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USSR REPORT

ECONOMIC AFFAIRS

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ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

REFINEMENT OF COMPLEX PROGRAM MANAGEMENT URGED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 4, Apr 84 pp 90-97

[Article by Doctor of Economic Sciences Professor V. Rapoport: "On the Strengthening of the Economic Methods of the Management of Comprehensive Goal Programs"]

[Text] The goal program approach to the accomplishment of the most important tasks of socioeconomic development, which require the interaction of many levels of management, which is complex and significant in scope, as well as the thorough consideration of both sectorial and regional interests, is finding more and more extensive dissemination as one of the most effective directions of the improvement of planning and management. The scale of the actual implementation of comprehensive goal programs of different types and purposes during the 11th Five-Year Plan attests to this.

At present the solution of the food problem, the development of the energy base, the formation of territorial production complexes, the protection of the environment and the efficient use of natural resources are being accomplished with the use of program forms and methods of management. The elaboration and implementation of comprehensive programs of this type, which are of especially great national economic importance, involve the use and redistribution of considerable resources and have an influence on the plans of the social and economic development of practically all sectors and regions, require in each case the making of individual decisions at the statewide level.

At the same time tens of large-scale unionwide scientific and technical programs, many regional and sectorial programs of various types, programs of the building of large production facilities and so on are being implemented in the country. Goal program management is also being developed no less actively within industrial and production associations, enterprises and other economic organizations. The management of programs of this sort is possible on a sufficiently universal standard basis.

Comprehensive goal programs have become a part of the practice of socialist management as an independent object of planning and management. Here it is necessary to bear in mind that the formation of goal programs is a fundamental component of national economic planning and cannot be regarded as an

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For purposes of discussion.

alternative to sectorial or regional plans. The program cross section of the plan encompasses only a part of social production and includes, as a rule, only the problems, the solution of which is distinguished by fundamental novelty and considerable difficulty, is based on the interaction of many organizationally separate performers and requires the search for and use of previously unknown scientific and technical results.

The formation of a part of the plan in the form of goal programs is necessary first of all in order to determine more thoroughly and soundly the list of results, which are necessary for the achievement of the ultimate goal, and their interconnection, the content and sequence of the work to be performed, the amount and structure of the corresponding expenditures. At the same time the successful implementation of the formulated programs is possible only on the basis of the inclusion of all the assignments connected with them in the sectorial and territorial plans. The objective need for the distribution of the program measures among the formed units of the national economy follows from this, which requires, in turn, the setting up of special organizational systems for the current management of their coordinated implementation and the centralized monitoring of the achievement of the ultimated goals of the program.

The means of the interaction of performers within the comprehensive goal programs differs substantially from the traditional methods of the joint work of formed production economic organizations. First of all it should be noted that enterprises, production and industrial associations and their internal subdivisions, which are specialized by items or technologically, as objects of management are more organized systems than the set of performers of the goal program, even those which are united under a common management.

The point is that each production economic organization and its unit are specially formed for the accomplishment of preset long-term goals. Their basic properties or characteristics are chosen, while in the process of further improvement are adjusted on the basis of the needs of the most effective performance of the stable technological functions which have been assigned to each subdivision. Here such already tested methods as the balancing of the capacities of the basic and auxiliary shops, the synchronization of interconnected processes and the maximum possible specialization of workers and equipment are used. For stably operating enterprises and associations with proportionately formed units contradictions do not arise between the aspiration for the increase of the efficiency of the work of each of the subsystems (shops, services, planning subdivisions and others) and the tasks of the improvement of the results of the activity of the entire system as a whole.

In contrast to enterprises, associations and sectors the comprehensive goal program is a temporary organizational system. It is formed most often from units which have not been adapted for the accomplishment of program tasks. When selecting each participant in the implementation of a program (an organization or an individual performer) the capacities for the best achievement of the set goals are taken into account, but the possibilities of the choice or adaptation of the parameters of the subdivisions and organizations, which are being enlisted in the fulfillment of the program, are limited.

For example, if in case of the fulfillment of a scientific and technical program it is necessary to design and produce an original accessory, which had previously not been developed in the sector, for this purpose, as a rule, they do not set up a specialized organization, but assign such operations to the most appropriate subdivisions with allowance made for the skills and workload of their workers. Most often those of the organizations, which exist within a sector or region and which are capable of performing on time the program measure regardless of its relatively effectiveness, are used for the performance of relatively small amounts of construction, installation and other work.

This is explained by a number of factors. The temporary nature of the program and the uniqueness of the majority of program measures are one of them. The impossibility of keeping the enlisted performer completely busy with work on the program also pays a role. Moreover, significant differences of the operational tasks of the organization, to which the performer belongs, and of the program measure, in the implementation of which he is employed, are not ruled out. Finally, several subdivisions and enterprises can be enlisted simultaneously in participation in several measures.

A subjective, but very significant factor also exists: for the more convenient management and coordination of the program measures they prefer to enlist performers from within the organization's own subdivisions, and not "from outside." This makes even worse the possibility of the choice of participants in the program and the most effective organization of their interaction.

Thus, the participants in the comprehensive goal program, the interaction of which it is necessary to manage in the process of its implementation, are an organizational system, in which the need for the achievement of the set ultimate goal permits and justifies the possible decrease of the efficiency of some of the components which are included in it. For example, in case of the fulfillment of many sectorial and intersectorial scientific and technical programs a number of design, research and production subdivisions were enlisted in the fulfillment of individual, one-time assignments, which are not characteristic of the type of their specialization, on the development and production of new assemblies and accessories, the conducting of special tests and the carrying out of unique transportation operations. Here above-standard expenditures on the obtaining of the desired results and the decrease of the profitability, labor productivity and other indicators of the activity of organizations and their subdivisions as compared with those achieved when fulfilling characteristic assignments occurred.

In case of the formation of the environmental protection program in the Latvian SSR a number of studies and developments were assigned not to specialized organizations, but to those of the organizations located in the republic, which are capable of fulfilling the corresponding assignments.

From the point of view of national economic interests the formation of comprehensive programs is an advanced form of the organization of social production, which ensures a significant increase of the effectiveness of intersectorial and intrasectorial cooperation. Therefore the possible relative worsening of the work of individual organizations, which are being enlisted in participation in the program, can be justified by the importance of its ultimate goal or by the

objectively shortest possible time of implementation. It pays for itself by the cumulative economic impact from the implementation of all the interconnected measures.

However, if one proceeds from the interests of the organizations, the efficiency of whose work when fulfilling the program measures may decrease as compared with the other possible directions of the use of resources, it is possible to understand their aspiration in a number of instances to evade participation in one program or another. Such situations arise especially frequently in case of orders for small batches of single-design equipment for machine building enterprises or in case of attempts to find a contractor for the performance of particularly difficult construction and installation work. The purely administrative inclusion of program measures in the plan of economic operations of such organizations, which is not backed by economic levers, complicates the management of the program and leads to the decrease of the effectiveness and quality of the results being obtained.

The indicated peculiarities of comprehensive goal programs should be taken into account when choosing the corresponding forms and methods of their management. The analysis from this standpoint of a significant number of programs of various types, which were fulfilled during the 10th and 11th Five-Year Plans, made it possible to formulate a number of general organizational and economic requirements, the observance of which substantially improves the results of goal program management. It is possible to group the following with these requirements.

The assurance of the coordination of the ultimate goals of the program and the assignments, which are formulated centrally, with the content and results of the measures which are being fulfilled in the corresponding sectors and organizations. Such coordination should be achieved already at the stage of the formation of the program, which requires the special organization of the corresponding operations and their complete backing with resources. Experience shows that the drawing up of a complete set of high quality planning documents on the comprehensive program is analogous to the designing of a complex technical or production system. It includes the performance of special research, design and analytical operations, the comparison of many versions, a skilled appraisal and others, for which it is necessary to enlist on a planned basis various performers, to allocate the necessary resources and to allow adequate time. Unfortunately, in practice these conditions are frequently not met, which leads subsequently to changes of the content of the program, the search for new performers, the increase of the cost of operations and so forth.

The concentration at the highest level of supervision of the program of only those decisions, which are of fundamental importance and influence the results of the fulfillment of the entire program or large parts of it, the affording to the performers of program measures of the opportunity to independently carry out their detailed study and to make specific decisions. This requirement is especially important in case of the formation and implementation of programs, in which the results of the fulfillment of individual measures are weakly interconnected and only indirectly influence some end result of the fulfillment of the program, which can be objectively defined as the relative (qualitative) importance of the achievement of the set goal. These are, for example, the

programs of environmental protection, the decrease of manual and difficult labor, the saving of fuel and energy resources and so on. Practical experience attests that the aspiration to specify in detail when forming such programs all the quantitative results, to substantiate the allocation of the necessary resources and to ensure the timely and complete fulfillment of the strictly formulated assignments did not always end in success. In this case it is more preferable instead of the centralized elaboration of the specific content of the assignments to establish standard indicators of the achievement of the goals, using simultaneously economic levers and stimuli.

The granting to the organs of the day-to-day supervision of the programs of an adequate amount of powers, their provision with levers of real influence on the performers, who are under different departmental subordination, the creation of the opportunity to directly distribute or redistribute resources. This will make it possible to avoid situations, when the department or organization, which is responsible for the implementation of the program, is not capable of coping with deviations during its fulfillment, and the intervention of superior organizations is required for the elimination of such deviations. Such a situation led to the unjustified overloading of the highest echelons of management with questions of current supervision and to the significant worsening of the efficiency and effectiveness of the management of programs due to the complication of the procedures of decision making.

The increase of the interest of the performers of program measures in the timely and high quality fulfillment of the assignments, the creation of their preferential orientation toward the immediate meeting of the requiments of program interaction, and not toward narrow departmental interests. This will make it possible to put an end to the search for reasons for the evasion of the fulfillment of the corresponding assignments, to the requests on the postponement of the deadlines, the easing of the requirements, the allocation of additional resources and so on. The observance of the indicated requirement will promote the overcoming of the trend toward the decrease of the responsibility for the accomplishment of the tasks, which is due to the dual or even greater subordination of the performers both to the immediate line managers and to the organs of management of the program. Under such conditions the results of managerial actions became hard to predict, while the effectiveness of management decreased sharply.

The optimum combination of administrative supervision and directive regulation in the management of the implementation of programs with the active use of economic levers and stimuli. The prevalence in a number of instances of administrative methods required a high level of the making of not only basic, but also special decisions on each program. In case of the emergence of deviations from the planned course of the fulfillment of the programs, of conflicts between its coperformers and a shortage of resources all these questions has to be examined by an organ which has the appropriate superdepartmental powers--the USSR State Planning Committee or the USSR State Committee for Science and Technology. Here the central planning organs diverted their attention from the basic work, while the process of making decisions on the program was dragged out and became complicated. Moreover, in case of the directive method of managing the implementation of programs the constant danger of the upsetting of the stable work of the sectors and economic organizations, which had fulfilled their own plans,

which were balanced and approved in accordance with established procedure, existed.

In order to create an effective system of the management of the implementation of comprehensive goal programs, it is necessary to ensure their maximum coordination with the formed system of economic stimulation and to create an interest of the performer of program measures in their fulfillment. For this it is necessary, on the one hand, to offset the losses which may arise in individual units due to the fulfillment of noncharacteristic assignments and other reasons, which are connected with participation in the program, and, on the other, to ensure the appropriate incentive for the successful fulfillment of the program assignments by the crediting to the account of each performer of a portion of the ultimate impact from the implementation of the program as a whole.

It is exceptionally important when determining the amounts of the compensation and incentive to take thoroughly into account the conditions of the economic stimulation of the results of economic operations, which have formed in each sector. This implies the need to compare when forming the program the planned economic stimulation funds, which the performer organizations are counting on receiving in case of the fulfillment of characteristic sectorial assignments, with the expected amounts of these funds in case of the inclusion in the sectorial plans of program assignments which do not conform completely to the type of organization. The difference obtained in case of such calculations should be taken into account in the expenditures on the program and be transferred to the corresponding performer after the acceptance of the performed work by the organs of supervision of the program.

However, for the development of the cost accounting principles of management it is necessary to compensate the performers not only for the possible losses of a portion of the incentive funds, but also for all the additional (above-standard) expenditures of resources on the fulfillment of the program measure. This should find expression not only in the making available of the necessary financial resources, but also (with respect to limited resources) in the allocation of the corresponding physical assets.

The creation by the above-indicated method of an interest of the performers in the fulfillment of the program assignments should play not only an important stimulating and organizational role in the process of the direct management of the implementation of the program. The making of the indicated calculations will promote the specification of the total amount of expenditures on the fulfillment of the program as a whole and the adjustment on this basis of the rated evaluation of the effectiveness of the anticipated results, which without consideration of the compensatory expenses could have proved to be overstated. Such adjustment in individual cases can lead to the revision of the decision on the advisability of implementing one section or another of the program, to the specification of its content and to the more precise determination of the ultimate and intermediate goals, as well as the methods of achievement. This will make it possible to increase the economic soundness and quality of goal program planning and management and to reject ineffective decisions.

Another fundamental distinction of the mechanism of the management of the implementation of goal programs from the formed methods of the management of

independent organizations exists. This distinction is due to the substantially different degree of certainty of the tasks and processes in both systems.

Whereas for the assurance of the stable operation of enterprises during the year the stability of the current plans is an important factor, in case of the implementation of many comprehensive goal programs the need for more flexible current planning, which ensures the best adaptation of the process of fulfilling the programs to the probable results and variable conditions of the interaction of many organizationally separate performers, frequently appears. It is necessary to bear in mind that the programs are formed, as a rule, for the achievement of qualitatively new, frequently unprecedented goals, therefore in many instances it is impossible to envisage exactly their content when drawing up the plan. This means that in case of the management of the implementation of programs in a number of cases needs to make revisions in the individual assignments of the current plans of the performer organizations of program measures can arise.

The objective need to make changes in the current plan causes the problem of forming special reserve funds of resources and material stimulation. These funds should be intended for the intensification of the work on individual subprograms and program measures, the violation of the deadline of the fulfillment of which is impermissible; for the allocation of additional resources for the performance of operations, the amount of and the expenditures on which proved to be greater than those envisaged by the plan; the taking of additional steps, the need for which came to light during the implementation of the program; the elimination of the unforeseen negative consequences of the fulfillment of the corresponding sections of the program and the offsetting of the possible disturbances of the balance of the plans of individual organizations and subdivisions during the fulfillment of the program.

The creation of special reserve funds will make it possible to make the necessary adjustments of individual assignments for the performer organizations of program measures, without upsetting the balance of the sectorial and territorial plans and the general procedure, which envisages the stability of the approved annual plans and the established technical and economic indicators of the work of sectors, associations and enterprises.

So that the reserves being planned would actually be backed by material, technical and manpower resources, it is expedient to establish for each production economics organization or subdivision, which is taking part in the implementation of the program, standardized wage funds and funds of financial resources, materials and capacities, which can be used only for the fulfillment of program measures with the permission of the appropriate organs of management. It is also very important to regulate the procedure of the transfer of the unused operational reserves for the programs to the fund of the current activity of production economics organizations or subdivisions.

The broadening of the scale of program planning and management is posing the task of seeking new procedural approaches to the formation and use of the planned reserve funds. The traditional means of creating physical stocks of material resources, redundant capacities of equipment and surpluses of manpower resources in many instances proves to be ineffective. Such an approach is

always accompanied by the worsening of the use of the resources, which are in reserve, and by the freezing of working capital.

Moreover, the objective variability of the majority of comprehensive programs and the dynamicness of the conditions of their fulfillment will have the result that a portion of the reserve funds, which are created as stocks, will not be able at all to be used efficiently. Such situations are permissible, if they provide the necessary conditions for the successful achievement of the ultimate goals of the program, but one way or another this leads to the decrease of the efficiency of program activity.

However, another method of the formation and use of reserve funds can be suggested. It consists in the use of time-variable planning standards of the consumption of resources.

Thus, in case of the calculation of the total need for resources for the entire program (at the stage of its formation) depending on the degree of uncertainty and complexity of the measures being planned the initial standards of the consumption of resources can be increased by such an amount so as to provide an adequate reserve for maneuvering in case of the occurrence of unforeseen changes of the conditions of the implementation of the program. The experience of accomplishing programs shows that a reserve of 5 percent of the amount of centrally regulated resources is adequate for the effective management of program activity.

In the process of planning the activity of specific performers (for the current year) the degree of uncertainty of the assignments decreases significantly, which makes it possible to use accordingly stricter standards, in which the reserve portion can be decreased to one-third to one-half. In case of the operational planning of work (quarterly and monthly) the strictest standards, which reflect the specific conditions of the fulfillment of the assignment, should be used. Here it is not necessary to introduce any allowances for uncertainty.

Thus, the use of varibale standards in case of the transition from long-range planning to current and operational planning makes it possible to reserve sufficient amounts of resources in the necessary range, without resorting to their freezing and ensuring the required flexibility of their shifting. The elaboration of a method of using variable standards of the consumption of resources in case of the management of programs should not cause particular difficulties, therefore the real opportunity exists to check already by the end of the 11th Five-Year Plan the proposed approach in several programs which are at the stage of implementation.

The existing system of the planning and economic stimulation of economic operations makes it possible to use successfully the above-described levers of economic influence on the performers of the goal programs, but for this it is necessary to elaborate and approve the appropriate legal norms and economic standards.

First of all it is important to regulate formally the rights of the organs of management of the programs in the area of the supervision of various resources. The forms of supervision can and should be the most diverse--from the allocation

of independent material, manpower and financial balances to the granting of the right to approve efficiently the standards of the consumption of all types of resources. In any case the allocation in a planned manner (with a breakdown by 5-year and annual periods) of funds of resources, which are substantiated in amount and range, for the fulfillment of the program under the control of the corresponding organ of program management should be ensured.

The centralized funds, which are created in this manner, can be used for the following purposes:

for the allocation of additional resources fo the fulfillment of the intersectorial programs, in which the amounts of work proved to be greater than the planned amounts and the goals of which during implementation changed and the sphere of introduction of the results increased;

for the organization and implementation of new supporting subprograms or program measures, which were previously not included within the approved programs;

for the formation and development of new comprehensive programs, the need for which arose during the current planning period;

for the formation and replenishment of the centralized funds of economic stimulation and compensatory reserves with respect to the programs for the period of the search for sources of their financing and the making of payments in accordance with established procedure.

It is advisable to form the centralized funds of the resources, which are allocated for the fulfillment of the program, from the standardized basic portion and the planned reserve, the amount of which will be established subject to the class of the program and the specific conditions of its implementation.

The reserve portion of the fund in such a case can be used for offsetting the above-standard outlays of resources in case of the choice of performers with nonoptimal characteristics or in case of the advancing of the dates of fulfillment of individual program measures, which is due to the interests of the achievement of the ultimate goal.

The opportunity will arise to offset from the reserve portion of the economic stimulation funds the relative worsening of the results of the activity of those participants in the program, to which assignments, which do not coincide with the type of their usual activity, have been given or whose conditions of the fulfillment of the program assignments require the increased consumption of resources.

The amount of the centralized funds even for the programs, which are fulfilled within enterprises and associations, is quite significant. Thus, at the Kama Motor Vehicle Plant several long-range technical and production programs are estimated in the hundreds of millions of rubles, and up to 50 percent of these expenditures can be concentrated in the corresponding funds. At the Uralelektrotyazhmash Production Association the centralized material incentive funds alone for individual programs came to 50,000 rubles.

The distribution and use of such significant resources should also be monitored, but already with a breakdown by programs. Here both the strict regulation of the procedures of the standardization of the funds, the substantiation of expenditures, the redistribution of resources and other operations on the management of the centralized funds and the stimulation of the economical consumption of resources on the part of the organs of management of the program play an important role. For this purpose payments for reserve funds in an increased amount can be introduced, and a special procedure of the monitoring of the use of reserves can also be established.

The economic stimulation funds and the funds of compensatory resources, which can be used for the following purposes: for the stimulation of the implementation of program measures, the effectiveness (profitability) of which is less than the planned effectiveness for the association or enterprise, and the compensation of the corresponding performers for the losses or the deficient profit; for the stimulation of the work of the production economics organizations, from which resources are being diverted for the fulfillment of the program, or the immediate performers of program measures, who need to perform increased amounts of work for the purpose of maintaining the sectorial balance; for the compensation of associations, enterprises, organizations and the immediate performers of program measures for the losses, which are attributable to operational adjustments of the current plan of the program; for the economic stimulation of the participants in the implementation of the program for the timely and high quality fulfillment of the program measures, should play a special role in the process of the economic management of the implementation of comprehensive goal programs.

The formation of the listed centralized funds, including the reserve portion, for the programs being implemented within one economic system (a sector, region, association) does not present significant difficulties. The standardized portion of the funds can be created by means of the redistribution of resources among the production units and their balancing with allowance made for the program measures. Here the creation of centralized funds in practice does not require an increase of the working capital, since the use of the funds can take place on the basis of the introduction of a stricter system of the monitoring of the consumption of resources according to purpose.

It is advisable to create the reserve portion of the centralized funds from various sources. Thus, the reserves for small and medium-sized programs can be formed by means of the working capital, which was saved during current activity and has been placed under centralized control. For large-scale programs the reserve funds can be created by special-purpose allocation by means of credits of the state bank. In order to minimize the amounts of reserve funds, it is advisable to formulate a procedure of their monitoring and use, which ensures the reactivation of reserves in case of the favorable progress of the implementation of the program.

Centralized carryover economic stimulation funds can be created by means of a portion of the impact, which was obtained from the implementation of preceding programs, and the reserving of a specific proportion of the current material incentive fund.

The above-listed methods of economic influence on the performers of comprehensive goal programs need organizational support and the standard assignment of special rights on the disposal of resources and the responsibility of the organs of program management, which follows from this.

The development of the organizational mechanism of goal program management for the most part proceeded in the direction of the redistribution of administrative powers and the regulation of the corresponding interrelations of all the units taking part in the implementation of the program. But experience shows that just the redistribution of the formed rights and responsibility is not enough.

The organizational forms of the management of goal programs are based on the distinction in the prevailing organizational structure of a main department or organization, to which several functions of management, which are of a supporting nature, are assigned: monitoring functions, coordinating functions, functions on the preparation of individual types of management decisions.

However, under the conditions of the dual subordination of all the participants in the implementation of the goal programs (to the organs of sectorial or territorial management, on the one hand, and of program management, on the other) it is not possible to ensure adequate efficiency by administrative supervision alone. Practice urgently requires the assignment to organs of current management of the rights of economic supervision and economic influence on the performers.

The many years of experience of improving the mechanism of goal program management, which has been gained in Hungary, are of definite interest. There the granting to the main organizations or their subdivisions of the rights of a legal entity with the ensuing possibilities of the disposal of the corresponding funds and resources, the conclusion of economic contracts and the use of all forms of economic relations with the performers of the program led to the increase of the efficiency of program management and the elimination of many organizational difficulties.

In the prevailing enforceable enactments (the statutes on the enterprise, various types of associations, ministries), procedural instructions and economic and technological standards the peculiarities of goal program management have not yet found adequate reflection.

Moreover, the analysis shows that many organizational methods and criteria of the efficiency of program activity are formally at variance with the prevailing regulatory documents.

Thus, the principle of the assignment to the manager of the program of great powers, which ensure him a leading role in case of the making of decisions on the program with respect to sectorial and regional managers, is the basis for the use of matrix organizational structures of goal program management. They include the right of adjustment of the current plans, the monitoring of the distribution and use of resources and the material and moral stimulation of the participants in the fulfillment of the program. Here the goal is being pursued to relieve the highest levels of management of the national economy and its sectors from the day-to-day supervision of the programs.

Since the organs of management of the programs are envisaged in the officially accepted structure of the management of the national economy (which also found reflection in the prevailing statutes on ministries, departments, associations and enterprises), the assignment to them of the above-listed rights does not conform to the accepted legal norms.

Whereas in case of management vertically (that is, of administratively subordinate units) the opportunity to delegate a portion of the powers of the manager of the organization to the manager of the program exists, in case of horizontal interaction (between the units of different organizations, which are subordinate to several ministries, departments, all-union industrial associations and so on) the possibilities of the supervision of material and financial resources for the entire program cannot be concentrated in one of the organs of sectorial or territorial management. Consequently, no organ, which is being set up or is operating, will be able to bear adequate responsibility for the end results of the fulfillment of the programs.

The lack of the strict legal regulation of the relations arising in the process of goal program management, which is based on a thorough scientific analysis of the essence of this method, noticeably checks the development of new organizational forms and decreases the effectiveness of their use. The systems of goal program management at the level of sectors, associations and enterprises need standardized regulation.

The drafting and approval of an enforceable enactment-statute (or a set of statutes) on the management of comprehensive goal programs of a different scale and different levels may become the most constructive means of such regulation. The most important aspects of the economic mechanism, which include the procedure of the elaboration of programs and their coordination with various types of plans, the procedure of the distribution and use of resources, the coordination of the plans and the monitoring of their fulfillment, accounting and plan reporting, the questions of the distribution of the competence of the organs of management of the programs in the implementation of all the listed functions, the interrelations with superior organs of state administration and other organs of economic management, with organs of territorial management and public organizations, as well as the questions of stimulation and the review of disputes between participants in the program and so on, should be specified in this document.

Before drawing up and putting into effect standard documents on the management of goal programs, it is expedient to check experimentally the possibility of the assignment to organs of program management of various types of the rights of a legal entity, as well as to specify their competence in the carrying out of economic and functional management, the distribution of physical assets and the conclusion and fulfillment of various contracts. The urgency and usefulness of such a check also stem from the fact that at present a large-scale experiment on the broadening of the rights of the production associations (enterprises) of industry in the planning of their economic operations and on the increase of the responsiblity for the results of work is being conducted in the country. The use of the new forms and methods of goal program management under these conditions will make it possible to speed up their dissemination in all the sectors of the national economy.

At the same time as the drafting and approval of the statute on the management of comprehensive goal programs it is necessary to take into account in case of the preparation of a new statute on ministries, which is presently being carried out, as well as in case of the making of changes and additions to the statute on the enterprise and to envisage the corresponding changes, which reflect the present organizational forms and the economic mechanism of program management, which for understandable reasons could not be envisaged at the time of the adoption of the documents now in force.

It is very important for the assurance of the effectiveness of the new legal acts to supplement the list of positions of managerial, engineering and technical personnel and employees, as well as the job classification manual with a list of the corresponding positions which are connected with program management; to make changes in the model diagrams of organizational structures and salaries and in the model manning tables.

Definite research and experimental work in the area of the creation and regulation of the mechanism of the management of programs at different levels has already been done. However, in case of the elaboration and use of experimental systems of goal program management, especially those based on matrix structures, the main attention, as a rule, was devoted to the regulation of exclusively organizational relations. This was explained by the fact that entirely new relations, which were not used in linear-functional structures and are based on dual and multiple subordination, on the division of administrative actions and functional management, on the stepping up of informal relations and the significant increase of the role of the procedures, which are connected with joint decision making, appear in the matrix organizational mechanism.

As we attempted to show above, this work needs fundamental coordination with the strengthening of the economic methods of the management of comprehensive goal programs.

The task of the comprehensive improvement of the entire mechanism of management, which should completely conform to the economics of mature socialism and the nature of the tasks being accomplished, was posed at the December (1983) CPSU Central Committee Plenum. Here comprehensiveness can be ensured only by the interconnected solution of the problems of the improvement of organizational structures, the improvement of the system of planning and the increase of effectiveness of the entire set of economic levers and stimuli.

The posed task also fully applies to the improvement of the mechanism of goal program management. Its accomplishment cannot be simple and quick. It will require special research, design and standard methods study and thorough experimental checking. But, as was indicated at the December CPSU Central Committee Plenum, in order to enter the 12th Five-Year Plan with a well-adjusted economic mechanism, it is also necessary to begin immediately the performance of this work.

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ACADEMY ASSOCIATE DISCUSSES CAPITAL ACCUMULATION

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[Article by Corresponding Member of the USSR Academy of Sciences G. Sorokin: "Accumulation in the System of Socialist Reproduction"]

[Text] The greater the level of the socialization of the economy is, the more attention should be devoted when planning to the indicators of social reproduction, including accumulation. Knowledge of the laws of the formation and realization of accumulation is a component of the theory of accumulation. Such most important economic problems as the employment of the population and the increase of well-being, the rates and proportions of the development of the national economy, the acceleration of scientific and technical progress and the increase of labor productivity, intensification and efficiency, the national income and national wealth, otherwise, all the aspects and stages of reproduction, are interconnected with accumulation. The requirements of the basic economic law of socialism and of the laws of planned, proportionate development and the economy of time are realized through accumulation.

Socialist accumulation is the material base of the broadening of socialist production relations, the reproduction of the new type of worker and the increase of the means of production, and not only the quantitative increase. New equipment should bear a greater and greater social load: it should improve working conditions, develop its creative nature, ensure the preservation of the environment, in a word, create an atmosphere of labor and daily life, which conforms more and more to the needs of socialist society. This is the most important purpose of socialist accumulation.

F. Engels viewed expanded reproduction and the process of accumulation as a unified process. He called accumulation a social necessity, the most important progressive function of society.[1] The statement of V. I. Lenin that "under communism the ratio of $I(v+m)$ to II_c and accumulation will be of enormous importance"[2] is well known.

Marxist theory assumes that reproduction and accumulation can be understood, if one proceeds from the laws which are inherently characteristic of a specific mode of production. In the history of science there have been attempts of explain accumulation by external factors. Capitalist accumulation was also derived by some Marxists not from the nature of capital, but only from the exploitation of noncapitalist forms. V. I. Lenin points out that the root of the

error of such a theory lies in this.[3] The study of socialist reproduction and accumulation is fruitful, if it is based on the economic laws which are peculiar to socialism.

In the USSR the accumulation comes to a significant amount--134 billion rubles (1982). If the average per capita accumulation in a year is compared with the average monthly wage of workers and employees, it exceeds the latter by 2.8-fold. It turns out that every resident of the country, regardless of age, accumulates in a year a sum which is equal to nearly three monthly wages. The plans of economic and social development specify the goals and amounts of socialist accumulation, its formation and efficiency of use.

The main source of accumulation, as of consumption, is the produced national income in its twofold expression: on the one hand, as the newly created value and, on the other, as the newly created use value. The amount of accumulation is regulated by the rate of accumulation. "In case of accumulation it is necessary to direct attention first of all to the rate of accumulation."[4] Along with the absolute amount of national income the rate governs the amounts of accumulation. Here it is more flexible and in case of the same amount of national income can specify a larger or small scale of accumulation.

The rate of accumulation in the USSR (including reserves), which was calculated in current prices with respect to the produced income, came on the average during the Seventh, Eighth and Ninth Five-Year Plans to 27 percent of the national income, during the 10th Five-Year Plan--26 percent, during the first year of the 11th Five-Year Plan--23.2 percent, in 1982--25.6 percent. With respect to the used income it differs from the former negligibly, and in case of a general analysis it is possible, as a rule, to ignore this difference. The difference in the rates of accumulation, which are determined in current and comparable prices, is somewhat more appreciable, but also small. In 1982, for example, in current prices it was equal to 25.6 percent, while in comparable prices it was equal to 26.7 percent.

The situation in case of the calculation of the rate of accumulation in prices, which are close to the cost (the socially necessary expenditures), is different. These prices reflect more accurately the real economic turnover, the movement of use values, and the rate of accumulation shows more thoroughly the actual amounts of the national income which is being allocated for expanded reproduction. Current and comparable prices do not take into account the historical peculiarities of pricing. The prices for basic products, which are used in accumulation, and for consumer items deviate differently from the cost: for means of production they deviate downward, while for consumer items they deviate upward. If the surplus product (net income) is distributed in proportion to the wage in subdivisions I and II of social production, we will obtain (with allowance made for the production cost) prices, which are close to the cost and differ from the above-mentioned prices: higher for means of production and lower for consumer items. Thus, the rate of consumption will come in the late 1950's to 37 percent and in the late 1970's to 33 percent. These are approximate calculations. In the press the rate of accumulation was published in prices which were close to the cost as applied to the late 1960's. At that time it came to about 35 percent.[5]

The equalization of the prices for means of production and consumer items is occurring. They are approximating the socially necessary expenditures. The rate of accumulation is gradually decreasing. This is especially noticeable, if one compares the present rate with the rate of the period of industrialization. Thus, in 1931 it came to 40 percent.[6] And in the capitalist countries during periods of economic recovery, in spite of considerable parasitic consumption, the rate of accumulation proved to be high. In Japan, for example, it came to 30 percent.

Accumulation breaks down into two types--productive and nonproductive, and accordingly we have two rates--of productive and nonproductive accumulation. The study of both rates is of scientific and practical interest; the expansion of physical production is connected with the former, the solution of problems of social development is connected with the matter. The different purpose of the two types of accumulations is responsible for the different method of their planning.

It is possible to define productive accumulation and its rate in a twofold way: with respect to the national income of the current year (5-year period) and as the realized accumulation (by means of the realized national income of the current period and preceding years). The accumulation from the national income of the current year and its rates are formed from the net capital investments (the capital investments minus the amortization for renovation) and the increase of the physical working capital, the stocks of agricultural products in the private subsidiary sector and reserves. The realized accumulation is formed from the assimilated accumulations of the given year and previous years (the placement of fixed production capital into operation, the increase of physical working capital, stocks and reserves). The productive accumulation from the resources of the current year shows the actual distribution of the national income. The realized productive accumulation characterizes the increase of the production potential and is used in case of calculations of the capital-labor ratio, the balances of production capacities and the actual amount of stocks and reserves. The rate of accumulation from the national income of the current period reacts more rapidly to the changes in the policy of accumulation, while the rate of realized accumulation reacts with a delay, which is due to the construction lag, but records the real growth of the production apparatus.

In any society a specific amount of the surplus product is required for "the continuous expansion of production to the extent which is determined by social need."[7] Under capitalism the capitalization of the surplus value in amounts, which ensure the derivation of not less than the average profit, and wherever possible more than it, not counting such social needs as the expenditures on nature conservation, measures on the protection of labor and so on, is the lowest limit of accumulation. Under socialism there are also objective limits of accumulation. The simple reproduction of productive forces and production relations is not characteristic of socialism, and, hence, even in case of the lowest limit of accumulation production and public property should be expanded, consumption should rise, the capital-labor ratio and labor productivity should increase, while the technical level of the national economy should guarantee intensification, the increase of efficiency and so on. The point of the socialist law of accumulation also consists in this. True, expanded reproduction can

be sustained by means of not only accumulation, but also the available production reserves, nevertheless the leading role is left for accumulation.

Accumulation coexists and interacts with consumption. Their boundaries come together, and each of them can be regarded as the boundary of both. The specific nature of socialist accumulation lies in this. It cannot be planned outside consumption. Under capitalism "the amount of accumulation is the independent variable, the amount of the wage is the dependent variable."[8] Under socialism the matter changes radically, priority is with consumption, its boundaries yield less to the influence of market conditions and frequently dictate the rate of accumulation. The changes of the rate of accumulation during the postwar years did not permit a decrease of the absolute amount of the consumption fund, although the absolute value of accumulation during individual years decreased for various reasons. Such was the case in 1954, 1957, 1963, 1972, 1975, 1979 and 1980.

These general views on the boundaries of the accumulation fund become quite perceptible in case of a specific analysis of the conditions of accumulation, which makes it possible to determine the rate of accumulation for the future. Let us examine the basic indicators of accumulation (Table 1).

Table 1

	Basic indicators of accumulation by years						
	1960	1965	1970	1975	1980	1981	1982
Means of production for accumulation:							
billions of rubles.	24.1	31.9	52.2	51.8	77.2	82.4	80.9
percent of capital (fixed production capital and working capital in reserves of commodity stocks).	10.8	8.2	8.1	5.3	5.6	5.5	5.1
Capital investments in sphere of physical production minus amortization for renovation plus the increase of physical working capital, billions of rubles	21.1	24.9	51.5	65.1	62.5	72.4	76.9
Output of subdivision II in excess of consumption fund in the sphere of physical production:							
billions of rubles.	45.7	57.8	95.2	127.6	155.4	169.4	197.0
percent of consumption funds in the physical sphere	60.9	55.8	66.8	69.4	67.7	72.1	80.2
Net capital investments as a percent of amortization for renovation.	540	252	313	213	123	132	110

We can note expanded crisis-free reproduction during all the years of the building of socialism. The steady increase of the scale of reproduction is in evidence. The convergence of the growth rates of subdivisions I and II of social production is occurring and the consumption funds are increasing accordingly.

The law of capitalist accumulation signifies the increase of the norm and amount of the surplus value. The nature of capitalist accumulation "rules out any such decrease of the degree of exploitation of labor, or any such increase of the price of labor, which could seriously threaten the constant reproduction of the capitalist relation and, moreover, its reproduction on a steadily increasing scale."[9] Capitalist accumulation as a consequence of this leads to a rapid decline in the advanced capital of the proportion of the capital which is used for hiring workers. Thus, capitalist accumulation gives rise to a reserve army of labor, to mass chronic unemployment.

Socialist accumulation, as its entire history attests, not only provides all workers with workplaces, but also leads to the improvement of working conditions and the reproduction of manpower. Socialism eliminates unemployment, while the increase of the norm of the surplus product takes place at the same time as the growth of the necessary product and the increase of well-being.

The starting point of accumulation is the relative surplus of means of production. Whereas in case of simple reproduction the output of the first subdivision of social production is equal to the consumed means of production in the first and second subdivisions, in case of expanded reproduction $I(c+v+m) > cI + cII$. The excess of the production of means of production as compared with the needs of simple reproduction is the source of the expansion of production in both subdivisions and a means of the improvement of the structure of the national economy and the pulling up of the lagging sections of consumption. In case of expanded reproduction their surplus as compared with the increasing consumption in the sphere of production is accumulated. Such a surplus serves for distribution according to labor among the workers, who are being newly enlisted in production, the maintenance of the nonproduction sphere and the formation of reserves. In case of simple reproduction the net capital investments are equal to the retirement of fixed production capital, in case of expanded reproduction they exceed the retirement. All these conditions of expanded reproduction are in evidence during the postwar years in question. However, in the 1970's the pace of productive accumulation decreased. The rate of productive accumulation is relatively stable, but as a result of the decrease of the growth rate of the national income the absolute increments of productive accumulation are decreasing. The same thing, although in less pronounced form, is also occurring with the accumulation of consumer items. The changes of the dynamics of productive accumulation should be considered primary.

In 1983 some increase of the rates of economic growth and the qualitative indicators occurred. As was stated at the December (1983) CPSU Central Committee Plenum, now the most important thing is not to lose the gained pace and the overall positive orientation toward work and to develop the positive processes more actively.

Of course, there is no inevitability to increase annually the scale of productive accumulation, if it meets social needs and makes it possible to increase the productive capital and reserves. Let us compare the retirement of capital and the net capital investments and deductions for renovation. The net capital investments in 1982 exceed the retirement by more than 70 percent and the fund of simple reproduction (amortization for renovation) by 10 percent. The proportion of the fixed production capital put into operation during 1981-1982 came

to 15.7 percent of its total value. The expanded reproduction of fixed production capital is occurring. Moreover, under specific conditions it can increase in part also due to investments of past years.

In its composition accumulation should conform to the specific needs of the population and production (for housing, consumer goods for people who are being newly enlisted in production, as well as for those employed in the sphere of service, for construction materials and equipment, specific goods for the formation of stocks and reserves). Hence, the value analysis of accumulation should be supplemented by the analysis of its use value. This makes it possible to define more accurately the connection of accumulation with the needs of the national economy and to reveal the bottlenecks and individual disproportions in the structure of accumulation. In the composition of accumulation the increase of fixed capital accounts for 64 percent, including the increase of fixed production capital--40 percent and the increase of physical working capital and reserves--36 percent.[10] The balances of equipment, materials, raw materials and consumer items, which were prepared as applied to these parts of accumulation, make it possible to judge the balance of the national economic plan.

Socialist accumulation is formed on the basis of socialist property and promotes its expansion and strengthening. Its overwhelming portion is created at socialist enterprises. The accumulation, which is stored up by the state, is used almost entirely in the public sector. In 1982 approximately nine-tenths of the capital investments were channeled into state enterprises, about one-tenth was channeled into cooperative enterprises and organizations. The capital investments of the population in housing construction came to about 1 percent of the total amount of capital investments.

The result of accumulation is the increase of national wealth--the resources for the carrying out of social production, the maintenance and improvement of the living conditions of the working people. The national wealth of the USSR during 1970-1982 increased by more than twofold. This is two-thirds fixed capital, primarily fixed production capital. Apparently, Marx had such a structure of wealth in mind when saying that the development of wealth is the same thing as the development of productive forces.[11]

Each historical period poses its own tasks on both the increase and the use of accumulations. A period of retooling, the rearrangement of the production structure, the changeover to the intensive means of development and the achievement of a new level of efficiency lies ahead for the USSR economy. At the June (1983) CPSU Central Committee Plenum the need for the qualitative change in the productive forces of the country and the assimilation of the achievements of the latest stage of the scientific and technical revolution, which leads to technological changes in the sectors of production and a genuine revolution in the national economy, was substantiated. The complexity of these tasks is being increased by unfavorable trends--the decrease in the 1970's of the growth rate of accumulation and serious shortcomings in its use. All this, in our opinion, makes it incumbent to achieve the broadening of the sources of accumulation and to increase the effectiveness of the use of assets.

The present rate and amount of accumulation ensure the expansion of productive capital in case of a comparatively low rate of the retirement of worn out and

obsolete capital. In 1983 the retirement of fixed production capital came to 29 billion rubles--2.4 percent of its average annual value, the net capital investments--50.1 billion rubles. The latter exceed the amount of retirement by 73 percent. However, in case of a low rate of retirement there is the danger of the accumulation of old equipment.

The accomplishment of the strategic tasks, which were outlined by the CPSU, is impossible without adequate accumulations. The construction of new, technically improved enterprises and the renovation of operating ones are the most reliable means of the intensification, in particular, of the replacement of manual labor with mechanized labor, the industrialization of agriculture and the increase of the production of consumer goods. Therefore, in our opinion, the point of view of the economists, who regard accumulation as a source of extensive growth and its high rate as an evil, which it is necessary to combat, is unacceptable.

The interests of the matter require the sources of accumulation to be broadened. The opinion that the surplus product is the only source of accumulation, dominated for a long time in the literature. Theoretically this is at least not accurate and does not direct attention to the search for new sources of accumulation. Under certain conditions amortization (the deductions for renovation) can become an additional source of accumulation. And now, since renovation deductions exceed retirement (by 57 percent), a portion of them is being used for accumulation and amounts to approximately one-fifth of the productive accumulation. However, such a use of amortization is inadvisable, since it inevitably leads to the preservation of obsolete capital. Apparently, in the future it is impossible to aim at this source. The attraction of amortization as a source of accumulation makes sense in case of a different approach to its use, when it serves the timely replacement of obsolete equipment with new equipment. "In case of the rapid development of the productive force all the old machines should be replaced by more economical machines, that is, should be discarded altogether."[12]

During the period of work on "Kapital" Marx asked Engels the question: Does not the existence of a large amortization fund explain in part "THE GREAT DIFFERENCE [in italics] in the ratio of the accumulation of capital for a nation with development capitalist production, that is, with much capital, and the nations which have not achieved such a level of development"?[13] Subsequently he responded affirmateively that amortization can become a source of the expansion of production. Such expansion follows from the reverse transformation of the value which existed into additional or more effective capital. The reverse transformation of the value which existed (the amortization deductions) into functioning and more effective productive capital is possible, if the replacement value decreases as compared with the initial value, or in case of a fixed value the use value of the productive capital, which has come to replace the capital which has served its life, is greater than the consumer qualities of the latter. Here the strongest impact is achieved if at the same time the value of the constant capital decreases, while the use value increases.

Under socialism the decrease of the replacement value as against the initial value and the greater use value of the new fixed capital as compared with the capital which it is replacing, are a condition of the use of amortization for the expansion of production. In practice, as the experience of past years

shows, the replacement value exceeds the initial value. According to the reevaluation of 1925, it was 8 percent higher, according to the reevaluation of 1960--12.4 percent and 1972--11 percent. Under such circumstances amortization will be able to be used for expanded reproduction, if the use value of the capital, which is replacing the old capital, increases and exceeds the increase of the replacement value.

The amortization deductions for renovation now come to nearly the amount of the net capital investments. Moreover, their increase by means of the decrease of the amortization assets, which are used for capital repair, is expedient. The latter consumes 40 percent of the assets for amortization and, in the opinion of specialists, it is advisable to decrease its proportion significantly. It is necessary to increase the technical level of the production of means of production, in order to turn the replacement of worn out and obsolete capital into an effective factor of the expansion of production.

Apparently, the comprehensive study of the formation and use of the amortization fund, the effectiveness of the simple reproduction of fixed production capital and the efficient amounts of the retirement of capital by sectors of the national economy, the strengthening of the centralized management of amortization policy, the broadening of the rights and the increase of the responsibility of associations in the realization of amortization assets are necessary.

A unique means of the "increase" of accumulation is its freeing by means of the better use of productive (fixed and working) capital. This is a significant reserve of the increase of economic efficiency, which makes it possible to lessen and in many cases to eliminate the strain in case of the determination of the amounts of capital investments and to manage with relatively less accumulation. "The freeing of capital (and labor) in itself is the increase of wealth: it has exactly the same influence as if this additional capital were obtained by accumulations, but it saves the labor of accumulation."[14]

The saving of the capital, which is being both consumed and used, is equally necessary. K. Marx distinguishes constant capital, which has been consumed in the process of production, and constant capital, which has been used in the process of production.[15] It seems to us that by analogy with the named categories it is possible to distinguish as categories of socialist reproduction the used capital, which serves materially the creation of the product, and that part of it, which is entirely consumed in the process of production--the consumed capital. The used productive capital in case of value calculation includes the entire value of the fixed and working capital, that is, all the allocations from the national wealth of the country for the supply of production. Specifically this is the value of the fixed production capital, the value of the raw materials, fuel and auxiliary materials, which were consumed during the year, the annual wage (income) of the workers of the sphere of physical production. All this is the real amount of the total annual expenditures, which society should allocate in order to obtain the annual gross product and national income. The amount of used capital, which has been calculated in such a manner (according to the value), is by no means an abstract and self-sufficing quantity. The funds of a specific use value in the necessary proportions between their different types are behind it.

It would be possible to define the consumed capital as the value, which has been consumed in production, of the fixed production capital (amortization) plus the value, which has been consumed during the year, of all the working capital. These are the annual social production costs. The scale of the capital and the quantitative difference between the used and consumed capital are large. The former in 1982 exceeded the latter by nearly twofold. Both quantities (the used and consumed capital) are of great importance for the organization of production. Society should find the opportunity to advance in full the fixed and working capital and to determine the efficient amount of the production costs.

The saving of consumed capital (the social production costs) is achieved by the accomplishment of exacting plan assignments on the decrease of the specific rates of consumption of raw materials, fuel and materials and the increase of labor productivity at a faster rate as compared with the increase of the wage. The assignments of the current five-year plan on the saving of metal, fuel and materials are widely known. Saving also requires the acceleration of the turnover rate of physical working capital. The latter came in 1982 to 540 billion rubles (with allowance made for unfinished construction and the working capital of kolkhozes). The time of their turnover increased from 121 days in 1960 to 160 days in 1982, or by one-third. The decrease of the rate of the turnover required for the achievement of the gross product of 1982 additional working capital in the amount of 142 billion rubles, which is equivalent to the increase of accumulation by means of the assets of stocks by 6.5 billion rubles.

The saving of used capital is connected first of all with the improvement of the use of fixed production capital and the increase of the output-capital ratio. During the different periods of the building of socialism it was nonuniform. In the 12 prewar years (1928-1940) it nearly doubled with an average annual growth rate of 5.6 percent. The technical reconstruction of the national economic and the use of new highly productive equipment were the most important factor of the increase of the output-capital ratio. The years 1950-1958 are marked by some increase of the output-capital ratio (8 percent). Later it began to decrease, while during the Eighth Five-Year Plan there was an almost stable output-capital ratio. During the Ninth Five-Year Plan the decrease came to 13 percent and during the 10th Five-Year Plan--14.9 percent.

The output-capital ratio in many ways determines the rate and scale of reproduction. The increase of production can be achieved either by the increase of the output-capital ratio or by the increase of the rate of accumulation and the extensive expansion of capital. The most accessible reserve of the increase of the output-capital ratio in industry is the improvement of the conditions of the use of equipment, the increase of the shift system, the manning of the lagging sections with manpower and others. According to the calculations of Ukrainian economists, the elimination of the intersectorial and intrasectorial disproportions, the coordination of the number of workplaces with manpower resources and the increase of the shift system by means of this, the elimination of nonproduction losses would make it possible to increase the output-capital ratio in industry of the republic to the level of 1970, when its appreciable decrease began. These are reserves of the first order. Their use can halt the decline of the output-capital ratio and increase it to the level achieved during the most favorable years of the 1960's. And this is already a lot. However, the accomplishment of technical progress and the use of the highest technology in

production are the most important reserve of the sharp turn in the output-capital ratio and economic efficiency.

Soviet science and technology have outstanding achievements in many fields and spheres. Vast assets are being spent on the expansion of the production apparatus, its technical level is increasing. An important indicator of technical progress is the increase of the productivity of national labor, which in 1982 was 2.8-fold higher than in 1960. However, in a number of sectors the technical level is inadequate, which served as one of the causes of the decrease of the growth rate and, in many instances, the level of the output-capital ratio.

In this connection let us examine the ratio between the gross product, the consumed and used capital. The entire amount of fixed production capital is included in the latter, while in the consumed capital the fixed production capital is represented only by amortization, and, hence, its influence on the production cost and efficiency is small. The use of the used capital and the consumed capital is a simultaneous act. In both cases the organization of production and labor is the same, and thus it is possible to regard the difference in the yield as a consequence of one quality or another of the capital and technology. During 1960-1982 the yield of the used and consumed capital is characterized by the following data (the gross product per ruble of capital (kopecks)):

	consumed	used
1960	130	86.7
1965	127	78.0
1970	127	80.6
1975	126	74.6
1980	124	66.8
1981	129	65.4
1982	130	67.4

Whereas the yield of the consumed capital is stable, the yield of the used capital is decreasing. Other conditions being equal, this is occurring as a result of the use of fixed capital of an inadequate technical level. Thus, the acceleration of scientific and technical progress, the retooling of the national economy and the supply of enterprises with new, more productive equipment are a vital condition of the increase of the output-capital ratio.

Many economists and engineers are inclined to believe that the observed many instances of the increase of the cost of raw materials, fuel and equipment are also inevitable in the future. Bourgeois scientists discovered long ago the "law" of the diminishing fertility of soil and the decrease of the productivity of the subsequent expenditures of labor and capital. V. I. Lenin called this the most empty abstraction, which leaves aside the most important thing: the level of equipment, the state of the productive forces, while in case of the progress of technology there is no law of diminishing productivity.[16] Historical progress is based on the increase of the fertility of the soil and the increase of labor productivity and the efficiency of means of production. The transition from the plow to the tractor, from the steam engine to electricity--these revolutionary leaps in technology brought an enormous decrease of the expenditures per unit of agricultural and industrial output. The commenced

transition to atomic energy and automated production will be a new era in the development of productive forces and the decrease of production costs. The existing negative trends in production merely emphasize the need for the quickest possible transition to higher technology.

Along with the saving of production resources and the broadening of the sources of accumulation the increase of the efficiency of accumulation itself is an important task. This depends on a number of circumstances. For example, a greater efficiency of accumulation can be achieved by the streamlining of construction, in which a large portion of the investments in the national economy is realized. The decrease of the cost and the shortening of the time of construction, the elimination of the above-standard unfinished construction and the shortening of the time of the assimilation of new enterprises are the most effective means of increasing the effectiveness of capital operations. Accumulation is more efficient, the more perfect the equipment, with which new enterprises and enterprises being renovated are supplied, is. Its efficiency can be increased by the more efficient distribution of capital investments among sectors and regions.

The increase of the national income, which is attributable to accumulation (the coefficient of the efficiency of accumulation), can be a general indicator of the efficiency of accumulation. Here it is assumed that the optimum ratio between accumulation and consumption has been achieved, the composition of the increase of the national income, as of the national income as a whole, conforms to the needs of the national economy and contains such a set of specific use values, which meets the demands of the population and production. The dynamics of the indicator of the efficiency of accumulation is shown in Table 2.

Table 2

Year	Increase of production of national income, billions of rubles	Accumulation per ruble of increase of national income, rubles	Increase of national income per ruble of accumulation, rubles
1960. .	8.8	2.40	0.42
1965. .	12.2	2.04	0.49
1970. .	28.0	1.84	0.54
1975. .	9.3	7.00	0.14
1980. .	17.9	3.45	0.29
1981. .	24.5	2.96	0.34
1982. .	36.7	2.10	0.48

One must not use these data without reservation. It is impossible to ascribe the entire increase of the national income to accumulation. The increase of the number of people employed in physical production and the increase of labor productivity by means of its better organization and intensity also affect it. Further, the increase of the national income is not a result of accumulation of only the given year, it is due in part to accumulation of preceding years. For a more accurate calculation it is necessary to take into account a lag of 2-3 years. The unforeseen and chance fluctuations of the increases during individual years should be borne in mind. In 1975, for example, the output of

agriculture decreased as compared with the preceding year by 6 billion rubles, which affected the increase of the national income. But over a large number of years the chance occurrences and inaccuracies in the formation of the indicator of efficiency are eliminated. Theoretically a more accurate result would be obtained, if the national income were taken not in current prices, but in constant prices. However, both indices during 1961-1981 are very close, and only 1982 indicates an increase of prices. Some economists propose to added to the amount of produced accumulation the increase of the expenditures on the maintenance of manpower in the sphere of physical production, since the accumulation was also obtained owing to these expenditures. It would be necessary to do this, if we want to identify the cost accounting effectiveness of accumulation, and then the expenditures of the produced accumulation would have to be increased somewhat. However, the increase of the wage and income of the workers of the sphere of physical production is not only an expenditure in case of the obtaining of an increase of the national income, but also an impact, since the task of socialist society is the increase of the well-being. Hence, it is possible also to measure efficiency without consideration of these expenditures. Given everything that has been said, the adjusted indicator of the efficiency of accumulation attests quite thoroughly to the dynamics of the efficiency of productive accumulation.

All three methods of the "increase" of accumulation, which were examined above (by means of the amortization fund, the better use of fixed and working production capital, the increase of the efficiency of accumulation), have to be used during the remaining years of the current five-year plan and during the new five-year plan. As Comrade K. U. Chernenko noted at the February CPSU Central Committee Plenum, "the new five-year plan first of all should become the start of profound qualitative changes in production, a five-year plan of decisive change in the matter of the intensification of all the sectors of our national economy. The present material and technical base and the system of management should acquire new, higher qualities."[17]

The development of scientific and technical progress and the intensification of production require the rapid development of machine building and the increase of its level. Many suggestions on the means of retooling machine building have already appeared in the press. They are the preferential development of means of automation and robotics; the designing and production not of machines for individual operations, but of systems of them, which are capable of completely retooling entire sectors of production from the initial to the final stage; the efficient organization of intersectorial works; the mass production of means of mechanization and the supplanting of manual labor; the reorganization of metallurgy for the purpose of the complete meeting of the needs of machine building; the decrease of the materials-output ratio and the reduction of the cost of machine building products and others.

FOOTNOTES

1. See K. Marx and F. Engels, "Soch." [Works], Vol 20, pp 313, 323.
2. "Leninskiy sbornik" [A Leninist Collection], XI, p 349.
3. "Leninskiy sbornik," XXII, p 381.

4. K. Marx and F. Engels, "Soch.," Vol 24, p 592.

5. PLANOVOYE KHOZYAYSTVO, No 10, 1969, p 23.

6. "Materialy po balansu narodnogo khozyaystva SSSR za 1928, 1929, 1930 gg." [Materials on the Balance of the USSR National Economy for 1928, 1929, 1930], Moscow, 1932, p 54.

7. K. Marx and F. Engels, "Soch.," Vol 25, Part II, p 448.

8. K. Marx and F. Engels, "Soch.," Vol 23, p 633.

9. K. Marx and F. Engels, "Soch.," Vol 23, pp 634-635.

10. See "Narodnoye khozyaystvo SSSR v 1975 g." [The USSR National Economy in 1975], Moscow, "Statistika", 1976, p 566.

11. K. Marx and F. Engels, "Soch.," Vol 46, Part II, p 33.

12. K. Marx and F. Engels, "Soch.," Vol 25, Part II, pp 342-343.

13. K. Marx and F. Engels, "Soch.," Vol 30, p 231.

14. K. Marx and F. Engels, "Soch.," Vol 25, Part II, pp 243-244.

15. See K. Marx and F. Engels, "Soch.," Vol 24, p 446; Vol 25, Part I, p 43.

16. See V. I. Lenin, "Poln. sobr. soch." [Complete Works], Vol 5, p 101.

17. "Materialy vneocherednogo Plenuma Tsentral'nogo Komiteta KPSS, 13 fevralya 1984 g." [Materials of the Extraordinary CPSU Central Committee Plenum, 13 February 1984], Moscow, Politizdat, 1984, p 16.

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ECONOMIST DISCUSSES CREDIT LIMITS

Moscow DEN'GI I KREDIT in Russian No 12, Dec 83 pp 23-29

[Article by A.Ye. Melkov, candidate of economic sciences: "The Question of Credit Limits"]

[Text] The functioning in circulation of money formed on a credit basis when the issue of a loan means the provision of additional money for turnover and the payment of a loan--the withdrawal of money from turnover, makes necessary the examination of the problem of material and financial balance in interrelation with bank credit. The validity of granting a loan, its effective employment and timely repayment in essence predetermine material and financial balance.

The objective requirements of the law of credit money are aimed at the attainment of this purpose. According to it, the conditions of issue of money must also contain the conditions of its return as well as the basic principles of socialist extension of credit, first and foremost its purposeful character, fixed time period and returnability.

In examining development of credit, there should be noted the significant expansion of the sphere of its use and expansion of the range of items granted credit. At the same time, the tendency has been increasingly more clearly observed of dealing with credit as a means of overcoming disproportions arising in the economy. Thus the need is noted in the economic literature of broader use by a bank of the right of postponing loan payments as well as of broader granting of credits for making up of a shortage of own working capital, and the regret is even expressed that only 56 percent of such enterprises losing their own working capital as the result of not fulfilling of the profit plan and incurring above-plan expenditures received loans for making up shortages of working capital.[1] The noted tendency received a generalized expression in our view in the articles "Credit and Its Laws"[2] and "Credit and Banks in the System of Management of the Economy."[3]

This point of view received its fullest conclusion in the assertion that bank credit in a number of cases is "...an integral element of balancing financial plans."[4] This thought is also enunciated in a somewhat veiled form by other authors: "Excessive emission in all cases should not be considered as a negative occurrence...."[5]

It seems to us that characteristic of the noted statements is allowance of expansion of the sphere of use of bank credit and objects of credit extension without relation to objectively existing restrictions of credit emission and economic limit of credit, which may have negative consequences for balancing effective demand with a supply of goods and paid services and the material and monetary aspects of economic turnover.

The urgency of resolving this question is intensified to a considerable degree by the incompleteness of the search for scientifically based quantitative limits of credit. In the economic press, opinions are still frequently made to the effect that the volume of credit investment is determined by the volume of "sources" of credit extension in the process of balancing of credit and resources. The latter are ostensibly accumulated by a bank and constitute monetary resources located on its accounts and targeted for credit extension.

Other ideas also exist on this question. Thus, the article "The Question of Interrelation of the Credit Character of Money, Its Amount in Turnover and Volume of Credit" depicts a conception according to which two credit limits exist.

At the same time, its lower limits are determined by objective normal needs for credit volume under a socialist planned form of working-capital organization whose consistently stable amount is formed as one's own funds.

The lower limit of credit, as the author of the article points out, consists of a number of components: additional quantities of temporarily needed working production capital (above one's own) formed in the course of the normal planned circulation of funds; additionally needed cash and disposable stocks (above one's own)--stocks of finished production, means of payment (because of noncoincidence of times of due payments and times of arrival of funds for delivered products); investments in required planned outlays of future years; investments in above-norm immobilized working capital--physical stocks, unfinished production, stocks of unpopular finished production; temporary replenishment of shortage of own working capital because of incurred losses.

Credit volume from the aspect of the lower limit is determined in the author's opinion by the volume of physical capital temporarily released in the cycle of reproduction and settling in the form of free monetary funds as bank liabilities (plus anticipatedly produced emission in rationally planned limits).

Within the framework of more or less significaant exceeding of the upper limit of credit over the volume of the lower limit, he points out, credit resources have to be created for planned feasible investments--medium- and long-term capital investments, credit extension for unforeseen requirements of the economy, consumer credit for the population and others.

While not being able to dwell in detail on the depicted conception within the framework of the present article, it nevertheless seems necessary to express disagreement with certain positions described in it.

In particular, an objection is raised by the very formulation of the question of the existence of the two limits of credit extension as well as listing of the subjects of credit extension included in the lower or upper limit. Thus it is not understandable why the need for loans for covering expenditures of future time periods, immobilized funds, or for the covering of losses, etc., is an objectively created object of credit extension.

In examining the question of credit limits, it is impossible in our opinion to lose sight of the fact that views on whose basis the volume of credit resources accumulated by a bank determines the economic limit of credit investments possessed a certain basis under conditions of functioning of real money, the accumulation of a gold reserves by banks and the granting of loans on this basis.

With paper-money circulation, the situation changed significantly. At the present time, in capitalist countries, central banks or the Federal Reserve System attempt to set limits of credit extension at the state level. Even the credit resources of local banks only indirectly depend on the funds attracted.

Under the conditions of the socialist system of economy and the monopoly emission right of Gosbank, the objective possibility of utilization of the credit mechanism for issue of money (in cash and noncash forms) in excess amount is restricted by the credit plan, which determines the maximum permissible sum of credit. But this can be ensured given the condition that the methodology of developing a credit plan takes into consideration in a most rigid degree the objective requirements of the law of amount of money in circulation and the law of credit money.

Since monetary resources functioning in cash and noncash forms are not removed from circulation into depositories but, placed in accounts of funds and deposits, can reflect unsatisfied demand and are not "compressed" with respect to their nominal value down to the value of the actual money which they represent, as a consequence of the state monopoly of prices, the excess money still in circulation will disrupt plans of utilization of physical, labor and financial resources and the balance of supply and demand. Due to this circumstance, it is important to prevent the appearance of excess money in circulation and the creation of a material-financial imbalance.

This requires the observance of a number of conditions. First of all, we should begin working on developing a plan of aggregate monetary turn over with determination of the amount of monetary resources required for circulation. At the same time, it is necessary to take into consideration that the bulk of monetary resources must reflect and satisfy the requirements of the whole aggregate of monetary turnover, including settlements with the financial system and reinforcement of resources of other institutions of the credit system.

The end aim of control of monetary circulation in practice boils down to ensuring balance of commodity supply and effective demand at the stage of the change of forms of value (T[goods]-D[money]-T[goods]), which is achieved given the condition of balance of material and monetary flows in all their totality.

The difficulty of solving this problem is because balance at the stage T-D-T is manifested as an absolute equality of the sum of prices of sold goods and the money countervailing them forming the effective demand. The balance of material and monetary flows is manifested in optimal correlation of functioning amounts of the social product and money and the circulation of the social product and money is subordinated to the objective requirements of the corresponding economic laws and patterns.

The described circumstances have to be taken into consideration in the determination of optimal correlations of quantities of the social product and money. The validity of the above-described conclusion is confirmed by analysis of the real mechanism of movement of goods and money. Let us suppose that in the sphere of material production social product is created that is intended for consumption (personal and public) and for accumulation in a sum of 3,000 units per month and of 100 units per day. In this case the need for monetary resources reflecting effective demand should also consist of 100 units daily and 3,000 units monthly. It is namely in this way that the economic content of balance of goods and money is manifested at the stage of the change of forms of value.

But in order to sell 100 units of the goods, they have to have more available inasmuch as consumer demand (realized through effective demand) is satisfied while taking into account a number of factors: fashion, size, color, style, price and so on. If we adopt as a norm minimally required carry-over commodity surpluses in the amount of a 60-day requirement, then the commodity stock consists of 6,000 units. Daily sales in the amount of 100 units are supplemented by the same amount.

As for money, its determination in the amount of 100 units presupposes its receipt and expenditure on one and the same day, which is practically impossible in real life. If we assume that revenues arrive once in 15 days, then the amount of the money forming the effective demand constitutes 7.5 days, or 750 units. If income is formed once in 30 days, then the amount of the money in circulation will amount to 15 days, or 1,500 units.

Thus the total quantity of goods of 6,000 units and the daily sale of 100 units is countervailed by 100, 750 and 1,500 units of money. At the same time, in all three correlations, the planned character of circulation of goods and money is ensured.

But balance as an absolute equality of goods and money (100 T [units of goods] and 100 D [units of money] is manifested in all three cases only at the stage of replacement of forms of value as an optimal correlation ensuring the equality of T and D in the change of forms of value.

It is perfectly clear that the quantitative definiteness of the optimal correlations of T and D is due to the difference in the rate of turnover of goods and money. Thus in the first instance, this correlation consists of 6,000 T and 100 D since the rate of turnover corresponds as 60 days to 1 day. In the second case, it is 6,000 T to 750 D, which corresponds to a ratio of 60 days to 7.5 days. And in the third case it is 6,000 T to 1,500 D, i.e., correspondingly 60 days to 15 days.

A major influence on the determination of optimal correlations between material and monetary flows is exerted by factors existing outside the limits of economic turnover of goods and money, which determine effective demand. The ignoring of these factors inevitably brings on the violation of the planned character of the change of the forms of value.

For example, a considerable portion of the social product is used in kind, bypassing the monetary form of value. Moreover, the sales volume of goods displays a constant tendency for growth, which requires a corresponding increase of commodity stocks. The indicated and other factors should be taken into account when determining the total quantity of the social product above the amount of goods allotted for satisfaction of the effective demand. Only in this case will the sale of goods (in our example) of 100 units per day be ensured.

If we suppose that the share of the social product used for consumption and accumulation, not taking a monetary form, and for the growth of commodity stocks for the purpose of ensuring sale of the product in increased quantities amounts to 10 percent, the social product will grow by 600 units and reach 6,600 units.

Even more significant changes will be experienced by the amount of monetary resources. Thus, the objective necessity arises for creating a constant carry-over of reserves of monetary resources without increasing effective demand. If we assume that such a carry-over reserve is equal to the needs of one day, then it will amount to 100 units.

Hence the amount of monetary resources required for paying for goods in the amount of 100 units can be equal in the first case to 100+100=200 units, in the second case to 70+100=850 units and in the third case to 1,500+100=1,600 units.

It is necessary to take into account in this calculation objectively necessary requirements for monetary resources aimed at savings. These monetary resources, if they are actually savings, do not form current effective demand.[8] If we were to assume that the funds in savings constitute 5 percent of the amount spent on acquisition of goods, then the total amount of monetary funds will have to increase in the first case by 5 units, in the second by 37.5 units and in the third by 75 units. After this the total amount of monetary resources will have increased respectively to 205, 887.5 and 1,675 units.

Finally, there is another significant factor responsible for increasing the amount of operating monetary funds while not similarly increasing effective demand.

As we know, a portion of the revenues (and the amount of the monetary funds mediating them) undergoes a process of distribution and redistribution and forms effective demand only subsequently (for example, in the form of budget financing, pensions, grants and so forth). This redistributive turnover at stage D-D is achieved with the use of monetary resources not representing effective demand and fulfilling the functions of savings funds or existing in carrying over stocks as a monetary reserve. The constant diversion of monetary sums in redistributive turnover requires corresponding compensation as otherwise

goods would be "met" (stage T-D-T) not by 100 units per day and not by 3,000 units per month but by an amount reduced by the size of the carry-over remainder of the funds in their redistributive turnover.

Let us assume that the amount of the redistributive turnover amounts to 30 percent of the volume of turnover at the stage of the change of forms of value (turnover of T-D-T), that is, 30 units per day, or 900 units per month. Under the condition that the minimally necessary monetary reserve for these purposes amounts to a 3-day need, the size of the required monetary funds is determined by the sum $\frac{900 \times 3}{30} = 90$ units in all three cases.

As a final result, we obtain the following correlation of the social product to monetary funds:

	Quantity of D on receipt of revenues		
Quantity of T	Daily	once every 15 days	once every 30 days
6,600 units	295 units	975.5 units	1,765 units

These correlations, despite their quantitative differences, ensure balancing of material and monetary flows and balancing of supply of goods with effective demand by which the end aim of control of monetary circulation is achieved.

Emission (releasing into circulation and regulating the quantity) of monetary funds is as we know, a monopoly right of Gosbank USSR. The entire aggregate amount of cash and noncash monetary funds in all the institutions of the credit system was formed by Gosbank USSR on a credit basis and is determined by the ratio of issue and repayment of loans.

This right is reinforced by the existing mechanism of the interrelationship of Gosbank USSR with other institutions of the credit system: Stroybank USSR, USSR Foreign Trade Bank, State Labor Savings Banks and others. All the institutions of the credit system (with the exception of Gosbank USSR) perform credit and payment operations within the limits of the quantity of monetary funds coming under the control of the respective credit institution.

Thus, if Stroybank USSR receives a loan from Gosbank USSR for strengthening its monetary resources, it serves as emission of money into circulation not by Stroybank USSR but by Gosbank USSR at the time of the loan being granted to Stroybank USSR. The credit operations of Stroybank USSR are not identical to the credit operations of Gosbank USSR and are not a reflection of the right of Stroybank USSR to emission of money.

All the monetary operations of the institutions of the credit system (not involving operations relating to the issue and repayment of loans by Gosbank USSR) only change the structure of monetary resources and their distribution according to possessors and channels of monetary circulation that do not change their aggregate amount and thus are not a manifestation of the emission right.

This right is held by Gosbank USSR, which exercises it, utilizing the credit mechanism.

Of course, planning of monetary circulation by itself cannot ensure the achievement of a material-financial balance of commodity and monetary flows if at the same time a real restriction of the volume of monetary funds (credit investments) is not provided by the sum determined by the monetary circulation plan. In the opposite case, the planned sum of monetary resources can only serve as a "barometer" that passively reflects the extent of exceeding of the actual amount of monetary funds at face value compared to the actually necessary monetary turnover determined according to the law of the quantity of money required for circulation.

For the purpose of achieving the best balancing of effective demand with the supply of goods and paid services, it is necessary to simultaneously carry out a number of organizational and technical measures for improvement of the credit mechanism.

It is all the more necessary to do this since additional material and labor resources do not arise from saturation of turnover by monetary resources above the national income designated for consumption and accumulation. Additional effective demand not provided with a commodity cover can complicate turnover and shift established priorities (on the basis of statewide interests) for provision of raw and other materials, equipment, producer and consumer goods and manpower.

Credit is of major importance to ensuring balancing of effective demand and supply.

In examining the question of the interrelationship of the functions of Gosbank and the State Budget, there should first be pointed out the community of their economic interests and objectives in the matter of clear-cut organization of monetary circulation and finances of sectors of the national economy, which is one of the most important advantages of the socialist economic system. But one cannot help also see differences in the functions of budget and credit.

Despite the diversity of the forms of state income, all of them are united on the basis of their economic content, being the part of the national income created in the sphere of material production removed into the centralized fund of the state. Speaking more exactly, this is a monetary form of the national income, since the national income in its value form does not get on accounts in the bank; it moves from the place of production to the place of utilization.

The creation and utilization of the national income in two (value and monetary) forms and their relatively independent movement create conditions for a quantitative noncoincidence of these forms.

The monetary form of the national income is formed in the process of bank crediting production, shipped products, payment of suppliers' accounts and other operations. The appropriate part of these funds goes to the

accounts of the income of the State Budget in the form of turnover tax, deductions from profit and various taxes and collections.

In principle, the existing mechanism for the forming of budgetary income and bank credit extension makes it possible to ensure a correspondence between monetary and value forms of the national income and the balancing of effective demand, formed through the means of budget financing, with supply of goods and paid services.

At the same time, under certain conditions, equality of monetary and value forms of national income is not achieved. For example, it does not happen that rarely that a portion of the created social product does not become a commodity because it does not possess use value: unpopular goods, defective products. Not to be excluded are losses of goods in transit, storage or as the result of thefts. As a result a so-called shortage of working capital is formed. This really means a reduction in the amount of goods and the national income in its value form.

But since the monetary form of the national income and the effective demand formed earlier retain their former size, an imbalance is created between demand and supply. In order to restore the equilibrium, it is necessary to reduce, together with material effective demand, that is, to withdraw from circulation a corresponding sum of the monetary form of national income through repayment of bank loans from an enterprise's profit or from budget resources.

But this is not always done even with examination of annual reports. Sometimes the question is "closed" with the granting of a new loan for making up the shortage of working capital, which additionally increases effective demand, upsetting the balance of the material and monetary sides of economic turnover. In order to prevent the negative consequences of the issued loan, it is necessary in these cases to reserve corresponding funds of the budget as special credit resources.

It would appear that this "tangled interrelationship" of budget and credit should be worked out more clearly while taking into account the interests of monetary circulation. For these purpose, as also for monetary strengthening of other institutions of the credit system, Gosbank should have special resources earmarked for special use in equal sums, as it is only possible with this condition to retain a balance between demand and supply.

Of no less importance in this connection is the coincidence of the time periods of receipt of the monetary form of the national income and of the goods so as to ensure the final use of the created income for consumption or accumulation. Violation of this condition may be manifested in the form of anticipation of national income, that is, advancing of the time periods of utilization of the monetary form of the national income.

Thus the turnover tax for a number of goods is transferred by the selling bases of enterprises and for other goods--by wholesale units of trade organizations when paying presented bills. But the sale of these goods to the end consumer is done by retail stores after a rather considerable interval of

time. In other words, the forming of effective demand (through income from the turnover tax) outstrips the actual readiness of goods for sale. Drawing closer the times of receipt and utilization of the turnover tax with the times of use of goods (effective demand and its covering) can be achieved, let us say, with the establishment of an appropriate postponement of the use of income from the turnover tax after its entry in the accounts of the budget.

Thus, for evaluating the influence of the budget on the state of balance of demand and supply, simple comparison of its income and expenditures is quite inadequate.

It is important that the mechanism of functioning of budget and credit not permit exceeding of the monetary form of the national income over its value content and outstripping of the time periods of formation of effective demand for the end product compared to the time periods of movement of goods to the place of their use for consumption and accumulation. Observance of the said conditions will contribute to ensuring a planned character for monetary turnover and balancing of demand and supply.

Movement of the social product on the basis of price, including the share reflecting the national income, is mediated by credit. In the extension of credit the bank forms monetary funds countervailing the social product used not only for consumption and accumulation but also for formation of a reimbursement fund.

These funds are to be found in the accounts of the budget and the economy and among the population in the form of cash money and money in deposits.

Another no less important feature of credit is to be found in the conditions of formation of credit resources. The mechanism of short-term credit is built in such a way that a bank does not, like the budget, accumulate monetary funds beforehand. The social product is the economic basis determining a bank's credit capabilities, and the process of granting loans and forming credit resources take place simultaneously.

At the same time, the constant balancing of credit investments and credit resources can be substantive, that is, economically based, or formal. The latter is the consequence of two interrelated reasons: violation of the economic limits of credit emission determined by the law of quantity of money in circulation; the excess of the size of loans creating effective demand for the end product (for capital investments, making up and adding to working capital and other objectives) over credit resources that can be used for these purposes.

Whereas budget financing does not increase the amount of monetary funds in circulation and does not create additional effective demand determined by the plan of utilization of the social product and the national income, the granting of a bank loan increases the amount of monetary funds in circulation[9] and under certain conditions increases effective demand for the end product.

It should be pointed out that insufficient attention is paid in the economic literature to K. Marx's division of bank loans on the basis of a very

significant characteristic--loan of "money" and loan of "capital [Kapital]." At the same time, this division retains a certain importance, for under our conditions, that is, under conditions of functioning not of capital but of fixed and working assets [osnovnyye i oborotnyye fondy].

In those cases where the granting of a loan is brought about by the creation and movement of the social product, the monetary resources formed by the bank ensure the planned character of the change of forms of value at stage D-T-D. In other words, these are loans granted for the sale of the value of the social product created in production.

If a loan is granted for making up and growth of funds (above-norm stocks of physical assets, growth of the norm of own working capital, replacement of lost working capital and others), that is, loan of "capital," effective demand for the end product grows with its issue although use of the latter was already mediated by monetary resources (with crediting by the bank of the social product) distributed in the accounts of the budget and the economy and among the population.

In order to avoid having demand exceed supply in the issue by the bank of loans of "capital," it is essential to observe one condition: the sum of loans of "capital" must not exceed the sum of credit resources that could be used for these purposes. Such resources could be budget funds reserved for the period of granting of the loan as well as deposits of the population in part actually reflecting money in the function of savings funds.

A bank loan granted in these amounts compensates monetary turnover for the sum taken out of circulation and reserved in the accounts of the budget and in deposits and restores effective demand to the supply level of goods and services. But it should be taken into consideration that in this connection changes occur in proportions of distribution of the national income to the personal and production consumption funds and to the consumption and accumulation funds. As a consequence of this, the need may arise for a change in the structure of production of the social product.

Let us try to show the difference in consequences for monetary circulation and balancing of demand and supply by the granting by the bank of a loan of "money" and a loan of "capital" on the basis of a hypothetical example created in accordance with the operation of the credit mechanism in interrelation with budget financing.

A supplier, having shipped 1,000 units of a finished product, receives from the bank a loan (less accumulations and turnover tax) in the amount of 700 units of which 400 units are set aside for payment of commodity stocks for renewal of the production process and 300 units for wages.

The purchaser of these goods obtains a loan for payment of the bill in the amount of 1,000 units, which are transferred in their entirety to the supplier. The latter, on receiving the 1,000 units, uses 700 units for repaying the loan for the shipped goods. He transfers 250 units to the budget, including 200 units for the turnover tax, while 50 units of accumulations remaining he places in the accounts of special funds.

As a result, the created social product in the amount of 1,000 units is countervailed by an amount of monetary funds that is also in the amount of 1,000 units, including 250 units in the accounts of the budget, 450 units in the accounts of the economy and 300 units in the hands of the population.

Let us supposes that the budget has used its income in the following manner: 150 units for financing sectors of the national economy, 50 units for paying pensions, grants and stipends to the population, while 50 units are left in the account in the bank for an extended period as a credit resource. From the obtained 350 units (including wages in the amount of 300 units), the population has deposited 50 units.

Following this, the amount of money in circulation is no longer 1,000 units but only 900 units. This includes 400 units for production use, 200 units for expanded reproduction and 300 units for personal use (300+50-50).

Under these circumstances the complete sale of the social product can be completed through issue by the bank of an additional loan in the amount of 100 units for the period of withdrawal of money from circulation by the budget and the population. As a result, loan indebtedness increases to 1,100 units but effective demand remains at the level of 1,000 units. The balance of demand and supply is retained.

But in the process of sale (let us assume) it is learned that a part of the social product in the amount of 50 units was not accepted by the consumer in the market (defective output, goods that do not sell) and is marked off as a loss. Unsecured indebtedness was formed for the bank loan, which was presented for recovery from the enterprise's account.

The amount of money is reduced by this sum. Effective demand for the end product is also reduced thereby. The balance of demand and supply is restored.

In the absence of real accumulated sums for an enterprise, the loan may be repaid with allotments from the budget. A modification of such a solution of the problem may be found in allocation by the budget of 50 units to the bank as a resource for the issue of a special loan for making up the shortage of working capital.

In all the variants, naturally monetary allotments are reduced for expanded reproduction since 50 units are additionally needed for renewing the conditions of simple reproduction.

Quite a different situation exists when the loss is covered by a bank's credit without any allocation by the budget (or depositor) of credit resources. The issue of 50 units for covering the loss automatically preserves effective demand at the 1,000-unit level, while the social product amounts to the same 950 units. The balance of credit investments and credit resources observed in this case is of a formal character. The structure of credit investments and the structure of credit resources is not balanced according to economic content. This has been the reason for the 50-unit imbalance of demand and supply.

Such a case does not arise where a bank grants a loan of "money" for satisfying the needs of growing monetary turnover.

Let us suppose that production of the social product increases by 10 percent and amounts to 1,100 units, while profitability and production-cost structure do not change.

Reasoning in this way, as in the first example, we come to the following result. The social product in the amount of 1,100 units is balanced by bank credit in the amount of 1,210 units and effective demand--in the amount of 1,100 units since 110 units have been withdrawn from circulation and are in the accounts of deposits of the population or the budget.

The granting of a loan of money to the extent of the economically valid requirement of monetary turnover (that is, in accordance with the law of monetary circulation) not only does not upset the balance of demand and supply but, quite the contrary, creates conditions for completing the cycle of the social product.

Organization of planning of monetary circulation is a most complex task. It calls for the prior solution of a number of theoretical problems (concerning economic limits of credit, sphere of operation of the law of monetary circulation and the nature of money functioning in cashless turnover) and revision of the system of accounting and statistical reporting, wide use of mathematical economic methods utilizing electronic computing equipment and also the development of a planning methodology.

At the present time, development is going on of basic methodological principles of planning of cashless monetary turnover tied into planning of turnover of cash money. It would appear to us that carrying out an experiment on utilization of the methodology is possible simultaneously with the end of its development inasmuch as it is based on existing accounting and is to be found in the presence of a technical base.

FOOTNOTES

1. DEN'GI I KREDIT, No 2, 1982, pp 40-41.

2. Ibidem.

3. VOPROSY EKONOMIKI, No 3, 1982, p 5.

4. PLANOVOYE KHOZYAYSTVO, No 11, 1978, p 11.

5. Avdiyants, Yu.P., "Kredit i povysheniye ekonomicheskoy effektivnosti proizvodstva" [Credit and Raising the Economic Effectiveness of Production], Moscow, Finansy, 1972, pp 154-155.

6. DEN'GI I KREDIT, No 6, 1983, p 21.

7. Ibidem, p 29.

8. Under normal conditions, the use of savings for acquisition of goods is compensated by the receipt of an increasing amount of new savings.

9. Except for cases of direct circulation of a loan for repayment of an earlier issued one.

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GOSPLAN DIVISION CHIEF EXPLAINS PRODUCTION PLANNING

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 4, Apr 84 pp 48-58

[Article by D. Ukrainskiy, USSR Gosplan **division chief**: "The Planning of Industrial Production in the Contemporary Stage"

[Text] In our country a broad complex of measures is underway in regard to the further improvement of planning and the economic mechanism, which are aimed at the increase of production efficiency. In the decisions of the party congresses and plenums of the CPSU Central Committee it was noted that the central link of the administration of the national economy in the conditions of socialism is planning, on the improvement of which we must continue to work intensively both in the sphere of theory and in practice. This necessity was emphasized in the speech of K. U. Chernenko, general secretary of the CPSU Central Committee, at the February (1984) Plenum of the CPSU Central Committee.

The existing system of planning industrial production has been operating for less than 10 years. During this period substantial changes have taken place in the national economy of the country: Fixed assets in industry have more than tripled, there has been a significant improvement in the staff composition of the workers, and the number of engineering and technical personnel came to 5.4 million persons.

The economy of developed socialism is characterized by the wide use of the achievements of science and technology. Under the influence of scientific-technical progress and measures for the concentration of production, the appearance of socialist enterprises has changed. Today every industrial enterprise has on the average the following: 21 million rubles in fixed production assets; approximately 24 million rubles in output produced; more than 1,200 workers; more than 0.5 million rubles in economic stimulation funds. More than 50 percent of industrial production is now being turned out by production and scientific production associations, where these indicators are significantly higher.

However, until recently the work in regard to the increase of the economic possibilities of the individual enterprise is not accompanied by an equivalent growth of the scales of production, national income, public labor productivity, i. e., the final results of the labor activity of the collectives.

Thus, with an increase of fixed production assets by a factor of 2.5 in 1982 compared to 1970, they grew correspondingly by a factor of 1.9, 1.7, and 1.6.

In the economic literature various reasons of an objective and subjective character are cited, which restrain the rates of the development of our economy and slow down its transition to intensive methods of management. Regardless of the various assessments of these reasons, all authors are unanimous about the fact that only the increased productivity of public labor can countervail the negative trends and phenomena. Consequently, this criterion must also lie in the assessment of the effectiveness of the economic mechanism and its basic link--planning.

At the December (1983) Plenum of the CPSU Central Committee the task was set to enter into the 12th Five-Year-Plan with a well-adjusted mechanism, making possible the fuller utilization of the possibility of our economy. Obviously, taking this task into account, it is above all necessary to assess the work conducted in recent years with respect to the improvement of the forms and methods of management, planning and stimulation, and to determine the directions in regard to the further improvement of planning.

First of all, it is necessary to note the strict consistency and continuity of the measures being realized. The policy of the party and the government aimed at the development of democratic centralism in the management of the economy in combination with the increase of the role and responsibility of the industrial enterprises and their labor collectives in the development of the state plans is realized in the improvement of the forms and methods of management, planning and stimulation.

The main goal of this work consists in accelerating the transition of our economy and its leading sector--industry--to an intensive method of conducting the economy, which really secures the further growth of the productivity of public labor. In connection with this, the forms and methods of planning continuously improve both at the level of the state plan and at the level of the primary link.

Taking into account the fact that the dynamics of the productivity of public labor depends on the utilization of the latest achievements of science and technology in economic activity, the modern structure of the state plans and the methodology of their development differ substantially from the preceding ones. It has proved possible in practice to expand the horizon of planning. Today we have the Comprehensive program of Scientific-Technical Progress for 20 years and the Basic Directions of the Economic and Social Development of the USSR for 10 years, including also the five-year-plan for 1981-1985. Such a system of planning documents of a long-term and current character have been created for the first time. It can serve as a good norm basis for a whole series of indicators of the five-year and annual plans and will be perfected in the future. But in the majority of ministries the methods of developing the draft plans traditional for the past years predominate, where the increase of the production volume, the initiation of new types of production, etc., were always identified with additional capital investments and excessive calculations of material, labor and financial resources. It suffices

to say that the proposals of the ministries with respect to labor in the development of the plan for the 11th Five-Year-Plan exceeded the possibility of the physical growth of the able-bodied population for the country as a whole by a factor of 3 (the results of the work of three years of the five-year-plan confirm the unjustifiability of such a position).

In these conditions, the USSR Gosplan and the ministries expended a great deal of energy and time to balance the indicators of the plan. As a result the development of the five-year-plan for 1981 to 1985 was delayed, and the proposals of the collectives of the enterprises were not taken into account to a sufficient degree.

In the 11th Five-Year-Plan, more precisely than before, it proved possible to foresee the results of the scientific achievements. Fifteen comprehensive programs of an all-union (national economic) character were developed, as well as 170 scientific-technical programs, including 41 special-purpose programs. Their final task is the broad realization of the most effective scientific-technical achievements in the national economy. According to the programs it is planned to create a total of 4,000 projects of new equipment and technological processes, of which it is projected to put into production approximately 60 percent in the current five-year-plan and to receive, by virtue of this, an economic effect of more than 16 billion rubles in 1985.

Practice has shown that this process must be controlled to a significantly greater degree by the USSR Gosplan, in particular during the stage of the determination of the number of programs, the efficiency, and the expenditure of resources for their execution. Otherwise this progressive form of solving various national economic tasks can come into contradiction with the methods of the development of the plan.

The increase of the productivity of public labor is closely related to the efficient utilization of resources. In the USSR Gosplan, the ministries, in enterprises and scientific organizations, work is being carried out on the application of progressive technical-economic norms of the expenditures of labor, raw material, materials, and fuel and energy resources, as well as the utitilization of production capacities and relative capital investments.

At the present time, the system of lowering the norms of the expenditure of raw material, fuel-energy and other material resources is most developed. The limits of the tasks with respect to the reduction of the norms for the expenditure of rolled stock of ferrous materials have been expanded to 100 percent of the quantity being used, the limits of steel pipes--from 78 to 99, rolled stock of nonferrous metals--from 92 to 98, boiler and furnace fuel--to 95, electric power and thermal power--up to 98 percent, etc.

Taking into account the balance of the indicators of the plan in production and distribution, the USSR Gosplan increased the number of material balances in the five-year-plan for the basic types of production to 409 compared to 234 in the 10th Five-Year-Plan. This required the additional more precise definition of production descriptions, the perfection of unit measurements, and the determination of various norms and standards.

The indicated and other measures have made it possible already in the course of the development of the draft plan for the 11th Five-Year-Plan to make available to the national economy large reserves which our economy has at its disposal.

However, the work with respect to the lowering of the norms of the expenditure of material and other resources is proceeding with great difficulty, and the goal set is not always attained. At the same time, it is precisely here that basic measures in regard to the real lowering of all types of resources can be determined. It is impossible to consider such a situation as normal, since for some types of resources the necessary growth is not attained.

In the Basic Directions of the Economic and Social Development of the USSR for 1981-1985 and for the Period to 1990, the following task is set: "To secure the most rational utilization of material, labor and financial resources as the most important **condition** for the improvement of the balance of the development of the national economy, the creation of necessary reserves, and the achievement of high final results."* In solving this task, the USSR Gosplan devotes its main attention to production developing on the basis of the achievements of scientific-technical progress. Through the plan the scientific and engineering potential of the industry and the progressive experience of the enterprises are involved. And this brings results: The accounting data show that material-intensiveness is being lowered systematically, the utilization of power and secondary resources is being improved, and manpower is being freed.

In many ministries, the process of balancing the plan is being reviewed and assessed through a process of distribution, i. e., material-technical supply, which is based, as a rule, on the norms and organization of production of today. But these are frequently high norms and great losses of resources since the designs of many machines and equipment and technological processes in our industry were created during the period of an abundance of material resources, and for this reason there is a lot of work in regard to their rational utilization.

This contradiction of the practice of planning at the level of the Gosplan and the ministries cannot possibly be solved only on the basis of the mechanical expansion of the number of balances for the production being planned and distributed, even with the wide utilization of computers. The problem is more difficult. The methods of constructing the balance calculations at the level of the USSR Gosplan reflect the interests of the national economy as a whole. They do not coincide with the traditional aspiration of the ministries and enterprises to receive, in the stage of the development of the draft plan, more resources and to understate their possibilities in regard to the development of production through their own sources. The present circumstance leads to the delay of the introduction of mathematical methods in the development of the plan, and this must not remain unnoticed in the new stage of the development of the automatic system of plan calculations.

*) "Materialy XXVI s"ezda KPSS" [Materials of the 26th CPSU Congress], Moscow, Politizdat, 1981, p 141.

The different interests of the sides must be taken into account in methodical provisions. In this case, the existing contradiction can be overcome by the following measures.

It is expedient to convert a significant part of the calculations, which are executed on the basis of common, approved methods and indicators, into mandatory ones for all participants of the planning, having established a common products list and identical units of measurement of production for the plans of production and the balances of distribution.

The non-coordination of the methodical provisions in the development of various parts of the plan distorts the picture of the real need for resources and creates an artificial production deficit. The improvement of the balance methods of planning on the basis of calculations mandatory for all participants will be conducive to the efficient utilization of material resources. Other calculations, including production capacities, can also be justified on the same principle.

However, not all calculations can be carried out with such a method. Practice shows that, for many of them, the data on plan fulfillment are lacking or arrive with great delay, and it is impossible to use them in the pre-plan period since such calculations, given the existing methods of plan development and assessment of the results of work, do not interest the ministries and enterprises. The planning will bring resultsif it proves possible to secure the active, interested participation of the enterprises in a high degree of resource utilization in the stage of the development of the draft plan. In this lies the guarantee of the balance of the state plans on all levels of production management.

The present work requires the use of norms of protracted operation which are known to the enterprises and ministries ahead of time and are immutable for the entire plan period.

It is necessary to note that for the time being this progressive form of the improvement of planning is not reflected in the economic calculation of enterprises, the assessment of the final results of their activity, and the wages of workers. Thus, the annual lowering of the norms of the expenditure of rolled stock of ferrous metals is not accompanied by a corresponding increase of the coefficient of metal utilization. In the power industry two types of norms for the expenditure of fuel are being used: Physical norms (for the limitation of fuel for production) and norms for lowering it, on the basis of which bonus payments to workers are effected for the economy of fuel. They are different. Enterprises which have made the transition to the normative method of wage planning, even in the case of the nonfulfillment of the production plan, do not experience difficulties in wages since the norm for wages is recalculated under the actual fulfillment of the program.

The significance of normative methods of management is not limited by the quantitative content of the task addressed to ministries and enterprises. Their use also carries in itself an organizational and methodical principle, which presupposes the broad participation of specialists in the development

of the draft plan on all levels of management, the maximum utilization of computer technology, and the minimum influence of strong-willed administrative decisions.

Attention must be called to the fact that the violations, in the process of planning, of a number of approved methodical documents up to the present is not regarded as an extraordinary phenomenon. Meanwhile such a situation is inadmissible. On the one hand, the economic mechanism has in its arsenal, as it were, all the necessary elements provided for in the methodical acts, but, on the other hand, it does not exert the requisite influence on the improvement of the matter in practice. The violation of the methodical provisions and the substitution of concepts in the course of their introduction signifies the violation of plan discipline and delays the initiation of new methods of centralized management that are necessary for the present stage of the development of the economy.

The further improvement of the balance work presupposes a careful selection of the products list and the improvement of the units of its measurement. At the present time its composition is extraordinarily heterogeneous: From enlarged positions to concrete types of production of a contract assortment. It encompasses production reflecting the final result of the work of an entire industry and production of an intra-industry turnover.

The more precise definition of the composition of the products list is carried out annually, but is implemented inconsistently. The chief criterion is the shortage of production. However, a system for the improvement of the balance work in terms of its production and distribution cannot be constructed on this principle.

The contemporary group and enlarged composition of every position of the plan with respect to the products list at the national economic level cannot, in the overwhelming majority of cases, exert direct influence on the production program of the enterprise. Significant work is required on the part of the ministries and the marketing organizations of the USSR State Committee for Material and Technical Supply and, what is the main thing, the direct participation of the consumers in bringing the tasks of the state plan to the contract assortment of deliveries.

Not so long ago, the technical, industrial and financial plan, in its basic section "Production Output in Physical and Value Terms", approved by the director of the enterprise, completed bringing the tasks of the state plan for production in physical terms to the direct executors. At the present time, this document is practically missing (it was converted into a five-year document and its significance in the present question was reduced). The program of production in the developed products list is formed by the super-ordinated organization, and the sale of production--by the organs of the USSR State Committee for Material and Technical Supply. Thereby the rights of the enterprise in the formation of the concrete production program, corresponding to the demands of the client, are unjustifiably limited. It is natural that, with such a system of program approval, there cannot be the requisite responsibility of the supplier to the consumer for the concrete production output.

The expansion or reduction of the centrally planned products list is not an end in itself, but a means, a method for improving planning, for the rational distribution of functions between the various links of the planning and economic organs. Because of this process the reduction of the products list that is centrally determined can take place only in the presence of the constantly increasing responsibility of the ministries, departments and enterprises for the supply of the national economy and the population with the necessary production in full assortment, and not only those types of it in whose production they are interested.

In practice this has not taken place up to now. This is the result of a number of factors. First of all, although the physical-material composition of the public product on the level of the national economic plan is given paramount significance (this thesis is taken into account in the development of all calculations in regard to production and consumption), nevertheless the control over the course of plan fulfillment and the assessment of the activity of the basic link of industry--enterprises, ministries and departments--are carried out, above all, on the basis of the value indicators of the total volume of realization (normative net production) and profit.

Secondly, the economic essence of the indicator of the total volume of realization up to now has not been clearly defined, in spite of the fact that it is included in the number of indicators being approved. The present indicator reflects only the depersonalized act of purchase and sale. However, in the new role this is not sufficient.

The indicator of the production being sold, in being approved, must fulfill the role of the instrument which links production with consumption both in the plan and in the course of its execution.

In reality this quality of the indicator did not receive the proper development: Its value essence gained the upper hand, it proved to be more advantageous to the supplier of production (money for the current account at any price) than the essence of the plan link of production with consumption, being expressed on the level of the enterprises in the mandatory fulfillment of agreements and orders for the delivery of concrete production, concluded among enterprises for the purpose of the fulfillment of the tasks of the state plan.

Thirdly, the inadequate role of the labor collectives in the development of the drafts of the state plans has come to light. It must be kept in mind that every enterprise always acts in two persons: As the manufacturer and supplier of production, and as the buyer and recipient of the production of other enterprises. The role of the enterprise in the capacity of consumer is of great interest at the present time in the process of planning the production output in physical terms. The thing is that the requirements of the enterprise as a buyer are dictated by the tasks of the state plan which it is obligated to fulfill. And here by far not everything can be regulated from above: A broad field of activity remains for the initiative of the enterprise, including also the relations apropos the shipments of products under subcontracting arrangements, the supply and sale of production. Today,

in the determination of the volume of production of articles of one sort or another, the task of the conformity of their assortment and quality to the requirements of the buyer is given primary importance, and not the mechanical increase of volumes of output already being produced. Especially important is the increase of the role of the enterprise-buyer in the determination of the concrete types of machines and equipment in the carrying out measures for saving labor, rolled stock, construction materials for their careful use. All of these are concrete measures for the intensification of production. In the manufacture of consumer products, the influence of the consumer on the supplier of production must be still more perceptible. This is why the needs of the buyer in regard to assortment, quality, and deadlines for the delivery of production, within the limits of the funds allotted to him, must be regarded as the concrete expression of the products list plan approved by the USSR Council of Ministers and the USSR Gosplan.

The forms of state planning must take into account both functions of the activity of enterprises in expanded reproduction--as supplier and as consumer. It is natural that only the equitable position of the enterprise in these types of activity will provide the possibility of fully utilizing the rights and possibilities of the labor collective in the planned process of the development of production.

It is obvious that the further work on the improvement of the planning of industrial production must to a larger extent take into account the possibilities of the labor collectives in the increase of their interest and responsibility for the final results of work, since the solution of a whole number of problems that have arisen is impossible without the participation of enterprises, where the basic mass of specialists in production management is concentrated.

In 1983 the CPSU Central Committee and the USSR Council of Ministers took a number of measures aimed at the acceleration of work on the improvement of the economic mechanism, in which a new, more responsible role is allotted to the primary link in the management of production.

The Law on Labor Collectives, adopted by the USSR Supreme Soviet, legally grants to labor collectives the possibility of becoming active and interested participants in the process of reproduction, the securing of the growth of the productivity of public labor, the increase of the well-being of the people and every worker in particular.

In the decree of the party and the government on the observance of contract agreements it is established that the nonfulfillment of concluded agreements and orders accepted for execution must qualify as a serious violation of plan and state discipline. Additional measures are envisaged for the further expansion of direct protracted economic relations; the reduction of impractical transports of goods; the improvement of the system of attaching consumers to suppliers; and the increase of the role and responsibility of the territorial organs of the USSR State Committee for Material and Technical Supply for the supply of enterprises and organizations with resources through bases, warehouses and stores, and for the extension of assistance to suppliers in the sale of their production addressed to "small" consumers.

The decree of the CPSU Central Committee and the USSR Council of Ministers on measures to expand the independence and increase the responsibility of enterprises envisages the conduct of an economic experiment in 5 industrial ministries beginning on 1 January 1984. The selection of the ministries is not accidental. The Ministry of Heavy and Transport Machine Building is typical of the output of individual and small-series production with a lengthy production cycle, and in the overwhelming number of enterprises of the Electrical Equipment Industry there is mass production. Both ministries are of union subordination. There are also union-republic ministries--the BSSR Ministry of Light Industry and the UkSSR Ministry of the Food Industry; republic industry is represented by the LiSSR Ministry of Local Industry. Thus, the participants in the experiment include enterprises of ministries which differ in terms of the character of their production, the destination of production, and forms of management. This makes it possible to accumulate within a short time the necessary experience for applying a number of fundamentally new tenets in the methods of planning, economic stimulation, and the assessment of the activity of labor collectives.

The basic task of the economic experiment consists in unifying the efforts of the central planning organs, ministries, all-union production associations, and enterprises directly for the achievement of plan indicators that would reflect the interests of socialist society.

In connection with this, the proposals for the further expansion of the economic independence of enterprises and the increase of their responsibility for the results of work are aimed, above all, at strengthening the role of enterprises in the composition and execution of the state plans, which guarantee the realization of the economic and social policy of our party. Only on this basis can a workable basis for securing the complete combination of the interests of the state and the individual enterprises be created. The experience of the advanced labor collectives, the scientific developments of Soviet scholars, and the analysis of the activity of the CEMA member countries show that this presently contradictory task can be solved under certain conditions, and they constitute the methodological essence of the economic experiment.

The following tenets were taken as initial principles for the improvement of the methods of state planning in the presence of the expansion of the economic independence of enterprises and the increase of their responsibility for the results of work: The enterprise is placed in the kind of economic, material and moral conditions under which it proves to be objectively interested in the increase of production output with minimum material, labor and financial expenditures; a limited range of indicators are approved for it, and the centralized resources, basic consumers of the production and suppliers are guaranteed; the development of ongoing production is realized by the enterprise, above all, at the expense of its own and borrowed sources of financing. The decision about the development of operating enterprises at the expense of state sources is taken by the superordinated organization; strict dependence is established between wages and the final results of production, in which society is interested. The improvement of the work of the collective

must be rewarded in accordance with firm, previously established norms; the enterprise bears material responsibility to the state, its partners and the consumers of its products for the results of its activity on the basis of cost accounting.

The realization of the indicated principles in the development of the draft plan of the 5 ministries for 1984 required the adoption of a whole series of decisions of a methodical and organizational character, the determination and application of new methods in the technology of planning. All of them were concentrated in methodical instructions. The latter were approved by the ministries with the consent of one of the central organizations--the USSR Gosplan, the USSR State Committee for Material and Technical Supply or the USSR Ministry of Finance and are binding for both sides. This made it possible, while observing the basic provisions of the experiment, to improve the relations of the ministries and organizations from the very beginning, to exclude the necessity of issuing departmental (individual) instructions, and to accelerate the output of the necessary documents and bringing them to the enterprises.

For the realization of the principle of the efficient utilization of resources at the disposal of the enterprise, the significance of the economic norms has been increased. Through them the centralized state planning influences the formation of the plans of the enterprises, and they guarantee the relations as regards production, which are binding for the enterprises and other organizations for a number of years.

In order to increase the independence of the enterprises in the selection of ways of solving the tasks of the state plan, all economic norms, from the stage of its draft, were brought down to the enterprises participating in the experiment in the control figures for 1984. At this time, the ministries communicated to them the tasks in regard to the production output in physical terms (in a group and enlarged products list), the limits of material resources and other indicators necessary for the development of the draft plan of the enterprise, the establishment of relations with the consumers of production and the suppliers of raw material, materials and component products. At the same time, the conveying of the quantitative tasks and economic norms allowed the enterprises to study the program in greater depth, taking into account the conditions of the sale of production in the assortment needed for the buyer, to determine before the beginning of the year ways of management, to select the most efficient among them allowing the securing of high wages for workers while observing the indicators of the state plan, to establish funds for the stimulation and development of production in dimensions which depend on the final results of production.

The overwhelming majority of enterprises want to lower the production expenditures, work with a smaller number of employees, increase the quantity of production, etc., but in order for part of the economic effect, in so doing, to be guaranteed to remain in the enterprise and not to be redistributed by the superordinated organization for the benefit of other enterprises, as this may happen now.

The plans of the enterprises formed in the new conditions showed that the utilization of the technology of plan composition with the broad use of economic norms in the pre-plan stage has justified itself. Within the limits of the resources allocated, its indicators proved to be more effective than the USSR Gosplan noted in the control figures, and the rates of their growth exceeded the average annual rates for the past 5 years (Table 1)

Table 1.

(1) Показатель	(2) Минтяжмаш		(3) Минэлектротехпром		(4) Минлегпром БССР		(5) Минпищепром УССР		Минместпром Литовской ССР (6)	
	1979—1983 гг.	1984 г.	1979—1983 гг.	1984 г.	1979—1983 гг.	1984 г.	1979—1983 гг.	1984 г.	1979—1983 гг.	1984 г.
(7) Объем производства	1,5	4,9	5,1	5,7	2,6	3,5	1,6	2,5	4,2	4,6
(8) Производительность труда . .	3,0	4,7	4,5	5,4	2,5	3,4	1,5	2,0	2,1	3,1
(9) Прибыль	1,0	17,3	6,9	12,4	8,6	4,5	-2,3	7,2	5,3	11,3

Key:

1. Indicator
2. Ministry of Heavy and Transport Machine Building
3. Ministry of the Electrical Equipment Industry
4. BSSR Ministry of Light Industry
5. UkSSR Ministry of the Food Industry
6. LiSSR Ministry of Local Industry
7. Production volume
8. Labor productivity
9. Profit

The expansion of the rights of enterprises in the sphere of the development of existing production at the expense of their own and borrowed funds proceeds from the necessity of finding active forms of also using engineering work in the matter of the better utilization of available fixed assets, their reconstruction and technical reequipment.

For this purpose, the role of the production development fund has been restored as a resource which the enterprise must have at its independent disposal. In connection with this, sums of the production development fund of the 5 ministries, calculated by the enterprises on the basis of capital formation indicators, have been included in the state plan. The growth of the present fund is significant--from 10 to 47 percent. But it is justified, since here, too, the principle of "earning" their own means depending on production efficiency is laid at the basis. However, the financial source of the fund, given the planned conduct of management, is still inadequate. For this reason, besides the sum of the funds, the state plan also provides a material basis for the 5 ministries--machines, equipment, construction and installation work, etc. Moreover, the forms of credit extension for the enterprises are being expanded. In this way a guarantee is secured of the relations between the state and the labor collectives in the given question.

The dependence of wages on the final results of production in which society is interested is secured through the application of the economic norms, the methods of the determination of the wage fund, and the calculations of the incentive funds, taking into account the fulfillment of contract obligations.

The economic norm for wages is calculated in such a way that it gives the right to increase the wage above the level of the preceding year only if an increase in the scales of production is secured and the labor productivity growth attained during the preceding period is not lowered. Moreover, at the basis of the determination of the norm lie the proportions of the five-year-plan with respect to the growth of labor productivity and the growth of the average wage. Thanks to this, the norm always preserves the planned proportion between the present most important indicators of the national economic plan on the level of the primary link, including under changing conditions of the fulfillment of the five-year-plan.

The experiment significantly increases the responsibility of the enterprise to the state and the population. Introduced as one of the basic assessment indicators, the indicator of realization taking into account the fulfillment of contract obligations does not mechanically stimulate the growth of production volume, but only the growth of that part of it which is needed by the consumer.The increase of the role of the pre-plan period in the development of the production program taking into account the orders of consumers provides the foundation for such a requirement. The system of the assessment of the activity of the collective and its bonus payment are aimed at this: In the case of the full fulfillment of the contract obligations, the material incentive fund increases by 15 percent, in the case of non-fulfillment it decreases by 3 percent for every percent of the frustration of deliveries. The measure is strict, but justified since every enterprise is simultaneously a supplier and consumer, and only on this basis can discipline in deliveries be raised.

The analysis of the results of the preparatory period in regard to the conduct of the economic experiment revealed a number of items which must be carefully assessed in the development of the draft plan for 1985 and additional measures be taken.

Thus, the objective necessity came to light of beginning the work on the draft plans in the enterprises much earlier than this is being done now--a task whose solution also requires the introduction of some changes in the composition of the plan in the superordinated organizations.

Practice has shown that significant efforts are necessary in the training of management personnel of a certain part of the enterprises. Today by far not every manager is capable of taking upon himself the responsibility of the formation of a production program, the determination of the magnitude of funds, labor and other indicators. The habit of many years to receive instructions in regard to the organization of production, the introduction of new and progressive ideas from above finds expression here. The tardiness of necessary changes in the system of material-technical supply and the absence of guarantees in the sale of production which has a limited market created

in the pre-plan period additional difficulties that are unusual in this stage of plan development. The conditons of the experiment brought to light these and other shortcomings already in a stage when many enterprises could be given a certain amount of assistance, i. e., before the beginning of the economic year.

At the same time, some managers, not having completed work in the preparatory period on the organization of production in the new conditions and not having included in it the entire labor collective, have begun to demand individual, increased economic norms, justifying this by exceptional circumstances and conditions that differ from other enterprises of the industry. Such conditions exist. However, economic norms cannot be changed since they are calculated for the industry, proceeding from the proportions of the state plan. The difficulty of the use of common norms for such enterprises consists in the character of production, its technical and organizational level, the degree of specialization, and the quality of production. The ministries and the all-union production associations must extend assistance to these enterprises. Technical, material, financial assistance, i. e., effective assistance, calculated for the steady work of the enterprise in the future, and not linked to the correction of the plan, which does not produce any effect in the conditions of the experiment. Assistance may be extended for a year or two, but the economic norms must be common for the system as a whole, otherwise the dependent approach to the utilization of resources cannot be overcome already in the stage of the experiment.

Other weak aspects in the methodological and organizational plan were also brought to light. Thus, many enterprises take the view that the stimulating operation of economic norms would be significantly stronger if they were established not for two years, but for a longer period of time. This places before the USSR Gosplan and other organizations the task of approving norms for 1986-1990 at the moment when the control figures for 1985 are conveyed.

A principle which contradicts the experiment is the preservation of procedure of the annual mechanical reduction of administrative-management personnel, since the economic norm for wages forces and encourages them to work with a smaller number. In these conditions, the enterprises solve the task of personnel reduction with a glance to the next period and not proceeding from the conditions of the experiment, which limits its possibilities.

The preservation of advance deliveries instead of contract relations for some types of production for the first quarter and the first 6 months of 1984 also caught the attention of the enterprises and delayed their initiative in the development of the production program and other parts of the plan. At the same time, direct protracted economic relations which are conducive to the solution of this problem do not receive sufficient development in the experiment. In practice they are replaced by the so-called "long-term attachment" of suppliers and consumers to one another. The question must be about the progressive form of production relations, and not relations in regard to supply. In the new conditions of the development of the draft plan, direct long-term economic relations help to relieve the central planning organs, the ministries and all-union production associations from an enormous flow of paper,

bring the specialists of the supplier enterprises and the consumer enterprises closer together on the production, and not on the supply and marketing basis, and give many the possibility of concentrating to a greater extent on the development of the draft plan. In the presence of approved economic norms and direct long-term relations organized by way of the planning procedure, the process of the formation of the production program can practically be the continuous and creative business of specialists on all levels of management.

The use of the indicator of production sold, taking into account the fulfillment of the contract obligations, best organizes the relations of suppliers and consumers as regards the sale of production. In these conditions the role of the territorial organs of the USSR State Committee for Material and Technical Supply must grow, which can execute the function of the large consumer of production for the enterprises receiving it in small quantities. This measure will sharply reduce the number of consumers, improve the transportation of freight, and be conducive to smooth production work.

Taking into account the fact that the rights and the responsibility of enterprises are inseparably linked with their role in public production, i. e., above all with the scales of production, the further strengthening of the basic link of industry and the concentration of production, i. e., measures to improve management, are necessary.

The large-scale economic experiment which has begun in enterprises, the ministries and central planning organs, must assist the creation of a more perfect economic mechanism in industry.

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FURTHER IMPROVEMENT OF SUPPLY CONTRACT SYSTEM URGED

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[Article by M. Karpunin, candidate of economic sciences; and A. Kas'yanov, candidate of economic sciences: "Strengthening Supply Discipline" under heading: "Improving the Economic Management Mechanism"]

[Text] Increasing the efficiency of socialist production will continue in the future to depend on improving the economic management mechanism. At the February (1984) Plenum of the CPSU Central Committee, K. U. Chernenko noted: "The contemporary material and technical base and the management system should take on new and better qualities."[1]

Recently the party and government have taken measures aimed at improving management, strengthening discipline in socialist labor, expanding the rights of production associations (and enterprises) in planning and management activities, increasing their responsibility for labor results, stepping up scientific and technical progress, and further developing creative initiative among workers.

Measures aimed at meeting supply contract obligations play a special role in the activities named above. In April 1983 the CPSU Central Committee and the USSR Council of Ministers adopted a decree "On Serious Shortcomings in Adherence to Supply Contract Obligations and Increasing the Responsibility of Ministries, Departments, and Enterprises in this Matter." This decree emphasized that with the contemporary scale of production and extensive specialization and cooperation, strong economic ties and strict observance of quotas for supply of goods by enterprises and organizations, both in terms of the set volume and variety, are important conditions for the further development and effective functioning of the national economy as a whole and of all its sectors. Special emphasis was placed on establishing a closer correlation between the fulfillment of supply obligations and evaluation of the results of associations' (or enterprises') economic activity.

One must look at the history of the problem in order to evaluate fully the difference between the system in force at the majority of associations and enterprises today for evaluating fulfillment of contract obligations and the system that is to be used under the conditions of a new economic experiment.

The idea of establishing a correlation between the size of incentive funds and the extent to which supply contract obligations are met emerged quite some time ago. In the mid-1970s the USSR State Planning Committee, the USSR State Committee for Material and Technical Supply, and the USSR Central Statistical Adminstration recognized the expediency of introducing a new system of economic incentives for meeting supply contract obligations in terms of the assigned products list and assortment. A proposal was made that the volume of goods actually sold, which was at that time a fund-forming indicator, be reduced by the sum of goods that went undelivered. Enterprises and higher organizations turned out to be unprepared for this innovation--production plans were not balanced with material and technical supply plans and they were not coordinated with the available production capacities and manpower resources. Therefore, introduction of the proposed system for accounting and evaluating the enterprises' activities on a unionwide scale was postponed, so that it could be tested on an experimental basis between 1974 and 1976.

In December 1976 the USSR State Planning Committee, the USSR Ministry of Finance, the USSR State Committee for Labor and Social Problems, and the All-Union Central Council of Trade Unions confirmed the Basic Provisions for the formation and expenditure of incentive funds during the 10th Five-Year Plan, according to which economic incentive funds of associations and enterprises called for in the financial plan should be reduced by at least 1 percent for every point that the sales plan goes unfulfilled, taking into account the fulfillment of quotas and obligations for supply of goods. When contract obligations are not met, additional deductions for the economic incentive fund should not be made.

Beginning in 1978, the formation of incentive funds at production associations (enterprises) and the awarding of bonuses was made dependent on the degree to which supply contract obligations are fulfilled. Ministries, in conjunction with the USSR State Committee for Material and Technical Supply, confirmed the maximum percentage for subordinate associations and enterprises, beyond which management personnel were totally denied any bonuses. For some production collectives this maximum percentage was set at more than 10 percent. Full bonuses were paid only when 100 percent of contract obligations were met. When the failure to meet all supply obligations was below the maximum percentage, the bonus decreased according to a scale established by the ministry in conjunction with the central committee of sectorial trade unions. For example, in the Ministry of the Electrical Equipment Industry when up to half of the maximum percentage of the sales plan went unmet, taking into account supply contract obligations, the bonus was reduced by one-third and the maximum reduction in the bonus was 70 percent. This system applied to other engineering and technical personnel and white collar workers who had an influence on the fulfillment of contract and order obligations.

As a result of inadequately based norms for reducing funds because of supply shortfalls, in addition to establishing high maximum percentages and benefit scales for bonus cuts, the measures that were taken did not have a substantial effect on strengthening adherence to supply contracts. There was practically no change in the status of fulfillment of supply contracts and orders between 1978 and 1981, evidence of which can be seen in the following data (see the table).

Year	Plan Fulfillment (percent) Total volume of industrial goods sold	Sale of industrial goods, taking into account contract obligations
1978	100.9	97.5
1979	100.7	96.6
1980	101.2	96.7
1981	100.3	96.7

In accordance with the decree issued by the CPSU Central Committee and the USSR Council of Minsters on improving the economic management mechanism (1979), as of 1 January 1983 the new "Instructions for a system to calculate fulfillment of supply quotas and obligations in accordance with contracts when evaluating the activities and economic incentives of production, supply and sales, and commercial associations, enterprises, and organizations" have been in effect; according to these instructions, the conditions for evaluating economic activities have been changed substantially. For example, the maximum limit for failure to deliver goods was reduced to 2 percent (and in exceptional cases, to 3 percent); when this limit is exceeded the management personnel of industrial enterprises and material and technical supply organizations do not receive any bonuses at all. Furthermore, the USSR State Committee for Material and Technical Supply confirmed a list of the most important types of products for which management personnel receive bonuses only when there is 100 percent fulfillment of the supply plan.

It was also established that production collectives who have permitted contracts and orders to go unfulfilled may not be awarded prizes when the results of All-Union and republic-wide socialist competition are summarized. These same conditions were extended to supply and sales organizations under the system of the USSR State Planning Committee, the USSR State Committee for Supply of Production Equipment for Agriculture, the All-Union Agrichemical Services to Agriculture Scientific Production Association, and to wholesale trade enterprises.

The measures that have been taken have strengthened the orientation of production collectives at industrial enterprises toward meeting supply contract and order obligations, the level of fulfillment of which in 1982 and 1983 was 97.1 and 97.8 percent, respectively, as opposed to 96.7 percent in 1981. However, not even these results can be considered satisfactory. The December (1983) and February (1984) Plenums of the CPSU Central Committee directed the attention of managers at all levels of administration to this fact.

With the aim of further strengthening adherence to supply obligations it is necessary to establish and use an indicator for goods sold taking into account the fulfillment of contract obligations, and to define its place in an over-all evaluation of the economic activities of production collectives. Today the activities of associations and enterprises are evaluated on the basis of fulfilling and exceeding the plans for increasing production volume, labor productivity, profit (or reducing production costs). Deductions for the economic incentive fund are made on the basis of fulfilling and exceeding these

fund-forming indicators, and then corrections are made taking into account the fulfillment of contract and order obligations.

The existing system orients production collectives toward fulfilling the plan in terms of overall production output (or sales or normative net production) and in terms of the output of the most important types of products in physical terms. Under these conditions the indicator of goods sold that takes into account supply contract obligations takes second priority, even though fulfillment of this indicator is reflected directly in an improved balance in production plans and better satisfaction of the national economy's demands and the people's demands for specific types of goods. This situation is confirmed by the fact that today over 80 percent of the enterprises not fulfilling plans for the supply of goods under contracts are meeting the plan for total sales. For example, in 1982 the Belgorod Chemical Machine Building Production Association fulfilled its plan for total sales by 100.5 percent; and when contract obligations were taken into account, the fulfillment was 92 percent. This did not, however, prevent the association from forming an economic incentive fund of 474,000 rubles, justified by its success in exceeding other indicators.

The evaluation of the fulfillment of supply contract and order plans is not fully coordinated with enterprises' activities to produce the most important type of products. The latter indicator includes, as a rule, a grouped products list since the product sales indicator that takes into account contract obligations describes the structure of goods delivered in an expanded assortment.

There is evidently no need to preserve the evaluation of activities and the payment of bonuses to production collectives on the basis of two indicators used for the same purpose even in those sectors not included in the experiment. In our opinion, preference should be given to the indicator for fulfillment of supply contract and order plans, as has been done at enterprises operating under the new conditions. The composition of the indicator for product sales taking into account the fulfillment of contract obligations is also in need of more precise definition. It is now determined in a simplified manner. The planned volume of product sales is supposed to be equal to the supply plan. By subtracting from it the sum of goods called for by contracts and orders that went undelivered, one obtains the actual value of this indicator. It is possible that its value turns out to be higher than the actual volume of products sold. Let us suppose that the planned volume of product sales is 50 million rubles, with the actual volume of products sold totalling 45 million rubles and a shortfall in goods delivered of 1 million rubles. In this case the degree of fulfillment of the product sales plan, taking into account contract obligations, is 98 percent, while the plan for over-all sales was fulfilled by only 90 percent.

The time has come to determine a system for calculating the supply plan. Apparently, it should include the value of products under contracts that have been signed and other planning documents for the supply of goods.

The supply plan, in turn, should serve as the basis of the production plan. Each products list position in the plan should be determined according to the following formula:

$$T = O_n + P - O_k,$$

where T is the output of goods, in number of items;
O_n is the surplus of goods at the beginning of the period, number of items;
P^n is the volume of goods supplied under contracts and orders, number of items;
O_k is the surplus of goods at the end of the period, number of items.

It seems that there should be a more definite connection between prompt fulfillment of contracts and the size of incentive funds. The existing system for calculating the fulfillment of contract obligations, based on the cumulative total since the beginning of the year, makes it possible for some production collectives to interrupt deliveries over the course of the year and then at the end of the year, after making up for these shortfalls, they can still make the full contributions to the economic incentive funds. It seems to us that it would be wise to take into account the sum of undelivered goods for which compensation is made later when determining the degree of fulfillment of contract obligations over the course of a year, partially taking into account the time it takes to compensate for the undelivered goods. For example, when they are supplied 3 months later, the sum of goods that went undelivered would be calculated to be 75 percent; 6 months later, the sum would be 50 percent; and 9 months later, 25 percent. Supply contract obligations would be considered to be totally met only in the case of stable delivery of goods over the course of the entire year, within the deadlines set down in the contracts.

An innovation in strengthening adherence to supply contracts is the system for evaluating the activity of sectors that on 1 January 1984 were made part of a large-scale experiment to expand the rights and increase the responsibility of enterprises for their labor results. In accordance with the conditions of the experiment, during the course of the fulfillment of enterprises' annual plans, the absolute amount of deductions for the economic incentive fund decreases depending on the sales plan, taking into account obligations for the supply of goods under contracts that have been signed and orders that have been accepted. For each percentage point that the supply plan goes unfulfilled, for example at associations and plants of the Ministry of Heavy and Transport Machine Building and the Ministry of the Electrical Equipment Industry, the economic incentive fund will be reduced by 3 percent. When all contract conditions are met, the economic incentive fund should increase by 15 percent (which was not the case previously). This increase will be made by using part of the profit that remains at the disposal of production associations (or enterprises), or by reducing payments to the budget. The state not only applies sanctions with regard to undisciplined suppliers, it also grants privileges to production collectives that ensure the uninterrupted work of their commercial partners.

The majority of enterprises under the Ministry of the Electrical Equipment Industry have implemented additional measures to improve intra-plant planning, and to coordinate the activities of all services and production subdivisions, orienting them toward strict fulfillment of contract obligations. Taking into account the specific characteristics of electrical equipment production, this

is not an easy task. For example, the "Vatra" Production Association imeni the 60th Anniversary of the Soviet Ukraine in Ternopol annually produces about 4.5 million lamps of 135 different types and 735 different type sizes and over 10 million different starter-regulating devices; and it has about 2500 customers. The association developed a "Provision for an accounting system for the receipt, formulation, and fulfillment of economic contracts" and a standard for "Controlling the delivery of goods," which present a functional matrix of operations for the fulfillment of contracts and the types of documents that are drawn up; deadlines are set and specific individuals responsible for meeting the deadlines are identified. A great deal of attention is given to prompt processing of customers' orders, plan drafts, information on the sale of consumer goods at trade fairs, to prompt signing of contracts, practical control over their fulfillment, and organization of smooth-flowing production.

A standard on "Ensuring smooth-flowing production" has been introduced at the association, according to which the association's services assign shops estimates for equipment workloads and capacities, the necessary quantities of materials and finishing articles, instruments, and accessories, and manpower resources. There is regulation of the organization of operations for dispatching finished goods, which includes filling out orders for transportation equipment, organizing goods in terms of the freight flow directions, filling out shipping documents, calculating and analyzing the fulfillment of supply contracts, etc.

A system for evaluating the quality of performance and economic incentives in subdivisions is also aimed at fulfillment of contract obligations. For example, the coefficient of labor quality in production subdivisions increases by 0.1, or 10 percent, for fulfilling the plan for an extensive product mix (or component mix); for improving the production regularity coefficient the labor quality coefficient increases by 0.03 or 3 percent for each point of improvement; and for fulfilling the shipping plan with a growing total since the beginning of the month, the labor quality coefficient increases by 0.01, or 1 percent for each day. When planned indicators are not fulfilled, "negative" standards go into effect. For example, the labor quality coefficient for the sales department is reduced by 0.02, or 2 percent, for failure to sign a contract on time.

In connection with the shift to the experimental conditions, the effectiveness of these indicators was analyzed and many of them were defined more precisely. Substantial corrections were made in the bonus system, and an accounting and analysis of the movement of finished goods in warehouses were worked out and are being implemented, in addition to practical control over the formation of an order portfolio, and fulfillment of plans for shipping goods to each consignee.

Similar measures are being implemented at the Leningrad "Elektrik" Plant imeni Shvernik, the Novosibirsk Heavy Electrical Machine Building Plant imeni the 60th Anniversary of the USSR, the Kursk "Elektroapparat" Production Association, the Chebokary Electrical Instrument Plant, the "Riga Electrical Machine Building Plant" Production Association, the Novokramatorsk Machine Building Plant imeni V. I. Lenin, and other enterprises. All the production associations and plants in sectors involved in the experiment are implementing

these measures. Considerable efforts, which should be long-term and stable in nature, are needed to achieve coordinated interaction among all the subdivisions.

As the first results of the experiment show, increasing economic responsibility for failure to fulfill supply contract obligations and the organizational work done at enterprises have had a positive effect on indicators of economic activity. In January and February 1984 the Ministry of Heavy and Transport Machine Building fulfilled 99.9 percent of the deliveries called for in contracts and orders, as opposed to 96.9 percent in 1983; the same indicators for the Ministry of the Electrical Equipment Industry were 97.1 and 93.7 percent, respectively. If in January and February 1983 the proportion of production associations and enterprises that completely fulfilled all supply contract and order obligations accounted for about 30 percent of the total sales under the Ministry of Heavy and Transport Machine Building, it is now over 60 percent; and in the Ministry of the Electrical Equipment Industry these figures are 19 and 35 percent, respectively.

It is not enough, however, simply to organize intra-plant operations properly in order to set up stable economic ties. It was noted at the December (1983) Plenum of the CPSU Central Committee that "supply discipline depends not only on enterprises, but on the operation of material and technical supply and transportation agencies, and all administrative links that are called on to ensure the uninterrupted and regular flow of the production process. Each of the participants in this process who fails to meet contract obligations should be called to account in accordance with his responsiblity for the violation."[2]

During the course of preparing the experiment, several factors were uncovered that influence late fulfillment of contract obligations by enterprises of the electrical equipment industry and heavy and transport machine building.

These factors primarily involve planning. The desire of central departments to take on the functions of detailed current planning of development of sectors and enterprises prolongs the time needed to formulate and confirm plan quotas for basic technical and economic indicators, including the products list, and this has an effect on their quality and balance. Up until now with the existing planning system it has not been possible to overcome the "disjointedness" of the time periods for confirming quotas in terms of the products list of finished goods and the formulation of supply contracts with deadlines for allocation of funds for the material resources needed to manufacture these goods. This leads to a situation in which materials and finishing articles are ordered for the first quarter of the next plan year, as a rule, on the basis of previous years. Materials ordered for specific products (rolled metal, in particular) start arriving only at the beginning of the second quarter, which in turn is reflected in the adherence to delivery schedules for finished goods.

Evidence of this can be seen in data from enterprises operating since 1 January 1984 under the conditions of the economic experiment. Of all the issues raised by enterprises of the Ministry of Heavy and Transport Machine Building and the Ministry of the Electrical Equipment Industry during the first quarter of 1984 before central planning agencies, 60 percent involved requests for speeding up

the delivery of raw materials, supplies, finishing articles, and other resources at the expense of funds allocated for the second and subsequent quarters. Taking this into account, the quantity of the most important types of products included in the products list of the USSR State Planning Committee should be reduced to a minimum. It seems that there is hardly any need to include different types of electrical and power equipment, and other equipment for electric power stations on this list if the USSR State Planning Committee will determine precise deadlines and the number of power blocks being put into operation. All the power equipment, finishing articles, and procurements should be delivered to the customer in accordance with norms regulating deadlines and the complete delivery of goods.

At a meeting with voters on 2 March 1984, comrade K. U. Chernenko said, "We should, without a doubt, strengthen centralized management and planning and strive to make them more effective and flexible. We need to arrange things in such a way that statewide economic agencies are directing all their efforts toward resolving issues that are of key importance for the country. Lower organizations, either sectorial or local, can certainly take on some of these concerns."[3] With regard to the question of the time periods for informing enterprises of plans, practice has shown that a month and a half before the beginning of the new year is not enough time. Lack of clarity in assignments and in providing the necessary resources makes it impossible for enterprises to sign contracts with customers on time, and to prepare for production of new goods, or for small-series and custom manufacturing. Under these conditions the consumer often has no influence on the supplier's production plan, and is placed in what amounts to a subordinate position.

In our opinion, it would be expedient to shift work now being done during the third and fourth quarters to the first quarter of the year preceding the year for which the plan is being made; this applies to the work that is done to clarify the demands of the national economy and accordingly, the quotas of the five-year plan for the products list of manufactured goods for the next plan year, in cooperation with the supply and sales components of the USSR State Committee for Material and Technical Supply and All-Union associations and enterprises, and the plan quotas for producing articles on an extensive products list. During these same time periods it is necessary to allocate funds for materials and finishing articles, the production of which is limited by a shortage of production capacities or other reasons.

The proposed measures would make it possible for ministries to summarize in the second and third quarters products list quotas coordinated among subordinate enterprises, and to develop and coordinate with the USSR State Planning Committee and the USSR State Committee for Material and Technical Supply drafts of plans for all basic technical and economic indicators; and during this same period supply agencies could issue fund orders for goods, the production of which is planned for the coming year. In turn, the enterprises could sign contracts for the supply of goods, as well as for materials and finishing articles received before 1 December of the year preceding the year for which the plan is being made.

The development of the intermediary functions of regional agencies of the USSR State Committee for Material and Technical Supply would do a great deal to

promote the introduction of this kind of system. Today there is incomplete implementation of measures aimed at converting enterprises to direct, long-term economic ties; guaranteed complete supply of material resources for enterprises and construction projects through regional agencies of the USSR State Committee for Material and Technical Supply; expansion of services for preparation of goods for industrial consumption to enterprises in the system of the USSR State Committee for Material and Technical Supply; and so on. We cannot say that the situation in 1982, when less than 4 percent of the 400,000 orders and assignment plans issued by the Metal Production Main Administration involved direct ties between the supplier and customer, is normal.

Quite a few examples can be cited of economically expedient commercial ties that had been formed but were later broken by the State Committee for Material and Technical Supply, as a result of which there are greater losses from poorly organized transport of cargo. For instance, the Kursk "Akkumulyator" [storage battery] plant up until recently obtained monoblocks from a rubber equipment plant located in the same economic region. Now the plant obtains monoblocks from Siberia. The Saransk "Svetotekhnika" [Lighting Engineering] Production Association obtains cables from Tomsk Oblast, and thyristors and valves from Tallinn, even though similar articles are produced by enterprises located in the Volga-Vyatsk economic region.

With the aim of improving direct, long-term economic ties between large associations and enterprises, it would be wise to establish quotas for ministries and departments for the proportion of goods supplied by means of such ties when developing the plan for the next plan year and for the five-year plan as a whole. In this case the supplier-ministries and the buyer-ministries would agree between themselves on a list of partner-enterprises and the assortment and volume of goods supplied by them for a five-year period, which could be adjusted in annual plans. This system would lead to a gradual reduction in the proportion of goods distributed through centralized channels, and it would increase the efficiency of economic activity significantly.

Direct, long-term economic ties should be established only between enterprises engaged in mass and large-series production, and also when custom-made equipment is supplied under individual orders. In all other cases the USSR State Committe for Material and Technical Supply and its agencies could act as intermediaries in relations between the supplier-enterprises and the consumer-enterprises. They should be active intermediaries, with a network of large mechanized warehouses, subsorting depots for metals, cables, bearings, and instruments, with railroad spur tracks, the necessary materials handling equipment, all-purpose reusable packing materials, a motor vehicle pool, and shops and enterprises for primary processing of materials.

Regional supply and sales administrations should also act as buyers of goods which are needed in small quantities by a large number of consumers; they should be consignees and dispatchers of goods of this type, but not a retailer of these goods for numerous consumers. This measure would help conserve packing materials, it would free up warehousing facilities, and it would help regulate relations between enterprises and transportation organizations. With the aim of increasing the efficient utilization of rolling stock, the Ministry of Railways is setting limits on the frequency with which cargo is sent along

various routes, and it is requiring that containers be filled and that small batches of freight be packaged. It would be much simpler to resolve all these issues if regional agencies of the State Committee for Material and Technical Supply performed the role of buyer.

This approach would help establish specific economic responsibility among transportation departments for late allocation of railcars and containers, and for failure to meet contract deadlines for dispatching goods and delivering materials and finishing articles.

The interests of the suppliers should also be protected in the proper way, if the production collectives putting out goods that customers want deliver the goods within the set period of time. It often happens that enterprises fill customers' orders but do not receive their money on time and they end up in a difficult financial situation. According to the decree issued by the CPSU Central Committee and the USSR Council of Ministers on improving the economic mechanism (July 1979), the USSR State Bank and the USSR Bank for Financing Capital Investments can extend 60-day loans to buyer-enterprises that are experiencing temporary financial difficulties to help them pay their bills. However, as experience shows many customers do not manage to meet the deadline and they lose their credit for violations in their economic and financial activities. In these situation it makes more sense to grant a loan to the supplier to pay for the goods that were delivered, rather than to the buyer. Here it is important to see that the buyer or the organization to which it is subordinate make prompt interest payments to the bank on the loan.

Instructions on the system for calculating fulfillment of supply contract obligations are not being spread, for example, to power supply and repair enterprises. There is hardly a need to prove that in order to ensure the planned production output it is necessary to provide enterprises promptly with electrical power, thermal power, water, and other power services, and to perform repairs on equipment and other fixed capital in a timely manner. Enterprises use contracts and orders to report on the production of new articles, but no such reporting system has been established for repair work. It seems that the time has come to spread the system for evaluating the activities of production collectives, taking into account supply contract obligations, to power supply and repair enterprises. This would make it possible to increase the adherence to supply obligations in all links of the national economy, and in the final analysis to increase production efficiency and accelerate the rate of economic development in the country.

The task of making further improvements in economic mechanism with regard to increasing adherence to supply obligations is not limited to the problems described here. Still unresolved are questions of control over the authenticity of demands made by various customers for resources; practical reorganization of economic ties with the appearance of fundamentally new technical solutions that change the character of goods being produced and the structure of materials and finishing articles needed for their production; cost accounting responsibility of higher agencies for actions that bring economic losses to subordinate enterprises; and a number of other issues.

The economic experiment being conducted in a number of ministries to expand the rights of enterprises and increase their responsibility for labor results should provide an answer to some of the questions described here. The resolution of the other issues should be a current goal of economic science and practice.

At a meeting with voters on 2 March 1984, comrade K. U. Chernenko pointed out: "Practical verification will make it possible to move from the research stage to confident forward progress. But of course, comrades, the search for and introduction of the new should occur not only at enterprises included in some experiment or another."[4]

Apparently, it makes sense to establish the same economic responsibility and incentives for fulfillment of supply contract obligations for all enterprises that supply raw materials, other supplies, and finishing articles to sectors operating under the new conditions. This would make it possible to verify the treatment of various questions in the economic experiment at enterprises of other ministries and departments as well.

FOOTNOTES

1. "Materialy Vneocherednogo Plenuma Tsentral'nogo Komiteta KPSS 13 Fevralya 1984 goda" [Materials on the Special Plenum of the CPSU Central Committee 13 February 1984], Moscow, Politizdat, 1984, p 16.

2. Cf. "Materialy Plenuma Tsentral'nogo Komiteta KPSS 26-27 Dekabrya 1982 goda" [Materials on the Plenum of the CPSU Central Committee 26-27 December 1983], Moscow, Politizdat, 1984, p 13.

3. K. U. Chernenko, "Narod i Partiya Yediny. Rech' na Vstreche s Izbiratelyami Kuybyshevskogo Izbiratel'nogo Okruga g. Moskvy 2 Marta 1984" [The People and the Party Are One. Speech Given at a Meeting with Voters of the Kuybyshev Electoral District, Moscow], Moscow, Politizdat, 1984, pp 10-11.

4. K. U. Chernenko, op. cit., p 12.

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COMPUTERIZATION OF ACCOUNTING LAGGING IN UZBEK SSR

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[Article by E. Mirzakhmedov, director of the Uzbek branch of the USSR VGPTI, CSB, candidate of economic sciences: "Vital Tasks in the Automation of Calculation and Accounting"]

[Text] In the 1970s our industry sharply increased its output of computer technology and, in order to implement the new technology a planned capacity basis was required which would provide all the links of the national economy with projects for the comprehensive mechanization of bookkeeping calculation (KMBU). In this connection, the decision was taken to create, within the system of the USSR Central Statistical Board, an All-Union State Planning and Technology Institute for the Mechanization of Calculation and Computation Work (VGPTI). It is charged with goals involving the execution of new projects for the KMBU, the improvement of operating machines and the planning of computer centers for collective use, which must comprise the core of the technical base created in the country for the automated system of state statistics.

In order to speed up the process of improving this important division in the sphere of national economic management, branches of the VGPTI were set up in the provinces, including some in our republic.

During the past 10 years of its existence, the Uzbek branch has done planning work for 27 ministries and departments of the Uzbek SSR, the Ministry of Civil Aviation and the Central Statistics Board, totalling more than 3 million rubles.

Since we are a subdivision of the Central Statistics Board, we first of all accomplish work in connection with standard projects involving data processing of state statistics for the primary subdivisions of our computer system--the rayon IVTs. The second group of our clients comprises the centralized bookkeeping of budget organizations of the republic ministries of public health, education, social security, culture and trade, as well as Tsentrosoyuz, Gosstrakh and Stroibank. The third group of clients includes agricultural enterprises--kolkhozes and sovkhozes, while the fourth comprises industrial enterprises equipped with machine calculating stations. Finally, we serve all enterprises and organizations that require, in the execution of projects,

the processing of bookkeeping account data on computers of every type, regardless of the departmental affiliation of the VTs which will use the goal and subsystem plans of bookkeeping accounting.

At first glance, the volume of work that we accomplish seems impressive. However, if we evaluate the quality and timeliness of statistical accounting, then there are still, so to speak, a whole host of obstacles in the way of the introduction of KMBU.

In the first place, the existing terms for the presentation of accounts in party and soviet organs are still long. To what does this lead? Managers most often find out about existing shortcomings or hidden reserves so late that they are no longer in a position to intervene and correct the situation. Thus, for example, the ministries present the Central Statistical Board of the republic with the cumulative yearly accounts of the costs of commodity production (form 1 s) on 25 January. The year has passed. Someone ruined the plan with regard to this index, and nothing can be done about it.

In the second place, up to 8 percent of accounts are received for processing at the Republic Information Computer Center of the Central Statistic Board after the prescribed time limits. The systems of the republican ministries of construction, light, cotton-cleaning and food industries, fruit and vegetable growing and highways account for their productive activities with delays of 10 to 20 percent for their enterprises. The length of the delays for quarterly and annual accounts fluctuates between 5 and 20 days.

In the third place, there are many errors in accounts. Their total error rate is 1.7 percent for monthly accounts, 3.5 for quarterly ones and 5.3 for annual accounts. In order to expose the errors, inform the oblast VTs computer systems of the Central Statistics Board about them, eliminate them in place and communicate the corrections, it is understandable that several days must be spent.

These shortcomings reduce the effectivenvess of the national economy's management on all of its levels.

It is obvious that the automation of the primary account with an attendant improvement of state accounting is the cardinal way to eliminate the above-mentioned shortcomings. It is important to realize too that otherwise we lose the informational security of the optimization tasks which are being accomplished today in all functioning VTs. For the manual collection and preparation of the initial data for such tasks inevitably entails a few errors which computers cannot always eliminate without entering additional information.

Keeping in mind the aims of reducing the costs of projects and raising their quality, since 1982 the VGPTI has converted to executing standard project solutions (TPR), having established a sectoral fund of algorithms and programs for this purpose. The execution of a project on the basis of TPR reduces the time for its output by 30-70 percent and reduces the costs by 15-80 percent.

Regardless of the obvious merit of planning on the basis of TPR, each specific client (at the level of an enterprise or association) does not wish to take on the additional costs connected with the standardization of a project, but, on the other hand, is quite willing to conclude an agreement on the attachment or introduction (whichever is cheaper) of an already tested project.

Due to the fact that the most tangible effect of planning standardization is achieved on the sector level, it is expedient for each of their ministries and departments to determine the leading objects as base ones for execution by TPR, the deadlines and order of priority of attachment and introduction of KMBU projects in the other objects and the sources of financing. The work proceeds more rapidly in this way.

Thanks to the introduction of progressive planning technology, the Uzbek branch attained third place in terms of labor productivity in the VGPTI system. The growth of our output by 8 percent outstrips salary increase, while the percent of overhead expenses is the lowest in the institute.

Our branch has come out in favor of the proposal to organize feedback from the Central Statistics Board subdivision to the enterprises of the national economy. It is planned to organize it on the basis of micro- and mini-computers and yes computers which operate in the Central Statistic Board's computer system. The processed primary computer data will be accumulated in the accounting base (long-term computer memory), on the basis of which the "System of Economic Analysis of State Statistical Data" will function. The system must be implemented in three stages.

First, the accounts data received from enterprises and organizations undergo processing by statistical analysis, the aim of which is to give an estimate of the pace of production by means of an important number of work indices and by the level of fulfillment of indices reached compared to the accounting base and the planned goal.

In the second stage, the data transmitted are combined with analogous indices of the accounting base, and the dynamics of each of them is analyzed with statistical methods of processing time series.

In the last stage, quantitative interconnections appear in the aggregate of accounting indices and yield estimates for the volume of work attained.

By virtue of the proposed system, there is a material expansion of analytical indices and evaluations without an increase in labor expenditure on the collection of unnecessary information. Enterprises and organizations will receive the feedback from the Central Statistics Board offices in the form of statistical analyses of data presented by them. Finally, both party and soviet organs, as well as the enterprises themselves, will utilize precisely the same analytical data issued by the Central Statistics Board. This will provide them with comparability and will ease interaction through joint preparation of measures to improve the quality and increase

the volume of production output. The project will be executed in a standard form appropriate for any republic and aimed at the information support of the republic automated system of management.

A serious obstacle to a rapid pace of introduction of KMBU in the national economy of the republic consists in the lack among many clients (kolkhozes and sovkhozes of the ministries of agriculture and fruit and vegetable growing, centralized bookkeeping offices of the ministries of public health and national education, etc.) of administrative, material and moral stimuli to the mechanization of bookkeeping accounts.

For enterprises, institutions and organizations, it is imperative to include the introduction of KMBU without fail in their annual state plans in the section "New Technology" (on the line "Mechanization of Labor Intensive Processes"). There will then be both responsibility for fulfilling the plan according to nomenclature and a corresponding bonus for the introduction of new techniques and technology. It is precisely in this way that there was rapid introduction of KMBU into the centralized bookkeeping office of the Yangul city public health division.

At the present time, the technical base and the staff are ripe for conversion from the traditional technology of bookkeeping accounts, that is from the mode of packet processing of data in VTs to their processing in the mode of time, that is immediately after the completion of all those operations which pertain to the registration by the system of initial accounting. The new system will reflect, at any given moment of time, the whole course of production, the presence of finished products and the financial condition of the enterprise, as well as issuing all data necessary for high-effective production management. The introduction of the system will greatly ease the work of bookkeepers and will give them the possibility to engage in deeply analytic work and the search for hidden reserves. We are already prepared for the implementation of such systems, but the cost of their planning is several times higher than that of a fully-formed system of bookkeeping accounts, their complexity and labor intensiveness are considerably greater and the standards of their implementation are lacking, which, of course, restrains the beginning of their implementation.

The accumulation of experience in the introduction of ACS and the development of computer technology open more and more new possibilities in the improvement of KMBU and state statistics. Specialists at the branch see as their goal the utmost increase of effectiveness of executed projects, the improvement of data processing technology and the reduction of computer work costs.

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