There are substantial differences in the mining industry, agriculture, the sectors of the equipment type, in sectors with an especially rapid rate of change of models, designs and processing methods and, finally, in sectors with many similar machines and means of transportation. Therefore, apparently, the problems of replacement and modernization should be solved on an individual basis.

In the sectors of the equipment type, which are distinguished by heavy-duty units (in ferrous and nonferrous metallurgy, the chemical and petrochemical industry, the cement industry, the pulp and paper sector and other similar industries), good results are achieved with the combination of two or three directions of reproduction, for example, renovation and major repair or modernization and major repair, when the capacities of both the construction and repair organizations are simultaneously united.

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Practice shows that in a number of equipment sectors the renovation of enterprises is combined with the major repair and modernization of large units (that is what happens in ferrous metallurgy when modernizing, repairing or enlarging blast or open-hearth furnaces, in the chemical and petrochemical industry, the production of construction materials). In the cement industry the production capacities increased considerably as a result of the repair and modernization of the kilns and mills, as well as the intensification of technological processes. The specific capital investments on the modernization, repair and reequipment of production came to 29 rubles/ton of cement, while in the case of new construction they would be equal to 38-42 rubles/ton.

It should be borne in mind that the construction work connected with major repair coincides with modernization and retooling in the indicated equipment sectors not only in time, but also in the nature and conditions, as well as the organization of material and technical supply.

In the petrochemical and petroleum refining industry the enterprises are distinguished by large-tonnage, consolidated and combined technological installations, which unite in one technological block several different processes, and at times plants which have an interconnected production cycle. The separate shutdown for the repair or modernization of such complexes would be unprofitable, for it requires the one-time concentration of installation and repair personnel and the corresponding equipment. Moreover, shutdowns of large blocks involve losses of large amounts of output. In this connection here, as a rule, modernization and major repair coincide in time.

It is advisable to combine the modernization of fixed capital, especially its active portion, with the performance of major repairs. The inclusion of the expenditures on modernization in the norms for major repair is stipulated in the prevailing Statute on the Procedure of the Planning of the Crediting and Use of Amortization Deductions. The uniting of these two reinvestment processes makes it possible to carry out modernization in a shorter time and is the most economical means of the reproduction of fixed capital.⁵ At the same time it should be emphasized that it is possible to carry out modernization and implement it at the expense of the assets of major repair not in case of any capital repair and not for every type of equipment.

In many ways the reinvestment process in capital construction and agriculture takes place differently. For all the difference of the technology and organization of the production process both spheres are characterized by: the existence of a large pool of comparatively similar machines; difficult operating conditions, when it is necessary to take into account climatic conditions and seasonal fluctuation; the comparatively rapid wear of equipment, which often breaks down before the standard useful life. Moreover, these sectors have their own large, not always efficient repair service.

An intensive growth of the pool of basic construction machinery has been observed in the past 25-30 years. From 1950 to 1978 the number of excavators in construction increased from 5,900 to 160,000, that is, 27-fold, scrapers--from 3,000 to 45,300 (15-fold), bulldozers--from 3,000 to 167,000 (nearly 56-fold) and traveling cranes--from 5,600 to 190,000 (34-fold). During the period from 1970 to 1978 alone the machine-worker ratio in construction increased twofold.

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At present almost every construction ministry has its own repair base; enterprises of various departments, which perform repairs on similar machines, often in small amounts, are concentrated in many cities and rayons. Departmental isolation has not made it possible to concentrate the repair of every type of machinery in a given rayon at a specialized enterprise, which would have made it possible to increase considerably the technical equipment of repair work and labor productivity and to adopt the unit-assembly method of repair more extensively.⁶

According to the data of A. Nemchinskiy, the total number of enterprises, which are engaged in the major repair of construction machines, their units and assemblies, exceeds 2,200, but only 214 are specialized primarily in repair. The low level of the series performance of major repairs is leading to the increase of their cost. For example, the repair cost of one E-302 excavator at the Uglezavodsk Machinery and Repair Plant of the USSR Ministry of Construction of Heavy Industry Enterprises was 4,635 rubles, while in the case of the series repair of machinery at the Mari Remstroydormash Plant it was 2,403 rubles, or nearly half as much. It is even more important that the quality of repair at small enterprises and workshops decreases the average operating life of construction machines between major repairs by 40-60 percent as compared with new machines, which sharply decreases the capacity of the available pool of construction equipment. At the same time the expenditures on maintenance, as well as on current and unscheduled repairs increase (by 20-30 percent). Meanwhile the average operating life of a repaired machine of not less than 80 percent of the operating life of a new machine is ensured at specialized repair enterprises.

In the future the specialization of repair enterprises not only according to groups of machines, but also according to type sizes is called for in construction, which will make it possible to use production repair lines. The cooperation of the performance of repairs according to individual redivisions and objects with other enterprises of the construction industry is an important direction of the increase of the effectiveness of repair. The impact from the pursuit of a uniform technical policy in the area of repair consists in the increase of its series performance, the improvement of the quality of the repaired machines and the increase of its overhaul life (up to 80 percent of the indicator established for new machines). At the same time, the time that machines are in for repair should also be greatly shortened. All these measures will make it possible to utilize more completely the capacity of the enormous potential of fixed capital of the construction industry and accordingly to reduce the capital investments in the pool of new construction machinery. At present the number of workers employed in the repair of construction machines is twice as great as in the production of new construction equipment. Therefore the concentration of repair capacities and the technical equipment of repair are an urgent task.

Just as in other sectors of physical production, construction workers are aiming in plans and recommendations at the gradual transfer of the repair services to the USSR Ministry of Construction, Road and Municipal Machine Building. This will make it possible to organize a unified intersectorial system of repair enterprises, to pursue a universal technical policy in repair service and to set up the plant output of large assemblies of machines and their spare parts. However, the orientation toward the Ministry of Construction, Road and Municipal Machine Building for the present is regarded as a task of the distant future (2000).

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In our opinion, the gradual intensification of the repair service of capital construction is justified and merits support. But are four five-year plans really required to put the repair service of construction in order and to ensure here modern organization and technical progress?

Enormous tasks of the intensification of repair service are arising in agriculture. According to the data of studies conducted at the All-Union Academy of Agricultural Sciences imeni V. I. Lenin by Ye. Bazarov and others, in agriculture of the country approximately two-thirds of the fleet are machines which have undergone or are undergoing major repair. However, the post-repair operating life, for example, of tractors is substantially less than the prerepair operating life. According to the available data, every machine during the service life undergoes major repair four to five times. The fact that two-thirds of the fleet of agricultural machines operate after major repair affects not only the decrease of the productivity of the equipment, but also the skill of the machine operators, gives rise to discontent with the occupation and is a reason for the outflow of machine operators from sov-khozes and kolkhozes.

More than 300 repair plants and about 2,000 specialized workshops of the State Committee for the Supply of Production Equipment for Agriculture are in operation for the repair of agricultural equipment. At the same time the level of concentration of production at the plants of the State Committee for the Supply of Production Equipment for Agriculture is many times less than the level of concentration at motor building and tractor plants of the Ministry of Tractor and Agricultural Machine Building.

The output-capital ratio of the specialized repair workshops of the State Committee for the Supply of Production Equipment for Agriculture is 30 percent less, while the labor productivity is two-thirds as great as at tractor plants. The shift coefficient of equipment at the repair enterprises of the State Committee for the Supply of Production Equipment for Agriculture is equal to 1.1-1.2 and the coefficient of the intrashift utilization of equipment is 0.4-0.5, while at the plants of the Ministry of Tractor and Agricultural Machine Building they are respectively equal to 1.6-1.8 and 0.88-0.9. Owing to the small-series nature of production the repair workshops do not ensure the output of machines and their units with an operating life of 80 percent of the prerepair operating life. Meanwhile this figure is the mandatory lower limit, which is established by state order.

According to estimates of scientists of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin, it is economically feasible instead of the existing 2,000 specialized repair plants and workshops of the system of the State Committee for the Supply of Production Equipment for Agriculture to have in the national economy only 150-200 enterprises which perform repairs on the basis of large-series industrial production. In the future it is possible to unite the network of large repair enterprises with the network of plants which produce new machines. The investments in machine building for the purpose of increasing the quality, the service life and reliability of new equipment are 2.5- to 4-fold more effective than in the sphere of repair enterprises proper. The increase of the service life of new agricultural machinery should lead to a sharp decrease of the amounts of major repair, the consumption of spare parts and the diversion of manpower for repair work.

The experience of the leading workers of Kirovogradskaya Oblast of the Ukrainian SSR, where competition was organized under the motto "The Entire Amortization

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Period Without Major Repair," merits attention. Measures of economic stimulation, which are connected with the indicators of the age of the machines and the number of repairs performed, have been elaborated here. Thereby the machine operators do not strive to leave "old" machines, but turn over the new equipment to young machine operators. Tractor drivers, as a rule, stop working on a tractor at the age of 50. But in accordance with the "Kirovograd system" they work at the engineering and technical base of the farms and retain certain benefits which are granted to tractor drivers. This procedure stimulates great efficiency of those working on the equipment in the field and those employed in the maintenance and repair of machines. Moreover, the conditions are created for the year-round work of machine operators, which attaches personnel. As a result the level of the turnover of machine operators at the kolkhozes of Kirovogradskaya Oblast is one-sixth as much as in neighboring oblasts.

Thus, in agriculture the use and repair of equipment are carried out differently than in the equipment sectors of industry. Major repair in combination with the modernization and replacement of units and other equipment is prevalent in ferrous metallurgy, the chemical and cement industries and others. In agriculture, in spite of the obvious preponderance of inefficient major repair which is performed by the State Committee for the Supply of Production Equipment for Agriculture, other, efficient forms of the restoration of the capacity of the production apparatus, namely the combination of the routine maintenance of machines with the plant supply of equipment with spare parts and crucial assemblies of tractors, combines and others, predominate.

The Process of Replacing Capital and Manpower Resources

The efficient organization of the reinvestment process has a bearing on the problem of manpower resources. In the literature it has already been noted that under the conditions of an unjustifiably large gap in the dynamics of fixed capital and manpower resources in the case of increasing new construction and an inadequate proportion of the capital investments, which are being allocated for the replacement of obsolete equipment, the nonstaffing of workplaces increases. According to the estimate of the Scientific Research Institute of Economics attached to USSR Gosplan, during 1971-1975 more than 2 million new workplaces, which were not fully provided with manpower resources, were created in industry alone, while during 1976-1978 more than 1 million more were created.⁷ In the opinion of V. Kirichenko, the proportion of the surplus placement into operation in the total amount of capital newly placed into operation is approximately one-fourth. "The existence of expensive, but unmanned workplaces is a factor of the decrease of the capital-output ratio in industry."⁸

In this connection it is important to determine the role of reinvestment processes in the formation of the balance of manpower resources. A. Tsygichko proposed what is called "a structural investment model." He believes that this method, the SIM (structural investment model), makes it possible to coordinate manpower resources, capital investments and technical progress and to determine under what conditions of the retirement and retooling of labor the capital investments and the fixed production capital, which has been put into operation, are fully utilized and, consequently, the best use of manpower is achieved.⁹

However, in the examination of the expenditures on the compensation for retirement, which are a part of his investment model (SIM), the author assigns a secondary and

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neutral role to this component. In the general formula of the effectiveness of capital investments a zero value is assigned to the factor of compensation.

This question is much more complicated. When it is a question of renovation, it not only reduces to the direct reproduction of the old technical indicators, but perforce presumes the improvement of the indicators, the use of automation, scientific and technical innovations and others. It is recommended to use even major repair in combination with modernization and the improvement of the technical level of the capital. If major repair is carried out on the level of the simple restoration of the old parameters, here a zero result is not obtained, for the productivity of old equipment after each repair decreases all the time. Therefore, when analyzing labor-saving factors in the reinvestment process one must not make arbitrary assumptions, which are not based on the study of real economic factors and are not confirmed by calculations.

In the reinvestment process there are important labor-saving reserves, since the number of personnel of the repair services is clearly overstated (the number of workers of the corresponding sectors of machine building is two- to threefold greater) and can be reduced substantially with the more efficient organization of repair in the main spheres of the national economy. Moreover, the combination of repair with modernization makes it possible not only to maintain the previous capital-labor ratio of manpower resources, but also to increase it and thus to decrease the present norms of maintenance. The potentials of the labor-saving factor in simple reproduction have still been inadequately studied. The conclusion about the zero value of the reinvestment process does not contribute to the studies of this important direction of the present intensification of production.

The structural model of A. Tsygichko abounds with apriori assumptions which concern not the minor details, but the key parameters of reproduction and the investment process. The author assigns the main role not to the real analysis of the trends and reserves of the efficiency of social production, but to mean statistical data and arbitrary hypotheses.

A. Tsygichko draws the conclusion that the main factor of the decline of the capital-output ratio in industry during the Ninth Five-Year Plan was the increase of fixed capital, which was not balanced with manpower. According to his estimates, at the end of 1975 the proportion of unused fixed capital was approximately 9.3 percent of its total value. However, the author does not cite any basis and real accounting data in support of this hypothesis, and its proof is based on indirect analogies and arbitrary assumptions.

The Economic Limits of Major Repair

With respect to the amount of resources and the number of personnel, major repair now holds first place in the resources allocated for keeping the fixed capital of the country in working order. It clearly predominates in the amount of capital over the retooling and replacement of the production apparatus of operating enterprises.

Is it possible to raise the question of redistributing all the resources now being allocated for major repair, for the more advanced and economical directions of capital investments--the modernization and renovation of capital and capacities? It is necessary to carry out the effective industrialization of major repair, which is

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based on the expanding plant production of spare parts and parts in machine building with the simultaneous increase of the maintenance of new equipment by machine building plants. Under these conditions the effective concentration of the available repair capacities and their specialization will be possible. In the future the merging of the two indicated forms of repair and maintenance will apparently occur. During their integration the amount of manpower resources, which are now employed in the enormous network of small repair workshops, will decrease considerably.

However, such rationalization of the repair system should be carried out according to a plan, encompassing first of all the sectors with large and similar equipment, and then the sectors with a complex processing method and diverse machinery. The already adopted and quite effective method of combining the major repair and modernization of equipment should probably be used in the sectors, in which large units and equipment systems predominate.

In housing construction and municipal services along with the demolition of dilapidated buildings the effective major repair of more valuable and sturdy structures, but with their mandatory modernization, the improvement of heat and water supply, sanitary engineering, the installation of telephones and others, can also be maintained. The historically established centers of old cities, which are of great architectural value, should undergo a cycle of complete and thorough restoration.

The different durability of the units, assemblies and parts of equipment, which creates the natural need for the partial compensation for the wear of machines, is correctly indicated in the studies on the economics of major repair. As the equal durability of the individual assemblies of machines gets closer, the need for major repairs will decrease. Designers and machine builders in many instances underestimate the importance of the indicator of the repair intensity of new equipment, although the decrease of this indicator has proven its worth even at the cost of an increase of the expenditures in the sphere of the production of machines. All this emphasizes the importance of the coordination of the work of the creators of the active portion of the capital and the personnel who use means of labor. The most economical conditions of the operation of capital, particularly the indicators of maintenance, the repair intensity, the reliability and others, should be taken into account already when producing the capital.

At the same time it should be noted that there is a certain point beyond which the performance of major repairs is obviously uneconomical. Thus, repairs of machines, which have served the life set for them by the standards and are obsolete, are entirely inefficient. Meanwhile up to 20 percent of the obsolete equipment undergoes major repair. In this connection the effectiveness of so-called firm repair should be emphasized. In our industry such organization has been adopted at a number of motor vehicle enterprises, in the production of computer equipment, electronic equipment and electrical equipment, in electrical machine building, in nuclear power engineering, the aviation industry and others. It is also expedient to extend this advanced know-how to the sectors of investment machine building.

Firm repair should probably be implemented first of all within enterprises and agricultural organizations of the food complex, in the complex of transportation sectors and in the investment complex, in which a comparatively compact set of large agricultural, transportation and construction equipment is used extensively. The new sectors, which are connected with the leading directions of technical progress, have been using such a system of repair and maintenance for a long time now.

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Under present conditions the changeover from the reproduction of capital on the old technical basis to the modernization of the available capacities with allowance made for many technical innovations is an urgent task. The accumulation in the sectors of the national economy of obsolete, worn out capital is hindering the improvement of economic indicators, is diverting large manpower resources and requires enormous expenditures.

FOOTNOTES

1. Ye. A. Shapiro, L. L. Savranskaya, "Effektivnost' kapital'nogo remonta v neftekhimicheskoy promyshlennosti" [The Effectiveness of Major Repair in the Petrochemical Industry], Moscow, TsNIITEkhim, 1975, p 66.
2. "Ocherki promyshlennoy statistiki" [Studies in Industrial Statistics], Izdatel'stvo "Soyuzorguchet", 1977, pp 168-174.
3. Ya. B. Kvasha, "Faktor vremeni v obshchestvennom proizvodstve" [The Time Factor in Social Production], Izdatel'stvo "Statistika", 1979, p 77.
4. See Ya. B. Kvasha, "Faktor vremeni v obshchestvennom proizvodstve," p 77.
5. See VOPROSY EKONOMIKI, No 4, 1981, pp 85-86.
6. D. M. Palterovich, "The Goal Program Approach in the Improvement of the Pool of Construction Machinery" (EKONOMIKA STROITEL'STVA, No 11, 1979, pp 22-25).
7. See V. Kirichenko, "The Proportionality of Economic Growth and Efficiency" (KOMMUNIST, No 18, 1980, p 32).
8. Ibid., p 32.
9. See A. Tsygichko, "The Reequipment of Labor and Production Efficiency" (PLANOVOYE KHOZYAYSTVO, No 3, 1979, p 75).

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