



**Raising
the Efficiency
of Socialist
Economic
Management**

● 2 2 2 2
● 4 4 4 4 4 4
● 3 3
● 7 7 7 7 7 7 7
● 1 1 1 1 1 1

● 5 5 5 5
● 1 2 2 2 4 4 4 4
● 2
● 7 7 7 7 7 7 7
● 0 0 0 0 0 0

Boris Gubin, M. Sc. (Economics)

Raising the Efficiency of Socialist Economic Management

S. HARRISON

Novosti Press Agency Publishing House
Moscow, 1973

CONTENTS

Preface	5
Raising Managerial Efficiency—A Key Consideration of Economic Policy	7
Centralised Management and Local Initiative . . .	31
The Objective Foundations of Production Manage- ment	44
Improvement of Production Management Systems	57
Management and Economic Cost Accounting . . .	73
Concentration and Centralisation of Production and Management	86
The Economic Reform and Its Effectiveness in Im- proving Managerial Systems	94
Summary	110

PREFACE

For centuries, human society developed spontaneously. Today, when an advanced socialist society has come into being in the Soviet Union, and the material and technical basis of communism is being built successfully, the national plan has become the cornerstone of its entire development. The progressive socio-economic system established in the USSR makes possible planned direction of all social life along scientific lines. This has become possible because in the socialist state, for the first time in world history, the interests of individuals striving for a higher standard of living and cultural advancement are in harmony with the objective processes of social development, and with the interests of society as a whole. The unity of objective and subjective factors which has arisen on this basis enables society to direct consciously, not only production, but also social and cultural processes in order to ensure an all-round, harmonious development of all its members, and the fullest possible satisfaction of their reasonable material and cultural requirements.

As society advances towards communism, the volume of production expands at an increasingly rapid rate. Under these conditions, qualitative changes take place in the economic structure, and social processes become more complex. Therefore

the function of management assumes particularly great importance. This is due to a change in the major factors of economic growth. Instead of the qualitative factors, such as an increase in the labour force and the construction of new enterprises, the enhancement of production intensity becomes decisive.

On the other hand, one can make the most of the intensification factors only through improving the entire system of economic organisation and management, bringing the managerial apparatus into line with the modern requirements of material production.

Under the impact of the current scientific and technological revolution, the questions of increasing the efficiency of production and management, and improving the quality of production have acquired prime importance in the Soviet economy. The advance of the national economy is being increasingly determined by this revolution which stimulates the priority development of new progressive industries which are of decisive importance for the entire economy and for raising labour productivity. Therefore an analysis of the efficiency of various elements of production, primarily management, is of particular interest.

The economic efficiency of any enterprise or any branch of production is not only the immediate result of their activity but also the overall result of the functioning of the economy as a whole. Under socialism efforts to raise production efficiency and accelerate technological progress have always been a matter of concern for the entire nation. The growth of labour productivity today means primarily the raising of the efficien-

cy of collective labour by using the immense advantages inherent in the socialist mode of production.

The present work, based on an analysis of vast theoretical and factual material, deals with the essence of the socialist system of economic management and its fundamental distinctions from the capitalist methods, and demonstrates the effectiveness of the socialist principles of economic management. It also discusses the basic tendencies for the improvement of the system of Soviet economic management and analyses problems involved in increasing managerial efficiency.

RAISING MANAGERIAL EFFICIENCY—A KEY CONSIDERATION OF ECONOMIC POLICY

The Soviet Union's achievements in the economic sphere and socio-political field are well known. Having created an advanced socialist society, the Soviet Union has entered a period of all-out construction of the material and technical basis of communism. The building of communism is a difficult task without precedent in history. Communist society is the first society based on planning. Therefore, one of the principal tasks facing the socialist state is to organise efficient management of the economic processes.

Managing the economy, both in the USSR and in any other socialist country, means organising economic activity of the governing bodies according to a single economic plan. Moreover, this means not only promoting the development of individual branches of the economy, as is the case under capitalism, but directly organising and guiding the country's entire economic develop-

ment. Expressing the interests and will of the working people, the Soviet state directs the development of material production in conformity with the basic economic law of socialism, which consists essentially in the fullest possible satisfaction of the material and cultural needs of all members of society.

Production management as a function of the state arose simultaneously with the emergence of the socialist state and has been developing steadily ever since. But as the productive forces grow and relations of production develop, the forms and methods of organising economic management are changed, improved, and brought into line with the new requirements of economic development. Therefore, improvement of the mechanism of economic management is considered in the USSR one of the most important features of the entire economic policy, and questions of management were paid very close attention at the 24th CPSU Congress. The Congress discussed and analysed in detail a wide range of questions and took decisions which would still further increase the efficiency of socialist production. The need to improve planning, which the General Secretary of the CPSU Central Committee, L. I. Brezhnev, described as the core of the management of the entire national economy, was re-emphasised at the Congress.

Management has always been one of the most involved aspects of human endeavour, but never before has so much been demanded of it as in the USSR today. This is because socialist production is continually growing, its scale is widening, and its structure being improved, and this demands changes in the organisation of the management

of material production. And this is only a part of the story. Improvement of the managerial system is one of the most important ways of raising production efficiency. The attainment of high efficiency of social production is central to the entire economic policy of the Soviet state. And economic efficiency of material production implies a rational use of manpower, and of the means and instruments of labour.

When clarifying the term "efficiency of social production" and the factors contributing to its enhancement, account should be taken primarily of the socio-economic nature of production. It is obvious that the interpretation of efficiency in capitalist production, for which maximum profit is the main goal, is inapplicable to the socialist economy. Under socialism the term "efficiency of social production" can be defined only in relation to the character of the economic laws of socialism.

The starting point in assessing the efficiency of production is the degree of conformity of production results to the requirements of expanded socialist reproduction both for the quantity and quality of products determined according to plan for a given period of time. The resources of society are not limitless; therefore a growth of output is impossible without reducing expenditures of materialised and direct labour per unit product. Hence the definition of the term "production efficiency": the better the results achieved at minimum cost the higher the efficiency of production.

The Soviet economy is developing on the basis of selecting optimum variants of production, optimum rates and sectoral proportions, and the

best managerial systems. The criterion of maximum national income can be used as the universal criterion of production efficiency, since the growth of the national income is a major factor for ensuring expanded socialist reproduction and a further raising of cultural and material standards.

Greater efficiency of the managerial system is essential for increasing production efficiency. The efficiency of a managerial system is reflected in the results obtained and in the economy of its operation. The results show how effectively a system copes with the tasks set, and the economy of operation depends on the expenditures involved in maintaining this system.

Economic efficiency is invariably a source of profit for a definite class. It is known that the capitalist relations of production give rise to an irreconcilable contradiction between the high efficiency of individual enterprises and tremendous losses of social labour in general. In this situation private employers stand to gain from it, and the mass of the working people to lose. Since such phenomena are legitimate for capitalist society, capitalist economists have no choice other than to examine economic efficiency on a narrow plane, from the viewpoint of the current profits derived by businessmen.

In a chase after maximum profits at all costs, it is impossible to ensure the rational utilisation of available resources for the benefit of the entire society. This goal is not set at all in capitalist society. The principal economic law of capitalism is the law of maximum profit. This is what determines the character and aim of capitalist production. For capitalists, high profit means every-

thing. Millions of unemployed, underproduction, and huge losses of labour and of machine time mean nothing.

The content and orientation of economic efficiency under socialism are determined by the aim of socialist production. As already noted, this production is intended to meet the rapidly growing material and cultural requirements of all members of society. The founder of scientific socialism, Karl Marx, stated that only socialism and communism afforded possibilities for maximally efficient management of the economy.

Economic growth under capitalism depends on the intricate and contradictory interaction of the unguided forces of cyclic development, on scientific and technological progress which causes structural changes in the economy, and on government interference in economic affairs. The major factor of economic growth is not a purposive plan but unguided motive forces. In this connection, the analysis of the main tendencies of modern capitalism made at the 24th CPSU Congress is of special interest. L. I. Brezhnev, in his report to the Congress on behalf of the CPSU Central Committee, said: "The features of contemporary capitalism largely spring from the fact that it is trying to adapt itself to the new situation in the world."

Capitalism is not developing in the new situation but is adapting itself as illustrated by the following example. Over the past few years, a tendency towards stimulating technological progress and using its results in the interests of the monopolies has been clearly in evidence. But society as a whole gains nothing at all from this. Only the monopolies make wide use of the

achievements of the scientific and technological revolution to promote the concentration of production and reinforce their position, to raise the efficiency and rates of development of new industries and, in the final analysis, to intensify the exploitation of the working class.

The development and improvement of management in socialist society assume particularly great importance because better management secures the best results in material production with a minimum expenditure of labour, means and materials. Management plays the part of the organising element in the conscious application of economic laws, while ability to handle the "mechanism" of their operation depends on the degree of maturity of the socialist economy.

The aims and tasks of social development under socialism are determined by the fundamentally new nature of the relations of production based on public ownership of the means of production, and it has become necessary and possible, for the first time in history, to govern socio-economic processes along scientific lines. Here it is in place to recall the Marxist-Leninist thesis on the decisive role of economic interests in social development. The classics of Marxism-Leninism have repeatedly emphasised that social interest can be satisfied only through the activities of economically separated collectives. Hence the need to secure conditions under which what is beneficial to society must be beneficial to an enterprise and to every individual worker. In the broader sense, this thesis formulates the problem and essence of economic management under socialism. In its approach to this question, the CPSU and the Soviet Government observe

the Leninist principle that the transition to communism should be effected not only through enthusiasm but also on the basis of personal interests of working people. For this purpose, objective economic laws are taken into account in planning economic development in the USSR.

During the initial period of building the Soviet economy, shortly after the Civil War of 1918-1921, Lenin confidently predicted that the Soviet state would quickly overtake other states in the level of economic development.

Developments have borne out the correctness of this prediction. The rapid progress of the Soviet economy has now brought its level of production close to that of the USA, the best-developed capitalist country. In 1950, Soviet industry produced the equivalent of less than 30 per cent of the US industrial output, whereas by 1966, the figure had risen to 60 and by 1972 to 75-80 per cent.

The world has been greatly impressed by Soviet scientific and technological achievements, particularly by the launching of the first artificial earth satellite, the world's first space flight by the Soviet citizen, Yuri Gagarin, and the flights of automatic probes to Mars. These accomplishments epitomise the economic, scientific and technological achievements of the Soviet people. They have contributed greatly to the fundamental change in the world balance of forces in favour of socialism. "The Soviet economic challenge" is the subject of heated debates among capitalist economists. They assess it, naturally, from the position of their class. This is what led to the propaganda clamour about "Soviet expansionism," "the Soviet threat", etc. Such allega-

tions are clearly meant to intimidate the peoples of the world by the imaginary danger of "Sovietisation." When stripped of the propaganda trimmings, the ideas of capitalist theoreticians are seen in clearer relief. They are definitely worried not by Soviet "expansionism" but by the Soviet economy being more dynamic than capitalist economy and by its tremendous potentialities for a still faster growth.

In his report to the 24th CPSU Congress on the Party directives for the ninth five-year economic development plan for 1971-1975, the Chairman of the USSR Council of Ministers, A. N. Kosygin, stated that "at every stage of its development the Soviet economy has clearly demonstrated its incontestable advantages over the capitalist economy... Our country's steady advance is expressed above all in the rate of its economic growth, and in the rapid build-up of its production potential. Here are the data for the past period, 1970 inclusive.

"It took the USA 20 years to double its national income, Britain over 30 years, the FRG nearly 15 years, and the Soviet Union, with its vast scale of social production—10 years.

"It took the USA 18 years to double its industrial output, Britain 22 years, the FRG over 11 years, and the Soviet Union—8.5 years...

"Such are the strides of the socialist economy. They provide convincing evidence that our economic development is balanced and dynamic. None of these capitalist countries has an economy that is as dynamic."

Thanks to the advantages of the socialist economic system and the scientific elaboration of the strategy of economic development, the social-

ist countries are far ahead of the capitalist world in the production growth rates. From 1951 to 1969, industrial output in the socialist community increased 580 per cent, whereas in the advanced capitalist countries it grew only 140 per cent. Over the same period the share of the socialist countries in world industrial production practically doubled and at present has reached almost 40 per cent.

The average annual rates of growth (in percentages) for the basic indicators of economic development in the USSR and the USA for the 1951-1970 period are given in the table below.

Basic indicators	USSR	USA
National income	8.7	3.5
Industrial output	10.1	4.1
Agricultural output	4.1	1.7
Capital investments	9.7	2.6
Labour productivity in industry	6.3	3.0

In the USSR, a solid basis has been built for carrying out the main task of economic development for the 1971-75 period: to ensure a further considerable rise in the material and cultural standards through achieving high growth rates in socialist production, raising its efficiency, promoting scientific and technological progress, and accelerating the growth of labour productivity. The plans for developing the Soviet Union, outlined in the Directives of the 24th Congress of the CPSU for the Ninth Five-Year Economic Development Plan of the USSR for 1971-1975, are conclusive evidence of the steady growth of the so-

cialist economy. Over the five-year period, industrial output is to grow 42-46 per cent, and labour productivity in industry—36-40 per cent. Electric power generation is to increase to 1,030-1,070 thousand million kilowatt hours, oil extraction is to reach 480-500 million tons, and steel output—142-150 million tons per year.

The table below presents figures illustrating Soviet achievements in improving the working people's well-being and what will be done in this field in the 1971-75 period.

Economic indicators	Increase, per cent		
	Directives of 23rd CPSU Congress for 1966-1970	Fulfillment	Directives of 24th CPSU Congress for 1971-1975 (percentage of 1970)
1. National income	38-41	41	37-38
2. Per capita real income	approx. 30	33	approx. 30
3. Average earnings of factory and office employees	not less than 20	26	20-22
4. Collective farmers' income in cash and in kind from public economy	average of 35-40	42	30-35
5. Grants and benefits to population out of public consumption funds	not less than 40	more than 50	40

The Soviet national economy has large production assets estimated at over 420,000 million

roubles. Even one per cent increase in their efficiency can effect a considerable rise in the output without additional capital investments. One of the major factors of a more intensive use of production assets is an efficient system of production management.

Boosting by all means the efficiency of social production has become of paramount importance as one of the major factors for ensuring high rates of economic growth and for raising the standard of living. "The crux of the problem is to achieve a substantial increase of output and of the national income per unit of labour and material and financial inputs," L. I. Brezhnev said in his report to the 24th CPSU Congress. The possibilities for increasing capital investments and the labour force employed in production, which fall short of the rapidly growing requirements of the national economy, must be widened through a better use of the available economic potential and the country's total resources.

The role of scientific and technological progress is steadily growing in Soviet economic development. In the period from 1950 to 1960, 61 per cent of the increment in the gross industrial output was secured by raising labour productivity, whereas the figure for 1970 was 84 per cent. In such industries as instrument making, electrical engineering, etc., more than 25 per cent of the rise in labour productivity between 1966 and 1970 was obtained by improving the organisation of production and introducing scientific methods of management. In the 1971-1975 period, it is planned to secure 80-85 per cent of the total increment in the national income by increasing labour

productivity. The role of technological progress in boosting production is thrown into bold relief by the fact that in the USSR greater efficiency of machines and equipment is achieved, not by intensifying labour, but by updating technology and equipment, by improving labour organisation, and by introducing scientific methods of management.

The growth of labour productivity in the 1971-1975 period will be equivalent to an increase in manpower by 11-12 million workers. The total saving of manpower in 1975 will amount to 35 million man-years.

The current stage of technical advancement of Soviet production is characterised by a replacement of many types of machines by new, more advanced automatic machines on a rapidly expanding scale. The fast pace of this process is illustrated by the fact that, in 1970, 58 per cent of all capital investments was channelled into technological re-equipment and the reconstruction of already operating enterprises in the USSR as compared with 35 per cent in 1960. Important qualitative changes will take place, not only in equipment, but also in production technology, and in materials used in industry. There will be a substantial increase in the manufacture of machines for mechanising and automating production processes, particularly arduous and labour-intensive operations. With this in view, intensive work has been started in the field of comprehensive mechanisation and automation of production processes. In the 1971-1975 period the asset-to-man ratio in industry is to increase by 50 per cent and the power-to-man ratio, by 30 per cent. The proportion of new assets (in terms of value) is

to increase by 10 per cent over the last five-year-plan period.

To carry out these plans, automatic lines are being widely introduced in Soviet industry and their manufacture is increasing steadily. The output of automatic lines for the engineering and metal-working industries alone grew from 10 units in 1950 to 295 units in 1967. In 1950, 650 types of new machines and equipment were developed, whereas in 1970, the figure was 3,007 plus 1,032 new instruments.

At present, more than 90 per cent of power-consuming processes in Soviet industry are aided by electricity while power consumption per worker grew from 10,000 kwh in 1960 to 22,000 kwh in 1967, an increase from 6.25 to 13.5 h. p. per worker. Taking the power-to-man ratio in 1913 as equal to 1, in 1970 it was 42 times that of 1913.

The increase in the power-to-man ratio under socialism leads to a fundamental change in the very nature of labour. It is asserted in the West that technology in its social aspect means one and the same thing everywhere. This is applied both to the West and the socialist world. Such views, however, are fundamentally wrong. The social consequences of automation under capitalism and socialism are different. Under capitalism, new technology leads to intensification of labour and aggravates unemployment. Socialism, for the first time in history, has provided the possibility for constructive uses of technology in the interests of the working people, not only for multiplying material benefits for all members of society, but also as a powerful lever for developing social relations. In socialist society, the economic effectiveness of mechanisation, automation and

advanced technology means not only a considerable increase in technical facilities available to labour, a sharp rise in the efficiency of equipment, and the reliability and continuity of production processes but also an improvement of working conditions and labour safety. Here is one striking example. In four years of the eighth five-year plan (1966-1970), the economic effect obtained through improving the equipment and using advanced technology in light industry in the Ukraine was 71 per cent greater than the combined costs involved in these measures.

Technological progress and the widening scope of production greatly increase the importance of scientific organisation of managerial work in socialist society. The planned development of the economy, and the economic reform now being implemented in the Soviet Union, which is changing substantially the relations between industry and higher managerial bodies, lend special topicality to the problem of improving management. Under these conditions, the make-up of the aggregate worker* is changing markedly owing to the growing number of managerial workers. For example, the proportion of operatives to the total industrial personnel in 1964 remained at the 1928 level of 83 per cent, whereas in 1970 it decreased to 81 per cent. At the same time, the proportion of engineers and technicians grew from 3 per cent in 1928 to 10.5 per cent in 1965, and to 12 per cent in 1970. Some economists believe that with acce-

* According to the Marxist-Leninist definition, the aggregate worker is not simply a factory hand operating a machine-tool but the entire personnel engaged in production in one way or another—operators, engineers and technicians, office employees, managers of varied rank.

leration of technological progress this process will develop at a rapid pace and that in conditions of comprehensive mechanisation the ratio of workers to engineers and technicians will be 1:1. This is perfectly feasible. For example, in the US atomic industry the ratio of engineers and technicians to other workers has already reached 1:1. In 1970, Soviet industry had 4.9 million engineers, technicians and office employees, with growing numbers of specialists with a higher and secondary education joining production every year.

According to estimates by Soviet specialists, the possibility to increase the labour force employed in the national economy is already limited in the ninth five-year plan period. This is due primarily to an increase in the percentage of able-bodied population employed in the national economy. In 1970, it reached almost 92 per cent as against 66 per cent in 1940. It follows from this that a continued rapid growth of the Soviet economy will be secured mostly on the basis of technological progress and efficient production organisation, particularly management. These factors of raising labour productivity are acquiring paramount importance nowadays.

As production develops, the proportion of administrative and managerial personnel inevitably grows. The question, however, is how rapidly it grows. At present, the USSR has much smaller numbers of employees in the managerial sphere than the USA. In the USSR, about 15 per cent of the gainfully employed population work in the managerial sphere, whereas in the USA the proportion of managerial personnel has reached 25

per cent, and in Japan, 20 per cent. In the 1941-1970 period, the numbers of engineers and technicians employed in the Soviet national economy increased by 720 and 1,220 per cent respectively. The total number of specialists with a higher education grew by 440 per cent. Most engineering and technical personnel in the USSR are engaged in research and development. A certain percentage, however, are employed on managerial jobs in production. To regulate the rates of growth of the administrative and managerial personnel, the Soviet government periodically implements measures to improve the managerial structure.

Today, production management is developing into a specific profession which requires special training. The efficiency of economic management largely depends on the qualifications of the personnel—their training, skills and general education. In 1970, about 17 million specialists with a higher and special secondary education, including 1,443,000 economists, were employed in the Soviet national economy. In the past few years, the proportion of economists has been growing at a faster rate than the total number of specialists. For example, since 1957, the number of specialists with a higher education has increased by 70 per cent, whereas the number of economists has more than doubled. In 1971, the total number of economists reached 1.8 million, which was 62 per cent more than in 1965. This makes it possible to substantially improve the staffing of managerial systems and the economic services of ministries, associations and individual enterprises.

At present, an important problem is the development of the non-productive sphere. The rapid

expansion of this sphere in the major capitalist countries is a complicated and contradictory process. For example, in the period from 1953 to 1968 the total number of employed in the United States grew by 17 million, including 16 million in the non-productive sphere, i. e. the latter accounted for 94 per cent of the total increment. A tendency towards expansion of the non-productive sphere is observed in the USSR as well, but to a lesser extent. The growth of the non-productive sphere under socialism presents a progressive trend in the development of the national economy—one towards an increase in the number of workers in the health services, the public education system and in the consumer-oriented services.

In the capitalist countries, the enormous, wasteful growth of the non-productive sphere is connected with the inflation of the bureaucratic state machinery, increased expenses on marketing due to chaotic production and heavy market competition, militarisation of the economy, etc. In the 1930s, 20-30 per cent of the labour force were employed in the non-productive sphere; today's figure is 40-55 per cent.

The tendency towards an expansion of the non-productive sphere is legitimate in principle. The question boils down to the structure and rate of expansion of this sphere. The hypertrophied development of the circulation sphere under capitalism can hardly be appraised favourably. For example, in France the number of industrial employees increased by 1.5 per cent over the 1962-1968 period, while the total personnel of banking institutions and the administrative agencies grew by 14 per cent. In 1965, Britain

had 3.4 million employees in the circulation sphere, i.e. 31 per cent of the total labour force employed in the non-productive sphere.

The planned regulation of the productive and non-productive spheres under socialism permits a more rational solution of this problem. The table below illustrates the progressive tendencies of change in the structure of employment in material production and in the non-productive sphere in the USSR.

	1940	1960	1970
	(percentage of total employment)		
Branches of material production	88.3	83.0	77.4
Non-productive sphere including:	11.7	17.0	22.6
health services, physical culture, public education, culture and art, science and scientific services	5.9	11.2	15.2
other non-productive services and government agencies	5.8	5.8	7.4

With the continued growth of socialist production and the development of the scientific and technological revolution in the Soviet national economy, the proportion of the population employed in the health services and public education tends to increase steadily. This is a progressive tendency. From 1940 to 1970, the number of factory and office workers employed in the Soviet national economy increased by 160 per cent, whereas the number of employees in the health

and social security services increased by 220 per cent over the same period, and in science and scientific services, by 790 per cent.

The purposive change in the structure of the gainfully employed population indicates only the general tendency in the planning of the distribution of labour reserves among different branches of the economy. The increase in the number of workers employed in the spheres of public education, science, culture, and health care in the USSR is a factor contributing to the all-round advancement of the working people. This process is directed also according to a plan. An example in point is the experience in social planning, which is fairly effective. For instance, at the "Svetlana" industrial association in Leningrad, a social development programme has been drawn up. It aims to improve the socio-economic and professional structure of the personnel, to reveal the influence of scientific and technological progress and economic reforms on social changes in the personnel structure, to improve working and housing conditions, to promote the health of the workers and raise their cultural standards and technical skills.

Considerable progress in social planning has been made in the Leningrad optico-mechanical association. The measures taken there to mechanise and automate production have substantially improved the character of work and raised general and technical standards. At the same time, about 800 general labourers were relieved of their hard manual work and improved their qualifications. At the same time, both associations mechanised engineering and managerial work, using computers. They solved the fundamental

problems of technical, economic and day-to-day production planning, which enabled them to go over to setting up a comprehensive automated system of management. The introduction of a scientific system of organising production, working operations and management at the latter association alone saved over 4 million roubles.

It is important to note that optimum work and recreation regimens were drawn up and introduced on the basis of psycho-physiological research. On the recommendation of psychologists and physiologists, the organisation of work and safety engineering facilities were improved on the flow lines. The number of specialists with a higher and secondary education employed at the association increased by 20 per cent. The general educational level of the personnel rose. In 1965, 600 out of every 1,000 employees of the association had a higher, secondary or 8-year education; in 1969, the figure grew to 710. After implementing a comprehensive programme of organisational, technical and social measures in the period from 1966 to 1970, the workers' average monthly earnings increased by 27 per cent, those of machine-tool operators, by 40 per cent. The social and cultural outlays doubled.

In a socialist society, the state plans and the plans of individual enterprises are not forecasts, nor are they wishful thinking, but directives backed by financial and materials reserves. These planned directives provide both for general and specific economic, technical and organisational measures the implementation of which ensures a steady growth of production efficiency on a nation-wide scale, improvement of all the aspects of the social life of collectives of employ-

ees, of their standards of living, and of their working conditions and recreational facilities, and provision of still greater opportunities for an all-round development of personality. The social development plans are becoming an effective instrument for stimulating vitally important processes within production collectives.

Improvement of the managerial system in the USSR contributes not only to greater production efficiency but also to greater awareness of their duties by individual workers and large collectives, and the creation of an atmosphere of genuine socialist cooperation, collectivism and comradeship. A well-balanced development of personality, provision of favourable conditions for heightening a sense of duty in all the members of society, and the cultivation of a communist attitude to work are some of the major tasks of management. Improvement of managerial systems on a nation-wide scale contributes to a further development of the masses' initiative.

New and extensive opportunities for developing technical ingenuity are opened by raising the general educational level and qualifications of the working people. The most massive expression of scientific and technical ingenuity in the USSR is rationalisation and invention. The number of rationalisers and inventors in the USSR was in excess of 3.6 million in 1970, while the savings yielded by inventions and rationalisation proposals in the national economy amounted to some 2,700 million roubles. Today, one out of every nine workers in Soviet industry is a rationaliser.

As the economy grows, the changes in the organisational forms of management at different levels do not occur automatically. Sometimes the

forms of labour organisation lag behind pressing requirements and begin to retard the further development of technology, failing to ensure its full utilisation. Technology is the most mobile element of production, and it usually develops faster than the forms of organisation of labour and management. This dictates the need for perfecting the forms of management to bring them into line with the standards of the technological facilities.

In this field, the decisive role is played by the mechanisation and automation of managerial work. This process is developing very rapidly in the USSR. According to data of the Central Statistical Board, seventy new types of instruments and computers for the mechanisation and automation of engineering, technical and managerial operations are now being developed every year in the USSR.

For example, from 1965 to 1967, the manufacture of capital goods increased by 20 per cent throughout the country, and that of computing machines, by 70 per cent. In 1969, the manufacture of instruments and machinery for industrial automation increased by 14 per cent, that of computers, by 30 per cent. By the end of the ninth five-year-plan period, i. e. in 1975, the output of business machines will be 10 times what it was in 1970.

The wide application of computers in managerial work is a general tendency in the development of modern production. However, the planned character of this process under socialism gives it great advantages. It is so far difficult to forecast the effect on a world scale of the application of computers, but the fact that its influen-

ce will be great is unquestionable. At present, there is a view that a broad, universal application of computers and the realisation of the ideas of cybernetics and information theory will make it possible to develop an entirely new system of production, just as the invention of the machine and its use in production gave rise to a factory system never known before.

An extensive programme for the introduction of computers into the management of the national economy has been drawn up in the Soviet Union. It is planned, in particular, to set up a network of automated managerial systems for enterprises, associations and individual industries, and, in the not-too-distant future, of an integrated system for the country as a whole. In 1971-1975, it is contemplated to develop more than 2,600 automated managerial systems. An example in point is provided by light industry where automated managerial systems are to be set up at 31 enterprises in the 1971-1975 period. In all, about 900 computers are to be installed at light industry enterprises and organisations.

In discussing the economic aspects of introducing automated managerial system, it is necessary to note the social consequences of transition to a qualitatively new management of production. The new principles of management involve a tremendous expansion of man's creative ingenuity now that he has been relieved by sophisticated automatic machines of the need to perform many mass-scale repetitive auxiliary operations. In addition, the use of computers eliminates the influence of subjective factors on the quality of decisions taken, and makes possible an optimum management of production.

Analysis of the economic results produced by the introduction of the first series of automated managerial systems in individual industries indicates that they ensure a 2-2.5 per cent increase in production, and make it possible to reduce the managerial staff of ministries and departments by 6-8 per cent, to cut down the volume of information by 19 per cent and to improve the quality of planning considerably.

Investigations confirm that the application of computers in the supply and marketing sphere will make possible a more accurate determination of the demand for capital goods, faster processing of information concerning the demand for various products, and a 70-80 per cent reduction in the paper work connected with supplies. A scientifically grounded pattern of links between consumers and suppliers will make it possible to reduce annual transport expenditures by 80-100 million roubles and the volume of goods transportation by 1,000 million tons.

The use of computers in designing work cuts the time required for designing by 99 per cent. It is expected that the introduction of automated managerial systems will, in the foreseeable future, bring about the release of 2.3 to 3.3 million industrial workers and will make possible a reduction in the managerial personnel of ministries and departments of 150-220 thousand. Technological progress produces a change in the structure of aggregate labour, leading to an increase in the volume and role of managerial work. Increased efficiency of managerial work has an immediate effect on the development of the entire social production. However, the character and results of this influence are fundamentally different

under capitalism and under socialism. All arguments, however sophisticated, adduced to disprove this simple truth do not hold water, and there is ample objective evidence to support this assertion.

CENTRALISED MANAGEMENT AND LOCAL INITIATIVE

Under socialism, the socialised character of production has raised management to a new plane, adding to it a vital social content. Production management in the USSR is not only a planned organisation of cooperation among producers, but it also reflects the mutual relations among members of a collective as producers enjoying equal rights and performing closely interconnected, though different, functions within the framework of a common assignment.

The need to develop relations of friendship and cooperation in a collective is an important task facing business managers acting on behalf of and in the interests of the entire collective, and at the same time under its control in attaining production targets. This major distinction of socialist production management was defined by Lenin as the principle of democratic centralism, whereby one-man command is combined with the extensive creative activity of the working people. The principle of democratic centralism is the foundation of socialist production management.

As socialist society develops, the need for centralised management of the economy increases. Centralised management ensures the unity, interconnection and interaction of numerous branches of the national economy closely linked with one another and constituting the country's giant pro-

duction organism. Soviet industry contains more than 49,000 large enterprises, while in agriculture there are 35,000 collective farms and 16,000 state farms. For every collective to function normally, the general state plan stipulates not only which goods and in what periods to produce, to whom and at what price to supply, but also all the questions of material and technical supply, financing, manpower supply, etc.

Modern capitalism has also led to a huge-scale socialisation of production. The headquarters of every monopoly examines the demand for its products, distributes capital investments among its enterprises, implements a uniform technical policy, organises joint research and development, general book-keeping, etc. However, actual planning under capitalism is limited by the size of the monopoly and ends at the borders of the spheres controlled by other monopolies, other enterprises, with which it is to compete rather than cooperate.

Under capitalism, the tendency towards centralisation is manifested in an expansion of the sphere of general state regulation of the economy, in government programming, etc. In this connection, J. Bernal wrote that for all their obvious disapproving attitude towards the Soviet Union, the governments of the capitalist countries have started imitating its planning schemes.

Of course, it is not so much a matter of "imitation" as the newly-emerged objective necessity for trying the methods of general state regulation to mitigate cyclic depressions and chronic crises. These attempts, however, are bound to fail. In the conditions of capitalist society, general government programming has the character

of a recommendation and cannot eliminate the anarchy of development and other deep-rooted diseases of capitalist production.

Modern capitalism is not what it was in the 18th and 19th centuries. It is no longer the capitalism of free competition, local stock exchanges, and direct connections between producers and consumers. It is the capitalism of the last third of the 20th century with an unprecedented level of socialisation of productive forces and with highly developed state monopoly relations. However, as long as the means of production are privately owned and are not the property of society as a whole, the economic role of the capitalist state will remain limited. The state is unable to establish control over the entire economy, particularly over Big Business; on the contrary, the state itself is controlled by Big Business.

Under socialism democratic centralism is the basic principle of managing socialist production. Lenin defined the essence of democratic centralism as follows: "Centralism, understood in a truly democratic sense, presupposes the possibility, created for the first time in history, of a full and unhampered development not only of specific local features, but also of local inventiveness, local initiative, of diverse ways, methods and means of progress to the common goal." (V. I. Lenin, *Coll. Works*, V. 27, p. 208.)

The principle of democratic centralism has an objective economic basis—socialist public ownership of the means of production. It is this ownership that has provided the conditions for and given rise to the need for economic management on a nation wide scale. The unity of the entire

production organism dictates the need for a unified centralised system of management.

Democratic centralism in economic management ensures well-balanced functioning of all the spheres of social life and planned direction of the national economy from a single state centre. At the same time, it encourages the initiative of local economic agencies with a view to fulfilling the general state economic development plan, and the active participation of the working people in socialist production management. The main content of the principle of democratic centralism in production management is the combination of centralised planned management of the national economy as a whole with the extensive economic independence of every individual enterprise, the combining of the principle of one-man authority with collective management, administrative directives with the activity and initiative of the working people.

Lenin pointed out that the management of social production was impossible "without definite leadership, without precisely establishing the responsibility of the person in charge, without the strictest order created by the single will of that person. Neither railways nor transport, nor large-scale machinery and enterprises in general can function correctly without a single will linking the entire working personnel into an economic organ operating with the precision of clock-work." (V. I. Lenin, *Coll. Works*, V. 27, p. 212).

This does not mean, however, that any manager invested with one-man authority by the state and society is not accountable for his actions to anyone. Quite the contrary. Every manager is responsible to society and to his collective both for

the successful fulfilment of the state plan targets and for the methods of management used in attaining them.

Here, naturally, the principle of capitalist management based on the maxim, "The end justifies the means," is inapplicable. Socialist management is based on the most rational methods of organising labour and production together with great concern for production and office workers.

The development of democratic centralism is a two-sided process. First, it is improvement of centralised planned management, and second, it is the development of democratic principles in local production management. Democratic centralism is the basis for state direction of the economy according to a single national economic plan.

Lenin repeatedly pointed out that the building of socialism meant the building of a centralised economy directed from a common centre. He persistently advocated the centralising of economic life on a nation-wide scale and maintained that the common state centre should be given the right directly to control all enterprises of a given industry. He repeatedly emphasised that centralised management was necessary for uniting the efforts of the working people for more successful management of the means of production on a nation-wide scale. Renunciation of centralised direction would automatically make it impossible to develop the economy according to plan, and lead to the loss of this most important advantage of the socialist economy.

As full masters of the means of production, the Soviet people are vitally interested in a continued growth of the economy. That is why they take

part in production management with great enthusiasm. Taking into consideration the specific features of individual branches of the economy, economic regions and enterprises, and a flexible approach to the solution of general and special problems in every field of production would have been impossible without the creative participation of the people in economic development.

Putting forward the principle of democratic centralism in the management of the national economy, Lenin opposed it to two extremes—bureaucracy and anarchy. The founder of the Soviet state contemplated the building of an economic system that would be truly democratic, and would develop the ingenuity and initiative of the people. Bourgeois theoreticians, however, see only one alternative—“bureaucratic centralism” or anarchy, which is either misunderstanding or deliberate distortion of the essence of democratic centralism. Soviet experience, and the many years’ practice of other socialist countries have demonstrated the effectiveness of the principles of democratic centralism in economic management.

It goes without saying that an optimum combination of centralism and democracy, one-man authority and collective management are the important and difficult questions of organising management. A proper correlation of centralism and economic independence, by its very nature, requires a specific approach. It is not something that can be reduced to a stereotype. Under certain historical conditions, it may become necessary to increase centralisation, as was the case, for example, during the Civil War and the Second World War. However, it would be wrong

to assume that such centralisation can be applied automatically to all the stages of socialist construction. On the other hand, market anarchy cannot be allowed to play havoc with the socialist economy. This would mean the abandonment of socialist positions. Commodity-money relations under socialism are based on common public property. Development is regulated by a plan, and production has a direct social character, and is only corrected in the process of marketing manufactured goods. In contrast to the capitalist market, the socialist market is immune to the influence of ungoverned forces. The socialist market is not only regulated but is thoroughly studied and organised on a plan basis by the central government bodies of the country.

As shown by the experience of the USSR and other socialist countries, correction of the correlation between centralisation of economic planning and the degree of extension of the rights and responsibility of local agencies and enterprises, effected in the course of economic reforms has proved sufficiently effective. With a correct correlation between the principles of centralism and democracy, every enterprise, in fact every “cell” of the socialist economy, operates successfully in full conformity with the nation’s interests, and at the same time is guided by its own interests on the basis of plan directives from the centre.

Greater emphasis on centralised guidance of the economy is a technical and economic necessity under socialism. For example, the basis for building the communist economy is a wide-scale electrification of the national economy, and the development of power engineering requires en-

hancement of the centralised direction of the economy. This is conditioned primarily by the fact that the technological foundation of electrification is an integrated state grid of high-voltage transmission lines connecting numerous thermal and hydroelectric stations. Such a grid is impossible without control from a common centre, either in the period of construction or during operation. The advantages of the socialist system in this sphere and, in particular, in managing the country's power grid manifest themselves with particular clarity. Power cuts are practically unknown in the Soviet Union, while in capitalist countries they are by no means infrequent. In 1969, for instance, there was a trouble with the transmission lines in the north-east of the USA and many enterprises came to a standstill. Of course, an accident can happen anywhere but the point is what has caused the trouble and how quickly its consequences can be eliminated, which depends entirely on the system of organising the management of power stations and transmission lines.

In the USSR, much has been done to set up an integrated system of computing centres which ensures comprehensive automation of production management. More than 200 state research organisations and institutions were engaged in its development. Such a problem is too great to be coped with in any capitalist country. The establishment of this system will make it possible in the not-too-distant future to widen greatly the scientific and technological basis for the centralised guidance of the entire national economy. The solution of such a problem in the conditions of competition between private monopolies and

smaller businesses is practically impossible because of their economic isolation.

The socialist system of production management is based on the principle of strengthening centralised guidance and widening the democratic foundations of management in the basic units of the national economy—at industrial associations and enterprises. The Communist Party of the Soviet Union regards it as its major task to encourage constantly the activities of the working people in all spheres of social life and to perfect all possible forms of enlisting the people in the public management of the economy.

The democratic principles of socialist production management mean extensive participation by the working people in managing the affairs of their enterprise through a system of local public and political organisations—party, trade union and komsomol; through technical councils and standing production conferences at enterprises; through bureaus for the scientific and technical organisation of labour and economic analysis, scientific engineering societies, etc. The social methods of improving the production management system are based on material incentives, communist education of the working people, and enhancement of the personal responsibility of every worker for the performance of the production collective as a whole.

The extensive application of democratic principles in production management contributes to greater cooperation and the development of socialist relations of mutual assistance among workers, and to the conversion of socialist labour into communist labour, which increasingly chan-

ges from being a means of earning a livelihood into a prime necessity of individuals.

The organisation of production management in the USSR is improved in such a way that the public organisations of enterprises increasingly take over the functions of the managerial apparatus, and contribute not only to a reduction of government spending on its maintenance but also to enlistment of broad sections of the working people in the management of enterprises. This develops their creative initiative, which accelerates the construction of the material and technological basis for communism.

The further development of democratic centralism in the management of the socialist economy is regarded in the USSR as linked inseparably with the question of raising the scientific standards of management and taking fuller account of economic laws of socialism. Centralised production management, covering connections involved in the exchange of production experience between all members of socialist society, unites the actions of all production collectives into one common effort directed towards attaining the objective goal of socialist production—advancement of the material and cultural standards of working people. It is only through the bodies of centralised management of the entire economy that people can develop production in accordance with the requirements of objective economic laws.

The ways of improving economic management are outlined in accordance with the strategic economic tasks facing the country. In considering specific questions (determination of functions, structure of management systems, selection

of methods and forms of their activity), the economic tasks of production development are taken into account at every given stage.

According to the sectoral principle accepted in the USSR as the basis on which management systems are founded, the main organisational form of economic management is the ministry. The ministries ensure centralised technical and economic guidance of individual branches of the economy, further scientific and technological progress and the fullest possible satisfaction of the country's requirements for all types of products manufactured by each individual branch. The ministries exercise centralised planned guidance of their respective branches with an eye to ensuring comprehensive development of the country's economy as a whole and of each of its fifteen Union Republics, allowing enterprises broad economic independence. The ministries concentrate their organisational efforts on securing conditions for the successful development of industrial production in their respective branches.

The following types of ministries exist in the USSR: all-union, union-republican, ministries of Union Republics and ministries of Autonomous Republics. There are a total of over 50 all-union and union-republican ministries.

Directing the work of their respective branches, the ministries and departments perform a wide range of functions: drafting long-term and annual plans and organising their implementation, carrying out technical policy, and supplying enterprises and organizations with manpower. The ministries and departments are fully responsible to the state for the performance and fur-

ther development of the branches of the national economy of which they are in charge.

Taking account of the economic independence of enterprises and associations, the ministries assess the possibilities for the most effective application of the economic methods of guidance under given conditions to meet the economic interests of individual enterprises and the branch as a whole.

Immediate day-to-day management of enterprises is exercised by the administration of plants and factories which is vested with extensive rights. The general planned guidance by the state is concentrated on drawing up the most important economic targets and ensuring their fulfilment. The State Planning Committee (Gosplan) stipulates the proportions of the development of various branches, carries out a uniform state policy in the field of technological progress, capital investments, distribution of productive capacities, labour remuneration, prices, and finance. It also ensures a planned propagation of scientific and technical achievements and progressive experience. The central agencies for the management of individual branches—i. e. ministries—concentrate on the major current and long-range-tasks of the development of their respective branches.

The extension of the economic independence of enterprises in the sphere of productive activity has entailed a redistribution of the managerial functions both in the system of managing branches of industry and in individual sectoral subsystems. In accordance with the principle of democratic centralism, an enterprise not only fulfils

production plans assigned by the higher-placed bodies of economic management, and is not only subordinated to these bodies, but itself enjoys extensive rights in the carrying out of day-to-day economic functions. This is why the question of optimum combination of centralism and democracy are considered to be of paramount importance in the USSR. This correlation depends in the main on the level of production development and on the concrete historical conditions of social development.

Socialist society is characterised by a consistent strengthening of the independence of all economic subdivisions. This is the result of a number of objective factors. In the socialist economy, the process of rapid development of productive forces is under way. It is manifested primarily in the automation of production. But the question is not limited to this alone. Atomic power engineering, astronautics, cybernetics, biology, and chemistry are also developing rapidly, one discovery following another. Progress in one field facilitates progress in another. Landslide progressive changes are becoming the rule. Under these conditions, greater independence and higher responsibility for assignments on the part of all production and economic subdivisions become indispensable. The need for extending the day-to-day economic independence of enterprises in the period of advanced socialism and the scientific and technological revolution is dictated by the greatly increased role of the subjective factor in the progress of social production. The management of the national economy in the USSR is management for the people and by the people.

The system of scientific management of socialist production is based on the knowledge of objective economic laws.

The need for organising the management of material production arose with the appearance of collective labour. Once the need for collective production was evident, its management became indispensable.

With the progress of concentration and specialisation of production and the growing complexity of the relations of production, the need arose for setting up a management system which would connect into a whole all the links of the production system, bring into harmony all the elements of production, and coordinate the activities of production subdivisions. It should be emphasised that the planned organisation of socialist production at all its levels from an individual enterprises to a branch and the national economy as a whole requires constant improvement and advancement of various managerial systems to an optimum level.

Two aspects are distinguished in production management: management as a definite structure (the statics of management) and management as a process (the dynamics of management). The process of management in relation to production is continuous socio-economic, organisational and technical activity aimed at attaining the highest level of economic efficiency of individual enterprises, associations and firms, branches of production and the national economy as

a whole. Management ensures the smooth operation of the entire production mechanism.

In the Soviet Union, management of social production is regarded as one of the major factors of economic growth. In the course of the economic reform now being implemented in the USSR, the mechanism of economic management is being improved with a view to raising to a still higher level the efficiency of social production as a whole. Under the impact of the scientific and technological revolution, the management system is being reconstructed so as to enable the speediest application of the latest scientific and technological achievements. The Communist Party and the Soviet Government, tackling the most important problems of the country's economic development, are paying special attention to the improvement of the apparatus of economic management. Speaking on this subject at the 24th CPSU Congress, L. I. Brezhnev said: "This is essentially a matter of how best to organise the activity of society in accelerating economic and social development... Improvement of management is an important component part of the Party's entire activity in directing the economy." (24th Congress of the CPSU, pp. 78-79.)

Management is an extremely complex and many-sided field of human endeavour, a phenomenon of social order. Karl Marx described the essence of management as follows: "All combined labour on a large scale requires, more or less, a directing authority, in order to secure the harmonious working of the individual activities, and to perform the general functions that have their origin in the action of the combined organism, as

distinguished from the action of its separate organs. A single violin player is his own conductor; an orchestra requires a separate one." (Karl Marx. *Capital*, V. I., Moscow, pp. 330-331).

To borrow Marx's metaphor, the economy could be described as the most complex, continually developed and perfected orchestra. And it is necessary to know how to conduct it perfectly in order to get the best sound from it.

The mechanism of regulating social production is a complex of interconnected systems, of which the most important are the technical, economic and socio-administrative. The interconnection and interdependence of elements in the management systems are determined by the character of these systems and the functional role of their individual elements. For example, the technical system ensures the normal operation of machines and mechanisms, and a rational combination of technical and technological factors depending on the technical division of labour. It incorporates in the main the regulation of relationships in the man-machine system. As for the economic and the socio-administrative systems, they are concerned with the regulation of relations among individuals.

The economic and the socio-administrative systems are closely interconnected. But this does not mean that they are identical. The essence of regulating the economic system consists in setting up relations among producers in the production process in accordance with the operation of objective economic laws. Regulation of the social system is connected with the establishment of effective links enabling a successful solution

of the administrative, legal and political problems facing society.

Objective economic laws do not predetermine the methods of political, administrative and legal regulation. However, they provide the basis for a conscious selection of those methods of management which enable the most effective solution of production problems.

Of late, in connection with the wide spread of the cybernetic principles, there has been observed in the West a "structural-cybernetic" approach to the elements of definite systems, the social system in particular. This approach is manifested in attempts to think of all existing systems in nature and society as machines. For example, Stafford Beer of Britain in his book, *Cybernetics and Management*, notes: "... we are using the word 'machine' as a name for any purposive system". (Stafford Beer. *Cybernetics and Management*, London, 1967, p. 25). This approach leads to paradoxical conclusions. Thus, Stafford Beer asserts that "a man and the engine he is driving may equally become fused into a machine for doing something specialised." (*Ibid.*, p. 24).

Production management is determined by the nature of the social process of labour. The functions of management issue from production and at the same time are integral components of it. The character of relations among workers as participants in contacts between enterprises and industries is determined by the socio-economic specifics of a given mode of production, that is, by the form of ownership of the means of production.

Production management develops under the impact of both the technical conditions of production and the socio-economic laws of the development of society. The simple organisation of the production process at the initial stages of production development—in the workshops, and factory departments—determined the simplicity of its management. The development of machine production was the decisive factor of advancing the level of management. The system of machines increasingly demanded better organisation. The deepening division of labour and broad development of cooperation complicated the relations between producers. Production grew in scale, and products became increasingly varied. The growing diversity of types of equipment and materials gave rise to the problem of choosing their optimum combinations. In turn, changes in the technological basis of production influenced the character of social development.

Production management acquired special significance in capitalist society. The organisation of effective management became a life-and-death matter for the entrepreneurs. Hence the despotic methods of capitalist management.

During the several centuries of its existence, capitalism has made considerable progress in organising effective management systems within the framework of individual enterprises and firms. Because of bitter competition and a feverish chase after markets and profits, effective and flexible management became essential. The entrepreneurs realised that only an effective management system could ensure the adaptation of production to fluctuations in the market situation and a corresponding change in the running ca-

capacity of an enterprise so as to achieve maximum efficiency in the exploitation of labour.

The development of the productive forces under capitalism is accompanied by tremendous concentration of labour and the means of production at individual enterprises. This occurs along with the deepening of the social division of labour. Different economic processes and branches of the economy become more and more closely linked and intertwined with one another. The universal links of labour become increasingly firm and mutually penetrating.

The development of large-scale machine production accompanied by extensive specialisation and far-reaching division of labour has lent a social character to the process of production. Because of this, the economy under capitalism has turned in effect into a single economic organism requiring centralised economic regulation. It is here that an unbridgeable gap appears between this requirement and the actual situation. Private capitalist ownership of the means of production makes management a private affair of capitalists and monopoly associations. Organisation of economic management on a nation-wide scale, which is an objective necessity of economic development implying the establishment, on a planned basis, of economic ties between industries and individual enterprises, proves to be an insoluble problem under capitalism. The anarchy of production involving huge unproductive expenditures of social labour and capital compels capitalists to seek reserves to compensate for these expenditures. This is precisely the reason for the keen interest of private employers in improving the organisation of production manage-

ment within the framework of an individual enterprise, concern or company.

The efforts by F. Taylor, H. Ford, H. Hunt, F. Gilbert, H. Emmerson, B. Hansen and others furnished the groundwork for the capitalist rationalisation of production and intensification of labour, and made possible the institution of stricter conditions for the operation of machines and people. However, contrary to assertions of bourgeois theoreticians, they have failed to change the essence of capitalism. "Capital organises and rationalises labour within the factory for the purpose of increasing the exploitation of the workers and increasing profit. In social production as a whole, however, chaos continues to reign and grow," V. I. Lenin noted. (Lenin, *Coll. Works*, V. 20, p. 153).

The capitalist system of production management thus proves to be in antagonistic contradiction to the social character of production, which is one of the principal and obvious manifestations of the main contradiction of capitalism.

The scientific and technological revolution in the capitalist countries is leading to a still greater exacerbation of the contradiction between the social character of production and the private capitalist form of appropriation. With the prevalence of private ownership of the means of production, management becomes a function of capital, which fact lends it characteristic class distinctions. In an effort to substantiate and introduce "scientific management" of capitalist production, bourgeois theoreticians identify the socially necessary function of production management with the despotic methods of capitalist business management, thereby trying to gloss over

the antagonistic contradictions rending capitalist society.

The main contradiction of capitalist society—the contradiction between the social character of production and the private form of appropriation of its fruits—leaves an imprint on any, even the most progressive and advanced methods of management. As a result, they are combined with cruel, frankly exploiting methods of management. In his description of the Taylor system Lenin wrote: "The Taylor system... like all capitalist progress, is a combination of the refined brutality of bourgeois exploitation and a number of the greatest scientific achievements in the field of analysing mechanical motions during work, the elimination of superfluous and awkward motions, the elaboration of correct methods of work, the introduction of the best system of accounting and control, etc". (Lenin, *Coll. Works*, V. 27, p. 259).

This statement of Lenin's is true not only of the Taylor system but also of the entire complex of theory and practice in the field of management and organisation of production in today's capitalist world. The present stage of development of the leading capitalist countries is characterised by the strengthening of state monopoly capitalism when the state assumes the function of direct interference in production in the interests of the biggest monopolies. This explains the attempts to effect programming and regulation, not only of the economy, but also of the life of society, the behaviour and thinking of people. By implementing certain measures in the economic field, however, the bourgeois state can

at best either promote the spontaneous development of the capitalist economy or somewhat retard the growth of its individual branches. It is unable to overcome the anarchy of the capitalist economy and to effect planned direction. The modern bourgeois state, which is a tool of monopoly capital performs its functions, as a rule, in the interests of the big monopolies. By interfering in economic affairs, it attempts to check the progressive development of society—the transition from capitalism to the more advanced, socialist mode of production. This leads to a further exacerbation of all the contradictions of the capitalist system.

Management under socialism has a different role to play. Socialist public ownership of the means of production, in addition to abolishing exploitation and all forms of oppression of man by man, subordinates production to a single goal—satisfaction of the material and cultural requirements of all members of society. This opens up unlimited prospects for the development of the productive forces. Production management under socialism loses its exploiting character, and thereby eliminates the antagonistic contradictions between the work of managerial personnel and operatives. Economic management becomes one of the major functions of the workers' and peasants' state which expresses the vital interests of the people and conducts its work on the basis of drawing the working people into the affairs of production management.

Under socialism, the economic laws cease to operate spontaneously. Management is organized in conformity with the requirements of objective

economic laws, and provides the most favourable conditions for their operation.

The economic tendencies inherent in the development of the socialist mode of production, which determine the character of management, also predetermine the general approach to the question of economic management, the character of problems and the methods of resolving them, and the specific features of the organisational structure of managerial bodies. The economic laws of socialism govern the development of the relations of production, i. e. relations between individuals in the process of production. They manifest themselves in the actions of individuals and determine these actions.

A conscious application of these laws makes it possible to develop the economy successfully, and to build communism. But in order that this possibility may be translated into reality, it is necessary to understand the objective economic laws and competently put them into practice. This is what determines the special role of the socialist state in directing the economy, a role that differs in principle from that of the bourgeois state.

Socialism enables the establishment of the most advanced system of management corresponding to the level of development of social production, and this becomes a specific social function.

The special features of socialist production management are clearly seen from an analysis of the character of the production relations, since the tendencies inherent in the development of the production relations determine the nature of socialist economic management. The most chara-

cteristic features of socialist management are given to it by the economic law of planned balanced development. It follows from this law that the socialist economy must be managed exclusively on a planned basis. Only planned management ensures the development of the national economy in the required proportions.

The system of Soviet economic management and planning in broad terms means planned centralised guidance of the economy, including the organisation of managerial bodies, elaboration of managerial methods, the scientific organisation of labour and production, the collection, processing and use of information for the needs of management, and the organisation of control over the fulfilment of plans and decisions.

There can be no management without planning. Centralised guidance of the national economy on the basis of a single plan is a major distinctive feature of socialist production. Centralisation makes possible a well-planned utilisation of resources on a nation-wide scale. The development of the productive forces, and the furthering of the division of labour associated with it, provide the material basis for both centralisation and democratisation of management. Centralisation is the basic organisational principle which creates the prerequisites for introducing democratic centralism. The socialist relations of production make possible not only centralisation but also the introduction of democratic principles into economic management. The development of the productive forces and production relations gives rise to specific forms of democratic centralism in management.

Under socialism, management of the economy is exercised with a view to ensuring the national wellbeing and the free, well-balanced development of all members of society. The abolition of exploitation and the establishment of equal relations to the means of production and equal rights to earnings according to work done—this is what unites working people into a society with a single aim—the building of communism. The essence of socialist production management consists in organising the collective work of millions of individuals for their own benefit, and in developing relations of comradesly cooperation and mutual assistance.

In organising collective work, a great role in the guidance of people is played by distribution according to the quantity and quality of work. This principle is associated most closely with personal material interest. The economic methods of directing collectives of individuals constitute the major part of production management. They give a class and political character to management. Due regard for the interests of the classes and social groups in production is an important principle of managing the national economy.

The socialist system has done away with the antagonisms of management. Socialist management ensures a definite interaction between individuals, and coordination of their activities in the working process. But the function of socialist management is not reduced to this alone. The working process itself, based, as it is, on public ownership of the means of production, inevitably gives rise to relations of comradesly cooperation and mutual assistance among individuals taking part in collective production.

In the socialist economy, the manager and his subordinates are equal collective masters of the means of production. The manager directs the work of the enterprise, not as a supervisor of private property, but as an authorised representative of the people and the state. To manage production in a socialist state is to fulfil one's duties in a careful, businesslike and honest manner, aware of one's responsibility to the collective and the state.

The management of socialist production is of a profoundly democratic character. As collective owners of the means of production, the Soviet working people themselves manage production through the agency of government bodies and public organisations, themselves select and promote business managers. That is why the Soviet state is an organisation which performs not only the functions of managing the national economy but also those of guiding individuals in production. The socialist state combines its functions of management with socio-political measures setting definite standards of conduct for individuals.

The economic policy of the Soviet state is planned on a scientific basis in keeping with the requirements of economic laws applicable to the various stages in the development of the country. The uninterrupted and rapid development of the Soviet economy and the resulting changes in the economic and political situation call for a revision of the forms and directions of the activity of government agencies in managing the economy. The continuous improvement of the economic management system is dictated essentially by the chief goal of socialist production, as well

as by the need to improve the organisation of the socialist economic system as a planned economy.

The efficiency of the managerial system is assessed primarily by its contribution to improving the results of the reproduction process, to the development of human personality in the collective and to the reinforcement of the advantages of socialism in the struggle against capitalism.

The steady and quick rise of the Soviet economy is evidence of the high scientific level of planning and management of the national economy, and of the correct application of the economic laws of social development in the building of the material and technical basis of communism.

IMPROVEMENT OF PRODUCTION MANAGEMENT SYSTEMS

Management of the socialist economy is an extremely important social function. As indicated by analysis, at present management can be listed among the most profitable fields of investment and application of the efforts of scientists, executives and managers.

But work in improving management does not always result in an immediate increase in its efficiency. There are cases where efficiency increases only at a later time or where the improvement is essential for the continued existence and successful development of the system itself.

Assessment of the condition of the managerial system and its efficiency is important as the starting point for choosing ways of improving economic management. The questions may be formulated as follows: What should be done to increase the efficiency of a given managerial system?

What directions should be chosen for its improvement and which of them are the more effective? What is the correlation between these directions? What methods of rationalisation are to be used? What spending is required to obtain the best possible results from reorganisation of the system?

The managerial system can be improved by different methods and in many directions. The entire variety of directions in rationalisation may be divided into ten large groups: improvement of the "technology" of management; scientific organisation of managerial work; improvement of decision-making procedures; improvement of information supply; perfection of the composition of functions, their specialisation and concentration; improvement of the structure of the managerial apparatus; improvement of the system of incentives and responsibility; improvement of the performance of individual managerial functions; improvement of training personnel, its selection and rating, and improvement of personal relations between workers.

The improvement of managerial technology includes the application, on an increasing scale, of up-to-date office machines. Quick introduction into practice of electronic computers of the latest design is one of the major trends in raising the productivity of managerial work and the efficiency of managerial systems. Many problems relating to the management of complex economic establishments are quite impossible to solve today without the aid of these universal means.

Management is based on collection, accumulation, processing and handover of information. Improvement of information supply is one of

the crucial trends in the rationalisation of management, and is attained primarily through an extensive use of computers of improved models for information processing. Improvement of information supply is also achieved by means of other technical facilities for collecting, storing, multiplying and processing information.

The scientific organisation of managerial work implies the application of all scientific and technological achievements for increasing the efficiency of the managerial apparatus and for ensuring normal conditions for its operation. This includes a wide use of office machines, scientifically-grounded work regimes, and investigation of elementary working operations for planning their rational combination.

Another direction in rationalisation is improvement of the procedures of decision-making, which is also directly related to the scientific organisation of labour. The competence of decisions, their timeliness, accuracy, and authenticity in relation to the actual situation have a bearing on the efficient operation of an enterprise, an industry, and the national economy as a whole. This direction includes a thorough study and improvement of the entire process of management from information collection to the fulfilment of decisions. This direction presumes such a sequence of managerial operations and availability of managerial facilities that ensure the most economical performance of the managerial system.

Managerial work is a specific type of human activity. It consists of a number of functions, i. e. an assortment of fractionated specialised working operations, such as planning, accoun-

ting, supervision, supply, marketing, legal regulation, stimulation of activity, etc. A change in the composition of the functions of various managerial divisions has a decisive impact on the results of the work of enterprises, associations, and branches of industry. In particular, specialisation of managerial functions, just as specialisation of any work, is a highly effective means of increasing the quality and productivity of those functions.

Improvement of the apparatus structure is the way of improving the managerial system which is the most usual in socialist society. It is expressed in the adjustment of managerial links, the assignment of normal quotas to all workers in accordance with their functions, the full provision of enterprises, associations and branches of industry with timely and accurate managerial instructions and with objective information.

It has long been known that human activity needs permanent control and encouragement. In the Soviet Union, a flexible combination of material and moral incentives is effected, not only in production, but also in the managerial apparatus. In addition to a correct distribution of responsibility for the performance of duties, this is an essential factor for increasing the efficiency of the managerial system. Any improvement in the system of incentives for managerial workers leads to greater efficiency of their work.

All of the above trends in the improvement of managerial systems are interconnected and therefore they are used in combination. The various methods of rationalisation are based on the latest achievements in science and technology. The achievements in mathematics, psychology,

sociology, economics, law, information theory, etc. are used to perfect managerial systems in the national economy.

Great importance is attached to the socio-psychological methods of improving management which embrace a wide sphere of relations between workers in the process of joint activity. They include such questions as the prestige of a manager and the social problems of collective labour.

A considerable number of problems involved in the improvement of management are related to the legal regulation of the operation of enterprises, associations, branches and subdivisions of industries. Regulation of rights and duties, contractual relations, relations of property and reimbursement for losses—such is the field of competence in which methods of legal regulation are used in the managerial systems.

Mathematical methods of modelling are used in the Soviet economy on a growing scale. The assortment of these methods includes optimum planning, linear and dynamic programming, the theory of mass services, the theory of games, multiple correlation, etc. The development of econometric models makes it possible to forecast, more accurately and with less effort, the development of economic projects and consequently to exercise a more effective management of production. Econometric methods in combination with electronic computers are the most efficient and promising aids in the further improvement of the Soviet system of managing the national economy.

Great attention is paid to the economic and financial methods of rationalising management.

Improvement of planning, incentives, crediting and financing are among the most widespread methods of promoting the operation of enterprises, associations and branches of industry and of the system of managing the national economy as a whole. The financial-economic methods are the most effective forms of such promotion. As shown by experience, a lasting effect of any method of rationalisation can be ensured only by reinforcing it with appropriate economic and financial measures.

Improvement of information holds a special place in the rationalisation of management. A distinctive feature of modern economic processes is the great need for large quantities of information. With the tremendous inflow of information, great difficulties arise in processing and assimilating incoming information necessary for substantiating decisions. This has led to a wide utilisation of information theory for improving the collection, recording, grouping, processing and storage of information and for facilitating paper work. The aim of the current efforts to improve information supply in the USSR is a further acceleration of information flow to managers, elimination of its duplication, the exclusion of superfluous and the supplementing of inadequate information.

The improvement of the managerial system in socialist society affects all aspects of production. Any essential change in the managerial system of enterprises, associations or branches of industry is backed by provision of appropriate conditions in the economy as a whole. And conversely, any change in the general conditions is taken into account at all levels of management.

Management, which plays an important role in relation to production, itself depends on the degree of production development. A highly developed industry must have a managerial system fully corresponding to it in its perfect structure, operation and forms of organisation. The systems of sectoral management existing in the USSR incorporate different types of management levels. However, the composition of managerial systems of the scheme ministry—central board—enterprise is the most common in the USSR.

The system of sectoral management cannot be uniform for all branches of industry. Every branch has a number of specific features which essentially influence the managerial structure. Among the factors responsible for the specific features of sectoral management are, in particular, the number of subordinated enterprises, the volume of output, the role of a given branch in the system of the country's social production, the character of the production cycle, the geography of distribution of enterprises, etc. The specifics of production determine the composition, volume, and combination of managerial functions and, accordingly, the combination of the structural divisions of the system.

The systems of managing individual industries operating in the USSR at present are based on a linear-functional principle and have a vertical-horizontal structure. This structure serves to implement in full the principle of democratic centralism by means of which all the steps of the managerial system are co-subordinated according to its different levels.

The structure reflects the internal arrangement of the elements of a system and joins them into

a whole. With the growing complexity of the system, its structure also becomes more intricate. Every variety of managerial division has an appropriate structural form. The system of industrial management has important specific features which figure prominently in an overall assessment of its operation. Among such major features are the organisational structure of the system, the relative autonomy of individual subsystems, and the possibility of adaptation and self-regulation upon a change in the external and internal conditions of operation.

At present, many traditional forms and methods of building the managerial structure are being abandoned in the USSR. A number of ministries and departments are taking practical steps in this direction. This can be regarded as the second stage in the development of the economic reform. The point is that in the present conditions it has become necessary to supplement the traditional methods of management based on the knowledge and experience of business executives of all ranks, with scientifically validated methods of decision-making reinforced with technical and other means for securing the most effective solution of complex managerial problems.

In particular, the information supply factor is becoming ever more important. Inflows of objective information from the periphery to the decision-making centre determines the character of management to a greater extent than the "hierarchy", i. e. the system of subordination.

The improvement of planning and economic management in the USSR at the present stage is closely connected with enhancing the role of eco-

omic levers and material incentives in production. This means that centralised management is relieved of the need for control and regulation of millions of specific production processes and links which grow like a snowball with the country's economic advancement and the complication of the structure of social production. These processes and links can no longer be regulated from a common centre. The growth of these links is illustrated by the fact that the Soviet national economy today manufactures about 20 million items of products, many thousands of new items being added every year.

Soviet industry comprises over 300 branches and fields of production with some 50,000 independent industrial enterprises. History could not furnish an answer to the question of how to manage the national economy on a nation-wide scale. In his outline of the article *The Immediate Tasks of the Soviet Government*, Lenin wrote that the task of state administration which had faced the Soviet government after the end of the Civil War was distinctive in that the point in question, perhaps for the first time in modern history, was economic management in which economics rather than politics was of primary importance.

"Under the bourgeois system," Lenin pointed out, "business matters were managed by private owners and not by state agencies; but now, business matters are our own common concern." (Lenin. *Coll. Works*, V. 32, p. 430). It was with good reason that Lenin pointed out that politics was a concentrated expression of economics.

In organising the management of Soviet production Lenin believed it possible to draw on the

experience of capitalist industrial complexes. This experience was useful because it had been accumulated during the development of large-scale industry. Meanwhile, from the early years of Soviet power, the process of building large production and economic complexes in the form of associations of various types began to develop on a very wide scale in the USSR.

Lenin noted: "Only those are worthy of the name of Communists who understand that it is *impossible* to create or introduce socialism *without learning* from the organisers of the trusts. For socialism is not a figment of the imagination, but the assimilation and application by the proletarian vanguard, which has seized power, of what has been created by the trusts." (Lenin, *Coll. Works*, V, 27, p. 350).

Understandably, capitalist experience was drawn upon quite cautiously in the USSR. The system of organisation of management and planning within a private firm has certain disadvantages from the viewpoint of the socialist system. Many elements of this system are the products of the contradictions in the development of capitalism and cannot be transplanted into socialist conditions—for example, the limited character of private economic programmes, whose main target is the immediate effect, i. e. profit, which does not always meet the interests of the national economy as a whole. Nor is the orientation of the plans of private enterprises—aimed primarily at securing more profitable markets—acceptable for the USSR.

Lenin regarded the improvement of the management of the national economy as the decisive factor for raising its efficiency. In his writings,

he repeatedly emphasised the need for high-degree organisation. He considered improvement of the organisational structure of governing bodies one of the major conditions for a successful construction of socialism and communism.

The system of management of socialist production, which has taken shape and developed during Soviet years, is based on the main principles of management worked out by Lenin. In accordance with Lenin's teaching, the concrete forms of management are changed and improved at the various stages of socialist construction. However, the main Leninist principles of management issuing from the very nature of the socialist economy remain unchanged. These are democratic centralism; unity of political and economic leadership; political approach to the solution of economic problems; planning; one-man command; moral and material incentives, and personal material interest of producers in the results of production.

The radical qualitative changes occurring in the economy of the Soviet Union have provided objective conditions for the further improvement of economic management. These changes have necessitated the introduction of methods of economic management, planning and economic incentives which correspond to the advanced socialist economy and ensure the attainment of higher efficiency of production.

The main trend in improving management is not an overall reorganisation of the managerial systems at all levels, but the raising of their efficiency by continuously improving the functions and methods of management. For this purpose, measures to improve management are planned in

the USSR for five-years and for longer periods. This planned work is subordinated to the interests of the national economy as a whole. The process of improving the management of material production is uninterrupted, being necessitated by the growth and increasing complexity of the national economy.

There is a striking difference, for example, in the levels of industrial development in the thirties and the seventies with regard to quantity and quality. Three decades ago, production management was a much simpler matter. Let us see what is being done at present and how.

The automation of production management is one of the most urgent, yet long-range, problems involved in the development of modern management. Computing machines today contribute to a marked improvement in the competence and efficiency of management. In view of the fact that managerial decisions have now become particularly important, especially as any incompetent decision may lead to considerable losses, the importance of electronic computers can hardly be overestimated. Moreover, to select optimum decisions, one has to examine quite a number of variants and make complex calculations. It is impossible to make such calculations without the aid of machines.

Electronic computers are able to preserve in their "memory" the normal production schedule, to react to deviations from it and to introduce corrections into the programme of subsequent operations. When introducing computing machines, account is taken of the fact that social processes make up a complicated probability system; therefore, in managing them, a variety of

factors—technical, economic, sociological, and many others—are taken into consideration.

As we see, the introduction of electronic computers into production management is not a simple matter and requires a comprehensive approach. The enthusiasm of some specialists in cybernetics who insist on the speediest and complete automation of economic management, with transition in the future to "push-button control", fails to find unreserved support so far. Soviet scientists are carrying out a thorough analysis of the qualitative aspects of economic processes many of which still do not lend themselves to formalisation. This, however, does not amount to underestimation of the possibilities inherent in modern managerial technology. Cybernetics is contributing substantially to the solution of the complex problems connected with the management of the national economy facing Soviet economists.

Cybernetics originated with the emergence and growth of a demand for managerial automation. However, in none of the special fields of management are automation techniques possible without a preliminary development and application of the general principles and standards of management. The elaboration of these principles and standards constitutes the essence of scientific management of the economy. Considerable successes in the new fields of mathematics and the mass use of modern electronic computers have given rise to novel methods.

What is the principal approach to developing automated managerial systems in the USSR? Should man strive to make the machine take over his thinking functions to turn out a pro-

duction plan, a plan of reserves distribution, etc. by "pushing the button" so that he would only have to put his name to its "decision"? This clearly will not be the case. A machine can operate effectively only in interaction with man. It must not "think" instead of man but help him. It must enable him quickly to verify various hypotheses and make the best decisions. This requirement lies at the basis of the systemic approach, which makes it possible to reduce the process of solving a large complex problem to the coordinated process of solving less complex problems in greater detail.

For example, a ministry draws up an integrated plan for its industry stipulating the basic indicators for the output and distribution of production. On the basis of this plan, a central board stipulates aggregate indicators for enterprises, the latter for shops, flowlines, etc. The lower production divisions size up their potentialities and offer their counter-proposals. The use of systemic and optimum methods of planning makes it possible to conduct the process of consecutive elaboration of a plan so as to enable the industry as a whole to turn out a maximum of the required products at minimum costs.

Mathematical methods also play an important role in improving management of the national economy. In the past few years, the USSR has accumulated vast experience in solving individual problems of economic planning with the aid of econometric methods and electronic computers. These, however, are only the first steps which have revealed in principle the possibility and effectiveness of using mathematical methods and computers at all levels of the economic struc-

ture—from the USSR State Planning Committee to an individual industrial enterprise. Today, the Soviet Union is solving the problem of developing and introducing a uniform state-operated automated system of economic planning and management on the basis of a comprehensive application of mathematical methods and computers. This work is already under way at the top level of economic planning. The USSR State Planning Committee and the Planning Committees of the Union Republics have already started developing an automated system of plan calculations through their computing centres, and research and design organisations.

This will be the world's biggest automated system of national economic planning and management based on the "man-machine" combination. The purpose of this system is to improve the quality and substantiation of current and long-range economic development plans, to supervise their implementation and, whenever necessary, to adjust them to the changing situation. All work to promote the economic reform, improve the structure of management of the national economy and develop the automated system of plan calculations at the USSR State Planning Committee and the State Planning Committees of the Union Republics, is oriented towards a common goal.

An important task is to cut the time spent on drawing up economic development plans and to further improve the organisation and methods of planning. The reasons for this are clear. In view of the rapid growth of production and the increasing complexity of economic relations, the problem of organisation takes on added urgency.

In fact, it is the organisation of work that holds back the elaboration and introduction of economic methods and computers into the practice of economic planning and management.

A more efficient organisation of work in drawing up economic development plans and introducing the automated system of planning and management will be achieved on the basis of the time-tested system of network planning and management, which has been worked out and is being improved at the USSR State Planning Committee. Similar systems are being introduced at the State Planning Committees of the Russian Federation, Byelorussia and other Soviet republics. Methods have also been worked out for making network models at ministries and departments. The possibility of using network methods in drawing up plans of production associations and individual enterprises has been proved experimentally.

After introducing effective systems of network planning and management at the USSR State Planning Committee and the Planning Committees of the Union Republics, at ministries, departments, associations, enterprises, etc. it will be possible to link up all these systems into an integrated system of network planning and management. It will enable an even more effective direction of the process of drawing up economic development plans since it will cover all the divisions and levels of this process.

In the last five-year plan period (1966-1970), broad investigations got under way in the field of developing automated managerial systems of enterprises and branches of industry. The first automated systems have been developed and suc-

cessfully introduced at the Lvov Television Factory, the "Azovkabel" Plant, the Minsk Tractor Works, and the "Frezer" Plant in Moscow. Conditions are being created for installing similar systems at all the leading Soviet enterprises in the current five-year-plan period (1971-1975).

To attain this target, it is planned to carry out a number of important measures on a nationwide scale. Much is done to improve the work of guiding the introduction of computers into the practice of economic management and to make this guidance ever more centralised.

All the measures outlined are being successfully implemented. At present the problems involved in developing and introducing automated systems for the management of enterprises, associations, and branches of industry are being tackled by more than 300 research and design organisations. In the ninth five-year plan period (1971-1975), more than 2,600 automated systems for various levels of economic management will be introduced in the USSR.

MANAGEMENT AND ECONOMIC COST ACCOUNTING

As pointed out above, continued economic growth under socialism calls for a continuous improvement of the forms and methods of production management. Therefore, the economic reform in the USSR did not come as a surprise. Being necessitated by the objective conditions of the development of socialist production, it provides an example of creative application of the principles of socialist economic management in

the period of transition from socialism to communism.

The principle of cost accounting underlies economic relations between socialist enterprises. This principle ensures an optimum combination of the state plan with the system of business contracts between enterprises, centralised management and broad local initiative. The system of contractual relations increases the responsibility of enterprises for the results of their economic activity, and subjects them to systematic mutual control.

Cost accounting in the socialist countries is not an aim in itself. It serves the task of fulfilling and overfulfilling economic development plans, and is a powerful lever for increasing production and strengthening the economy. The major economic and organisational aspects of cost accounting have a number of characteristic features. First and foremost, cost accounting mobilises the practical activities of enterprises for the fulfilment of the state plan according to all economic and qualitative indicators.

In fulfilling their plan assignments, enterprises enjoy independence in their economic and production activities within the framework of the plan. They have their own balance sheet and fixed and circulating capital. Cost accounting means that enterprises bear all the costs involved in the manufacture and marketing of their products and attain high profitability. This is achieved by increasing the material interest of the collectives of enterprises in fulfilling their plans with a minimum expenditure of labour and means. Financial control of economic acti-

vity, and a rational use of material resources and money are basic to cost accounting.

Cost accounting consists, not only in compensating for the expenditures out of the enterprise's own incomes, but also in comparing the expenditures and the profits.

Cost accounting ensures the harmony of public interests and the personal and collective interests of workers employed at socialist enterprises. The principles of cost accounting are further developed in the resolutions of the 24th CPSU Congress. The Congress Directives for the ninth five-year plan (1971-1975) give considerable attention to the promotion of a major principle of cost accounting—the repayment of expenses from profits and the raising of profits at enterprises, and emphasise the need for a number of budget-financed organisations and institutions to be put on a self-supporting basis.

The decisions of the Congress place greater importance on the cost accounting system and this will give a still stronger impetus to the development of social production. The plans of the Soviet state lay emphasis on the need to increase the interest of enterprises and associations in greater output and better quality of products, particularly those of a novel, more advanced type.

One of the most important economic tasks of the Soviet state at the present time is to secure greater interest in economic self-sufficiency on the part of enterprises, associations and ministries in order to obtain maximum production results, with minimum inputs of labour, material resources and capital investments.

The socialist principle of management is firmly based on the objective tendencies of social

development. The Soviet Union has experienced several difficult periods, which dictated the need for an utmost centralisation of the control and use of available resources. These were in the thirties, when industrialisation with accelerated development of heavy industry was under way, and more particularly in the period of the Second World War and the post-war reconstruction of the war-ravaged national economy.

More recently, the questions of raising production efficiency, and of developing the national economy in conformity with the current scientific and technological revolution, with an eye to ensuring priority development of the industries having decisive importance for scientific and technological progress and greater productivity of social labour, have come to the fore in the Soviet Union.

The specifics of the operation of the economic laws of socialism in present-day conditions call for a more effective use of these laws, which is possible on condition that qualitative changes are made in national economic planning. Let us see how this is reflected in the practical work of defining the main indicators of the state plan, and in implementing a uniform policy with regard to technical progress, capital investments, distribution of the productive forces, wages and salaries, prices, etc.

Under the new system of management, the assortment of basic products is fixed for enterprises by a directive from the centre. This ensures the required balance and rates of development of the national economy and channels the efforts of enterprises to the attaining of the main economic targets. Moreover, a fairly limited

range of technical and economic indicators, reduced by more than two-thirds since the beginning of the reform, is set for enterprises.

Under socialism, the forms and methods of production management must measure up to the level of economic development. This is why there have never been—nor can be—static, rigid forms of management in the Soviet Union. Lenin wrote: "We must build our economic edifice as we go along, trying out various institutions, watching their work, testing them by the collective common experience of the working people and, above all, by the results of their work". (*Lenin. Coll. Works*, V. 27, p. 409). If the word "edifice" is used to denote the entire system of socialist production, then economic management is a system of economic links within it. Management is called upon to ensure the normal functioning of the economic mechanism of production. Success of the socialist economy largely depends on the efficiency of management.

The socialist national economy is composed of a number of internal economic systems such as a branch of production, production associations, enterprises, etc. Despite a certain isolation of these systems, they are links in a single chain connected by a system of economic relations.

A very important problem is to establish a system of so-called vertical ties which constitute the hierarchic structure of the economic system: ministry—central board—association—enterprise. The establishment of rational ties within this system is important, particularly from the viewpoint of control by the state of the respective economic levers—the planning system, the system of credits, financing, prices, etc. This rules

out elements of spontaneity and enables the socialist state to adjust the economic mechanism in conformity with the country's requirements.

Economic management is essential to all socio-economic systems. However, the socio-economic essence of management is determined by the form of ownership of the means of production. This is expressed in the use of definite methods, for example, commercial interest under capitalism and cost accounting under socialism. Commercial interest, which is based on private ownership of the means of production, is wholly linked with the market relations in the conditions of chaotic production and stiff competition. This is what predetermines the local character of economic forms of management under capitalism. The limited character of functions of economic management under capitalism gives rise to a host of economic methods of management within the framework of individual production units—enterprises, firms, trusts, cartels. But while at individual enterprises there exist definite, even if different, systems of management, beyond their limits there is not a well-organised system but a variety of links connected through spontaneous market relations.

Cost accounting under socialism has nothing in common with commercial interest under capitalism. The aim of cost accounting is the fullest possible utilisation of material, labour and financial resources in the interests of society as a whole and its members. An indispensable condition for this is a rational combination of the interests of individual workers and the collective of an enterprise with the general national interest. Material encouragement of the collectives of en-

terprises to discover and make use of production reserves and to raise the economic effectiveness of production, is based on this principle: what is profitable for the collective and the enterprise is profitable for the state. This is what forms the basis for the community of public and personal economic interests, which is an outstanding feature of the socialist mode of production.

The efficiency of any system of incentives largely depends on differentiation between the workers encouraged. Therefore, the decisive factor is not the absolute size of incentives funds but the relative size per worker. We have already noted that economic management in socialist society has the form of directives, while economic relations are expressed in relations between workers in the production process. In this, the conscious volition of individuals is the basis for purposive activity.

The majority of directives concerning production are economic in essence. However, the circulation of a plan at all levels from the government to an enterprise is effected in the form of an order—a directive. At the same time, a plan is one of the most important economic instruments of leadership. Under socialism, the unity of form and content—i. e. the unity of the economic process and the administrative effort to secure its implementation—is preserved in both circulating and implementing the plan.

Some bourgeois theoreticians oppose the economic methods of planned management to directive methods. They naively believe that one rules out the other. This is a completely mistaken view. Both the directive and the economic methods of management constitute a single

whole and are indispensable elements in the socialist system of economic management. Their use in combination makes it possible more fully to use the advantages of socialism and to ensure a rapid growth of labour productivity.

The advantages of the directive methods for solving definite problems consist in that they enable account to be taken not only of current but also of more important, long-range tasks in developing the economy. This makes it possible to concentrate resources in the main sectors of economic development and to gain time in solving major economic problems. At the same time, the economic methods successfully supplement and reinforce the administrative forms of centralised management.

It should also be noted that improvement of the economic methods of socialist production management is dictated by the need for an ever faster growth of production efficiency and labour productivity on the basis of accelerated technological progress and the growth of the productive forces. Here, success largely depends on the activity of the working people as a whole, on their interest in the best possible utilisation of production reserves. This demands improving the planned management of the national economy and equipping the planning and managerial bodies with more advanced economic methods of promoting production. Today, crucial decisions cannot be based on a brilliant "brainwave". The basic requirement of scientifically sound management is to find and duly implement appropriate solutions with a view to securing maximum production efficiency at minimum costs.

The most important decisions concerning economic development in the USSR are taken when drawing up a long-range plan. In view of the rapid progress of the scientific and technological revolution, planning should be regarded as a permanent task of management. On the one hand, this requires major strategic decisions to be taken with regard to research and development, capital investments, marketing policy, and personnel training, on which the plan can be based. On the other hand, a far-sighted approach to a long-range plan is necessary lest it should become a lifeless dogma. Experience shows that it is impossible to envisage everything in a plan. Therefore the need often arises for taking new decisions, sometimes entailing amendments in the original targets. The quality and flexibility of a plan largely depend on practical preparations for, and implementation of, economic decisions both in individual spheres of management and in the national economy as a whole.

Economic methods of management are employed with the aid of such levers as price, profit, payment for assets, credit, material incentives, and enhanced financial control. Operated in combination, these levers help to place enterprises and production associations fully on a cost accounting basis. A wider utilisation of economic methods in implementing the national economic policy depends on how well the workers of planning and governing economic agencies have mastered these methods.

Economic methods make possible a faster solution of questions concerning the introduction and mastering of new technology, improvement of product quality, optimum utilisation of raw

materials in short supply, revision of the range of manufactured goods to meet changed market demands, etc. Economic methods are effectively used in the USSR, not only to meet changing conditions but also to ensure the best solution of long-range problems connected with the development of the socialist economy.

How are economic methods of management used in conditions of socialist production? The principal plan assignments received from the centre—the ministry or the central board—are finalised in detail in the plans of enterprises. The latter take into account the demand for their products and the conditions for marketing them. They analyse the market situation and determine the demand for the products they manufacture. They are also obliged to respond promptly to changes in demand and to start in good time the production of new, more popular articles.

Centralised planning has a strong influence on the development of the market as concerns both its capacity and its structure. Nevertheless, in the process of drawing up long-range plans, and particularly current plans of enterprises, commodity-money relations exert a certain influence on the volume and structure of production. They enable a more accurate determination of the required range and quality of goods. Therefore, in the course of economic development in the USSR, direct economic links are set up between enterprises, and, within the framework of the planned economy, full use is made of such factors as the market, sales and demand.

The Soviet economic system has worked out a complex of economic methods to promote production and to use fixed and circulating assets

more intensively. These include the drawing up of economic development plans, taking account of the commodity-money relations, the market situation, demand and supply, the introduction of complete cost accounting, payment for assets, the increasing of role of credit, etc.

Enhancement of the role of economic methods of management is not simply an organisational measure, but a new approach to management. The novelty of the economic, organisational, psychological relations characterises the conditions in which the new economic reform is being implemented in the USSR.

Indeed, under socialism, even such a purely economic category as cost accounting is growing into a moral factor. Today, this is not simply a form of verification and organisation, but also a method for testing relations between individuals and collectives, a measure of their conscientious attitude to work. On the other hand, such economic categories as profit, efficiency and marketing, under the new reform indicate in practice the degree to which the interests of the worker coincide with those of the collective and society as a whole.

The convergence and identity of the personal interests of workers with those of the collective of an enterprise and society as a whole do not put emphasis on personal interest. This interest is not the main motive force of the development of socialist society, as certain bourgeois economists allege. The universality of the term "profit" does not imply that it has the same meaning under capitalism and socialism. Three quarters of the profit of socialist enterprises are spent to meet the working people's requirements. The last

quarter is spent on developing the economy and maintaining the administrative apparatus. In the final analysis, all the profit is expended in the interests of the working people. Socialist profit is not the product of exploitation of working people.

Capitalist profit is of a different nature. To realise this, one has only to take a look at the aims of its use without delving into the essence of its origin. Consumption by the owner is the principal way in which capitalist profit is used. Even when it is channelled into production development the result is essentially the same.

The economic reform in the USSR involves the practical task of working out an optimum correlation between the social, collective and personal interests of the working people, which is the basis for increasing their productive and creative activity, and for drawing broad masses of working people into production management.

Cost accounting in the USSR is practised not only in the lower division of the economic system—at enterprises and associations. The apparatus for direct production management is also increasingly involved in the sphere of cost accounting. In view of the nature of the cost accounting principle, the latter can be defined as a method for the economic management of enterprises and associations. The principal feature of this management is a combination of planned direction by the state with freedom of operation for enterprises attaining added economy by ensuring efficient performance.

The specific features of cost accounting are manifested in the basic principles of its organisation. These principles include freedom of operation

and economic independence of enterprises operating on a cost accounting basis; greater emphasis on material encouragement of workers and collectives of enterprises for developing production and fulfilling plan assignments; the use of commodity-money relations for exercising financial control over the operation of individual production units.

While cost accounting as a factor of the independence of enterprises finds expression in their economic and financial interrelations, which constitute a definite form of cooperation and association, inside enterprises commodity-money relations (in terms of sales and purchases) are absent. In the latter case, the cost accounting principle of operating shops, sectors and teams is expressed in two factors—production costs, and the direct relationship between labour remuneration and its final results.

Enterprises, associations and other independent production collectives are “social organisms” under the socialist system. It may be added that they are directly social organisms by virtue of their inseparable links with social production as a whole.

The new economic reform in the USSR is not confined to improving the system of economic planning and management. Such measures as improvement of the system of forming the funds of enterprises, leaving a considerable share of net income at their disposal, the promotion of contractual relations between enterprises, the expansion of credit relations, introduction of the principle of payment for assets, etc., open up a new stage in the development of cost accounting relations in the socialist economy.

At present, the main trend in the development of organisational forms in Soviet industry is the establishment of production associations. This tendency reflects the desire to secure the most rational forms of managing the primary units of production and industry as a whole in accordance with the level of the productive forces. The experience in the operation of associations, and their increasingly wide spread are evidence of the effectiveness and vitality of these forms of production management.

This practice began with the establishment, in 1961, of a number of firms in Lvov Region, in the Ukraine. The idea of amalgamating related enterprises into firms was not new. Back in the twenties, much was done to organise a wide network of trusts and syndicates. Associations were also set up in later periods. After 1961, however, this work was given a more definite scientific orientation because of the urgent need to improve the managerial system and to amalgamate enterprises in individual branches of industry.

The process of amalgamation of enterprises, which began in the light and food industries has now extended to the building, chemical, engineering and other industries. In 1970, the USSR had about 1,400 associations incorporating more than 14,000 industrial enterprises with a total employment of 7.7 million. Of these 520 are firms, and more than 870 trusts and combines. The biggest number of associations, 278, is in light industry. In the food industry they number 157, in the

meat-packing and dairy industries 170, and in the coal industry 92.

The setting up of industrial associations in the USSR serves the purpose of ensuring a maximum efficiency of investments and an ever fuller satisfaction of the growing requirements of all members of socialist society.

In the beginning, the main purpose of associations was to raise the level of production concentration and the efficiency of the managerial system. At present, the amalgamation process is connected with the organisation of large production and economic complexes capable of performing the functions of a middle link in the management of industry.

A contemporary socialist industrial association is the highest form of concentration and centralisation of production and management. The character and direction of the development of this form are determined by a large number of production, organisational, social and other factors. This intricate process can no longer be described simply as concentration of production, because other complex phenomena manifest themselves in it.

Concentration of production regarded from the socio-economic viewpoint is inseparably connected with centralisation of production and management. The widening of the scope of production takes the form of enlargement, through amalgamation, of enterprises, as a result of which the level of production concentration rises. Concentration may also be effected through the amalgamation of enterprises into a production complex. In this case, individual types of

production and managerial functions are centralised within the framework of an association.

Centralisation of production management depends to a much greater extent than concentration of production on the socio-economic conditions. It creates the prerequisites for attaining a qualitatively new level of concentration. By intensifying concentration of production, it accelerates and widens the reproduction process.

The processes of concentration and centralisation are differently influenced by subjective and objective factors. While concentration of production is largely the result of the operation of the objective factors of production development, centralisation is more susceptible to the influence of subjective factors. Concentration of production is more connected with the technico-economic aspect of production; centralisation depends on its socio-economic aspect, the character of regulating the production process.

The basic principle of managing the socialist economy is democratic centralism. The efficiency of centralised management largely depends on a proper correlation between concentration of production and centralisation of management. Measures to concentrate and centralise production (establishment of production complexes of varied types) in the USSR provide a good basis for increasing the efficiency of centralised planned management. Scientific standards of planned management are raised through extending the independence of enterprises while the fundamental problems of economic development are tackled by the central agencies. Large production associations, which are a new middle link in management, can also make effective use of their

possibilities and rights in the field of technical progress, marketing, introduction of electronic computers, etc. What has been said is particularly important for understanding the essence of the economic processes taking place in the USSR and contributing to the dynamic character of production organisation, and to the improvement of forms and methods of management.

The establishment of associations does more than intensify concentration and centralisation of production. Experience shows that these processes are inseparably linked with an increased specialisation of production. The reason is that an increase in the level of concentration yields the greatest effect in case of narrow specialisation. This is because an industrial association is a production complex consisting of enterprises which belong, as a rule, to one industry and have a common managerial apparatus.

Scientific substantiation of a particular variant of organising an association rests on major factors common to productive activities of enterprises constituting an association. These basic factors, irrespective of the type of association, include identical designs and production processes, which provides the prerequisites for increasing production specialisation within the framework of an association; identical production facilities consisting of a definite quantitative and qualitative combination of machines, equipment and other plant at an enterprise; identical types of production personnel, which facilitates an increase in labour productivity; identical materials used in production, which makes possible a more effective utilisation of available resources.

Soviet associations of the "trust" type incorpo-

rate, as a rule, enterprises manufacturing products of the same kind and having a managerial apparatus isolated from enterprises. As applied to an association, this term is provisional indeed. Its use is explained by the fact that within the framework of a "trust" type association, a number of modifications are possible in the composition of enterprises, their territorial distribution and organisation. Despite the differences in the level of centralisation of production and management, the principle on which associations of the "trust" type are based is the same.

Associations of the "combine" type incorporate enterprises connected by the sequence of operations in processing raw materials and manufacturing end products. In contrast to them, an association of the "firm" type incorporates, as a rule, enterprises of one industry connected by relations of cooperation in manufacturing products of the same kind. Within a firm, the managerial apparatus of the biggest central enterprise manages the operation of the association as a whole.

This classification of associations has been drawn up in keeping with the type of the internal production and economic links and with the level of concentration and centralisation of production and management. In addition to several basic types of industrial associations, agrarian-industrial, scientific-industrial, and industrial-commercial complexes are being set up in the Soviet national economy.

An association is regarded as a system consisting of a number of production units—enterprises with varied degree of independence. The formation of an association is not a mechanical assem-

bly of related enterprises under a "common roof". Not every association can ensure efficient operation of enterprises. If enterprises of different specialisation scattered over a wide territory are included in an association, the efficiency of the association will be sharply reduced. Territorial associations are usually set up in regions of heavily concentrated industry. Violation of this rule leads to inflation of the managerial apparatus and less efficient management.

A major problem of management of enterprises belonging to an association is to establish an adequate degree of centralisation of managerial functions. Here, wide opportunities are available for the functional specialisation of managerial bodies. Centralised performance of these functions within the framework of the association ensures actual economic interconnection and interdependence between all the enterprises and organisations of the association, thus making of the association a factually rather than formally integrated production system.

In working out a new system of management, account is usually taken of the fact that the former system of managing enterprises of the association was formed having in mind the specific features of production development. Therefore, in the course of organisational reconstruction all the positive elements of the former system are preserved.

It should be noted that a functional approach to individual types of managerial work prevails within associations. This is connected with its partial centralisation and differentiation which ensure more effective performance of manage-

rial functions. The concrete forms of centralisation and differentiation of managerial functions depend on the specific features of the industry, the type of association, etc.

Such functions as implementation of a single technical policy, supply, marketing, etc. are performed by the managerial apparatus of the association. Whenever necessary, specialised agencies are set up to exercise certain managerial functions. For example, with a large volume of capital construction a directorate for the construction project is set up.

Also widely practised is the placing of individual functions within the competence of one of the enterprises, which discharges them in the interests of all the other production units of the association. Typical instances are the repair of equipment, personnel training, etc.

One of the basic functions of the association's managerial apparatus is the organisation of the marketing of manufactured goods. Under socialism, marketing is preceded by thorough technical and economic investigations which cannot be carried out by an individual enterprise with adequate efficiency. There are different organisational forms of centralised marketing. In certain cases, the function is entrusted directly to the managerial apparatus. Not infrequently marketing organisations are set up on a cost accounting basis particularly when the work of making contracts is centralised within the association. For example, at the Orekhovo-Zuevo and Glukhovo textile associations in Moscow Region contracts for product deliveries are concluded not by individual enterprises but by the marketing departments and sales depots which operate at

the associations on a cost accounting basis. This system is fairly effective. At the Orekhovo-Zuevo association the number of managerial personnel required has been reduced by more than 40 through centralising marketing functions.

Despite the fact that the management of an association is to a certain extent the product of combining the former functions of enterprises amalgamated in the association, it does not represent a simple sum total of these functions.

In the management of an association planning and organisational trends of activity prevail, whereas the management of an enterprise is characterised by operative control tendencies. The major functions of the managerial apparatus of associations include drawing up long-range development plans and plans for introducing new technology and equipment; plans for developing specialisation on the basis of broad inter-factory cooperation; organisation of advertising; personnel training; introduction of modern managerial methods, etc. The establishment of associations provides favourable conditions for a broader application in production management of economic methods and electronic computers.

The optimum volume of functions to be performed by the apparatus of an association largely determines the composition and size of resources and funds put at its disposal and actually predetermines the character of cost accounting relations within the association. Experience indicates that the centralisation of managerial functions within an association is above all in the interests of the enterprises belonging to it. Centralisation of functions is not intended to restrict the rights of enterprises but to relieve them of a number of

functions whose performance at enterprise level is inefficient. The degree of their independence is determined by the character of production development and the need for achieving greater efficiency of management.

The promotion of democratic principles in production management finds its concrete expression in the setting up of boards of directors to deal with the principal aspects of the activities of associations. The range of problems subject to consideration by the board of directors is fairly wide and includes draft current and long-range plans for developing the association, draft norms for outlays to the incentives fund, outlays for the construction and maintenance of public service institutions, etc. Although the board of directors functions in a purely advisory capacity the experience of many associations shows that its work is effective. Thus, while observing the principle of one-man command, the democratic principles of managing the national economy are promoted while implementing the new economic reform.

THE ECONOMIC REFORM AND ITS EFFECTIVENESS IN IMPROVING MANAGERIAL SYSTEMS

The economic reform being implemented in the USSR signifies a new approach to the problems of economic development and the direction of economic processes. This new approach consists, first and foremost, in revising the methods of industrial management. In place of the territorial management bodies—the national economic councils—industrial ministries directing the op-

eration of definite branches of the national economy have been set up. Territorial management of the economy gave rise to a multi-step system of management which resulted in a certain decline in the efficiency of control of enterprises. In this situation, the advantages of the socialist economic system were not utilised in full.

Industrial ministries work in a situation where emphasis has been shifted to economic methods of production management and where the rights of enterprises have been extended considerably.

In the course of the economic reform the methods of planning are being improved. For this purpose, the number of plan indicators fixed for enterprises has been substantially reduced, and some of them have been replaced with new, more progressive indicators. For example, instead of the former indicator for gross output by which the efficiency of an enterprise was assessed, a new indicator has been introduced, based on the quantity of marketed products. This indicator presents a more comprehensive picture of the quantitative and qualitative results of the operation of an enterprise. In addition to the quantity of marketed products, the following indicators are fixed for enterprises: assortment of major items, labour remuneration fund, labour productivity, profit and profitability. What is more, enterprises are given assignments for centralised capital investments, expansion of fixed assets, introduction of new technology and equipment, and the volume of centralised material and technical supplies. The new system of planning adds considerably to the economic independence of enterprises in utilising capital

investments, improves the system of price formation, etc.

Of great importance for raising production efficiency is the enhancement of economic encouragement of the personnel of enterprises. For this purpose, special funds are set up at factories and plants, an incentives fund and a fund for financing socio-cultural functions and housing construction. The size of these funds is directly related to the results of the work of the enterprise: the better the results and the higher the profit, the larger the funds and the greater the material and cultural benefits derived from the funds by factory and office workers of enterprises in addition to their wages and salaries. This is an important factor for raising labour productivity and improving product quality. Monthly bonus payments, lump-sum payments and annual awards amount to 30-40 per cent of basic earnings at many enterprises.

As we see, the economic reform is directed at heightening the material interest of the personnel of enterprises in the results of their work. It has ensured the coincidence of interests of the state, the collectives of enterprises and every individual worker and is accordingly a reliable guarantee of a continuing rise in production efficiency.

At present, two tendencies in distributing managerial functions are in evidence. The first consists in the transfer of a number of organisational functions from enterprises to associations; the second, in the handing over of individual functions by ministries to associations. The second tendency is of special importance because

the future of the new associations and the efficiency of the sectoral system of managing industry as a whole depend on the correct solution of problems arising in this process.

As a result of switching in 1965 from the territorial to the sectoral principle of managing Soviet industry, two and three-stepped and, in individual Ministries, five-stepped systems of management made their appearance in various branches of industry. Several basic schemes of production management may be singled out: ministry—central board—enterprise (two-stepped system), union-republican ministry—republican ministry—central board—enterprise (three-stepped system); union-republican ministry—republican ministry—central board—trust—enterprise (four-stepped system).

Of the 32,000 industrial enterprises surveyed, 13,000, or 41 per cent, are now managed under the two-stepped scheme; 11,000 (34 per cent) under the three-stepped scheme, and 7,700 (24 per cent) under the four-stepped scheme. A total of 471 enterprises are directly subordinated to ministries. For instance, the Moscow Motor Works (ZIL) and the Gorky Motor Works (GAZ) are directly subordinated to the Ministry of the Automobile Industry, the Magnitogorsk and Kuznetsk steel-making associations, to the Ministry of Ferrous Metallurgy, etc.

Now when associations have become the main link of management, the schemes of industrial management undergo modifications by virtue of considerable production differences between them. In every specific case, the sectoral forms of management are modified after careful study and scientific substantiation.

The establishment of effective production complexes in the form of associations is carried out both at union and republican level. This is closely associated with the elaboration of the general structure of management of a whole branch of industry, of which the most important step is the republican sectoral ministries. The ministries of the Union Republics have played an important role in reconstructing the management of industry on the sectoral principle.

With a view to completing reconstruction of the managerial system of industry and eliminating its multiple steps and dual subordination of some of the enterprises, a number of industries are considering the question of abolishing certain intermediary steps of management and of setting up, on the basis of republican sectoral ministries, territorial production associations operating on republican level.

In setting up such associations, the list of enterprises to be included in them is specified. This means that the existing classification of enterprises according to subordination is being revised not only within the framework of individual ministries but also between ministries. The question of revising the existing scheme of sectoral management will also be solved in the foreseeable future. This will lead to the amalgamation of a number of existing ministries or the institution of new ones.

In reorganising the middle step of management great attention is paid to rationalising management, and making it clear to what extent ministries can interfere in the affairs of individual enterprises and associations. Production units are thereby safeguarded against unwar-

ranted interference from sectoral agencies, ensuring that they have favourable conditions for efficient operation. It is envisaged, in particular, that individual functions of ministries in relation to enterprises be handed over to associations. In this way, a number of problems are to be solved. First and foremost, the work of the ministries will be facilitated and improved. They will be able to concentrate on the cardinal problems of developing the industry as a whole. At the same time, the efficiency of direct control of enterprises by governing bodies will be increased. Now, an association will be conducting this control. And this is particularly important.

Improvement of the middle step of management involves redistribution of functions, rights and duties at all levels of management, above all at association-ministry level. Correspondingly, the ministries concentrate on solving long-range problems of developing the industry as a whole, on carrying out major tasks on sectoral level, and on defining the main trends of technological progress. The volume of managerial work is reduced to a minimum. In the obtaining situation, the bulk of work involved in day-to-day production management is taken over by associations. This, in turn, will inevitably lead to a redistribution of functions among the enterprises of the association. Under the new system, many of these functions will be carried out in a centralised manner, which will make it possible for the enterprises to concentrate their efforts on production problems: the manufacture of high-quality products, advancement of production standards, better utilisation of fixed assets, etc.

The establishment of associations largely affects the functions of planning. This is manifested in the increasing differentiation of plan functions and, in particular, in the changed scope of planned regulation of production at different levels of management. Planning is the key factor in managing the national economy. Therefore, the general state plan retains the prerogative of fixing the targets and formulating the principal tasks of economic development. At the same time, the functions of current management of production are gradually transferred to the level of primary production units and their associations. In this connection, there has arisen the need for finding a rational correlation between plan decisions taken at the centre and decisions taken at enterprise and association level.

The main trend in improving management today is not overall reorganisation but gradual systematic work in improving individual structures of management and adjusting their functions in accordance with the demands of production development. No one has doubts about the need for drawing up a single state plan envisaging the principal measures to improve the managerial system of the national economy. Measures to improve the management of industry, based on the sectoral plans of all-union ministries and departments, have become a major section of this plan. For example, the USSR Ministry of the Coal Industry has drawn up a general scheme for improving management of the coal industry. The scheme provides for enlargement of low-productive sections and small and medium-size enterprises, transfer of enterprises to a department-free structure of management, simplifica-

tion of the managerial structure by abolishing intermediate steps, further specialisation and centralisation of the management of auxiliary services, and introduction of economic methods at all levels of management in industry. This work is carried out in the USSR not as a short-term "campaign" but as a planned, properly substantiated and consistent process.

The formation of associations and improvement of production management are among the most important measures being taken in implementing the economic reform in the USSR. The basic problem, which has existed at all stages of advancing the management of the Soviet national economy, is to achieve the best system of managing the economy. At present, special emphasis is being given to the use of economic levers in production management, and in this connection to the development of more rational variants for the economic encouragement of production with due regard to the specific conditions of the operation of production units. This is why in improving management stress is laid on the principles of cost accounting and material encouragement.

Cost accounting from the viewpoint of organisation is best expressed in the freedom enterprises enjoy in their day-to-day production activities, in their right to manage independently the property entrusted to them as part of the general stock of socialist state property. The degree of independence of production units in day-to-day economic activity was different at the different stages of economic development in the USSR. This was due to substantial changes made at different times in the organisational structure

of the socialist economy, changes which were invariably dictated by the growth and consolidation of socialist property, advancement of planning, promotion of the cost accounting principle, and changes in the specific tasks assigned to every unit.

The economic, administrative and legal independence of industrial enterprises and associations, by virtue of a certain contradiction between the need for centralised management and for the economic independence of enterprises under the system of socialist commodity-money relations, calls for the solution of a number of problems involved in establishing a proper relationship between administrative and economic methods of production management. The character of economic inter-relations within industrial associations depends to a decisive extent on the optimum combination of these methods.

The emergence of industrial associations has provided favourable conditions for extending cost accounting relations outside the framework of individual enterprises. The reason is that the association is not a specific hierarchic step of management, nor is it an intermediate stage, but an optimally organised production system operating on the basis of a broad application of economic methods of management, above all, the method of cost accounting.

The establishment of associations led to a modification of the organisational structure of the primary production unit. This gave rise to changes in the economic relations between individual divisions of production. These changes are effected both for developing the economic ties associations maintain with one another and with su-

perior bodies, and for improving the economic links within the associations themselves.

The development of economic ties between associations and with superior bodies is being effected along the line of granting associations wider rights in the use of material, labour and financial resources. Improvement of the internal economic links takes the shape of introducing effective forms of cost accounting at various production units, taking account of their specific position within the association.

Cost accounting does not mean a simple summation of the results of the productive activities of enterprises making up associations. The cost accounting principle in the USSR is coming to signify a new qualitative stage of management that makes use of economic methods. The formation of associations operating on a cost accounting basis opens up broad opportunities for raising production efficiency. It serves to increase the responsibility of workers and leading executives of associations for the economic results of their work, and to heighten their interest in using all ways and means necessary for efficient production performance, in concentrating available means and planning their use in the most rational way, and in applying material incentives on a wider scale.

The cost accounting principle of operating an industrial association is based on many factors. The most important of them are freedom of action in the day-to-day management of production in fulfilling programmes; financial self-reliance of the enterprises making up the association; the setting apart of centralised means of the association in the form of the funds which vary in

size with the results of the production and economic activities of enterprises; reimbursement by the constituent enterprises of the costs involved in maintaining the managerial apparatus; incentive payments out of the association's centralised funds to personnel of enterprises and organisations engaged in work of special importance for the association as a whole; responsibility of the association and managerial workers for incompetent decisions detrimental to subordinated enterprises and organisations.

The forms of cost accounting employed by associations vary with the types of industries. However, in all cases, centralisation of major managerial functions requires material, technical and financial resources to be put at the disposal of enterprises to enable them to discharge these functions. For this purpose, special funds and reserves are set up within associations.

In addition to the partly centralised incentives funds, the system of reserves and funds of an association includes a reserve fund for financial assistance, a technological development fund, a fund for mastering new technology and the manufacture of new products, and a depreciation fund for capital repairs. The structure of the reserves and funds and the size of each of them are established taking into account the specific conditions of work.

The reserves and funds set up at associations and central boards provide the wherewithal to solve questions highly important for developing production and, in particular, they facilitate the implementation of current amendments in the approved plans of enterprises.

The major condition for an effective operation

of the cost accounting principle within an association is the development of a system of accurately determined standards and rates to regulate both the work of the association itself and the production activity of its constituent enterprises.

As noted above, the forms and methods of cost accounting used at enterprises cannot be mechanically applied to other units of sectoral management within the framework of industrial ministries, because these units direct the operation not only of industrial enterprises but also of research, design and other cost accounting organisations.

Whatever the structure of industrial associations, the income they derive from the marketing of their products is sufficient, in most cases, not only to meet current production costs but also to meet the costs of research, design and other operations connected with technological progress. It also covers to a considerable extent the capital investments needed for expanding production. Thus, state budgetary appropriations for capital investments and other purposes are reduced to a minimum. In the associations, fullest expression is given to the principle of financial self-reliance as the basic principle of cost accounting.

From the theoretical viewpoint, an ideal body of management uses all available economic levers and feels all the results of its activity. This principle lies at the basis of associations, since the effective forms of interdependence between the performance of enterprises and the material encouragement of the managerial apparatus predetermine, in the final analysis, the efficiency of most measures to improve the management of associations.

Lenin repeatedly emphasised the need not only for moral but also for material encouragement of managerial workers. For example, in the draft directives of the Politbureau on the new economic policy to be implemented in Russia after the end of the Civil War, he wrote: "... the Political Bureau requires that bonuses be instituted for the largest possible number of persons holding responsible positions for speedily increasing output and expanding both home and foreign trade." (*Lenin. Coll. Works*, V. 33, p. 198).

Incentives for managerial workers in the USSR are provided from an incentives fund which is formed by associations out of the profits of their enterprises. Bonuses are paid from this fund according to the performance of an association for a month, a quarter-year, or a year, and in the form of lump-sum awards. The efficacy of the incentive payments is all the greater the closer the amount of a bonus is related to the volume and labour-intensity of functions discharged by the managerial staff. In all cases, however, the size of a bonus is directly related to the performance of the enterprises making up the association. Experience has proved the effectiveness of a cut-back in the total sum of bonuses to managerial workers if their enterprises have failed to fulfil their plans. In the "Sigma" association, for example, bonuses to managerial workers are reduced by five per cent for each enterprise failing to fulfil its sales or profits programme. Application of this principle serves to promote the efficiency of the association as a whole and of each of its constituent enterprises.

The effectiveness of the economic reform in operation in the USSR is obvious. Even the ini-

tial effect produced by revealing and using additional production reserves in the first year of operation on the new principles—when just a few enterprises had been transferred to the new management and planning system—was striking. For example, the increment in product sales amounted to over 11,000 million roubles. Profits increased by 3,500 million roubles and additional payments to the state budget, by 1,200 million roubles. The average annual growth rates of the national income in the eighth five-year plan period (1966-1970) exceeded by more than one point those in the preceding five-year plan period. This made possible a 33 per cent increase in per capita real income in the 1966-1970 period as against 19 per cent in 1961-1965.

In the eighth five-year plan period, an appreciable acceleration in the turnover of circulating assets was achieved, which enabled their reduction by almost 4,000 million roubles. As a result, the profitability level of industrial production in comparable prices increased from 16 per cent in 1965 to 20.5 per cent in 1969.

The effectiveness of measures to improve management is graphically illustrated, in particular, by the experience of the Ministry of Machine-Tool and Instrument Making. During the 1969-1970 period alone, the Ministry released more than 12,000 employees from the managerial apparatus and curtailed annual managerial expenditure by 24.5 million roubles through improving the managerial system. This involved enlargement of 774 structural units, including 196 shops and 169 departments. A department-free managerial structure was introduced

at one out of every four enterprises of this industry. The number of leading factory executives was also reduced.

The efficiency of the new production planning and management system is illustrated by the experience of the "Electrosila" association in Leningrad. In the 1966-1969 period, it increased production by 30 per cent, and profits by 110 per cent. With a 9 per cent growth in manpower employed at the association (much less than in the industry as a whole), labour productivity increased by 32.4 per cent. Batch production at the factories of the association doubled and the level of specialisation became much higher. A great saving was effected by centralising the production of castings, welded structures, forged articles, and tools. For example, at the "Sigma" instrument-making association, centralisation of production and equipment made it possible over the same period to cut down the costs of manufacturing non-standard measuring instruments. The production cost dropped by 20-30 per cent, and labour productivity increased by 100-150 per cent.

Great savings were effected by the organisation of associations in the oil-refining industry. As a result of setting up the "Kuibyshevneft" association, the managerial offices of seven oil-drilling enterprises, eleven oil-fields and 51 oil-producing and drilling sections were abolished. This enabled the release of over 1,000 workers and a saving of 1.3 million roubles in the annual labour remuneration fund.

The introduction of automated systems of factory management, saving 20 to 60 kopecks and more per rouble of annual spending, is particu-

larly effective. The size of the general (calculated) saving in individual systems is fairly stable, ranging between 150,000 and 600,000 roubles a year. Other important indicators of efficiency are also favourable.

Within the framework of associations it becomes possible to render assistance to smaller enterprises with less developed production facilities. In particular, within associations incorporating so-called leading enterprises—which have, as a rule, better-qualified technical personnel, more advanced technology, better tools, and repair and experimental facilities—branch enterprises receive all-round support and assistance in accelerating technical progress and in improving their performance. For example, the Likhachev Motor Works in Moscow, in 1969 alone, invested 9.7 million roubles from its economic development fund in industrial construction and the purchase of equipment for its branches in other towns. Specialists of the enterprise regularly assist peripheral enterprises in matters such as the introduction of advanced technology, the scientific organisation of labour, etc.

In connection with the question of increasing managerial efficiency, analysis of the size of managerial staffs at associations is of great interest. Upon the establishment of associations, a certain increase in managerial personnel is observed. The rates of increase in managerial staffs, however, are usually lower than those of production personnel—particularly engineers and technicians—in the industry as a whole.

Numerous facts can be adduced to illustrate the efficiency of measures to improve economic management, but one conclusion clearly sug-

gests itself. Under socialism, all the necessary objective conditions exist for maintaining the managerial system permanently at a high level of economy and efficiency. The main road to this goal is the improvement of the scientific foundations of the managerial system on the basis of the latest achievements in production technology and organisation.

SUMMARY

The Soviet Union is successfully coping with the fundamental problems involved in promoting the socialist economy. As was reported at the 24th Congress of the CPSU, the central task of the ninth five-year plan (1971-1975) is to ensure a considerable rise in the material and cultural standards of the people by ensuring high rates of the development of material production, its heightened efficiency, scientific and technological progress and accelerated growth of labour productivity.

A further enhancement of the efficiency of social production in all the branches and spheres of the national economy is the main direction of Soviet economic development. Advancement of economic management is the most important aspect of economic policy today. The Communist Party of the Soviet Union has outlined the task of organising still better the activity of Soviet society so as to accelerate economic and social development and ensure the fullest possible utilisation of all possibilities available for this, to unite even more closely and lead forward hundreds of thousands of collectives and scores

of millions of working people to the attainment of the main goals of economic policy.

The wider enlistment of the working people in production management is one of the central tasks in increasing the efficiency of the Soviet economy. In his report to the 24th Congress of the CPSU, L. I. Brezhnev said: "What we must achieve is, as Lenin emphasised, that every working person, every politically conscious worker should feel he is not only the master in his own factory but that he is also a representative of the country." (*24th Congress of the CPSU*, p. 84).

Improvement of the system of planning and managing the national economy at present requires a broad application of econometric methods, and extensive use of electronic computers and business machines. Owing to the advantages of the socialist economic system, enabling direction of economic and social progress on a nation-wide scale, the extensive use of computers will make it possible to improve the scientific validity and practical accuracy of plans, and to find optimum solutions to major problems of the national economy.

The construction of the material and technological basis for communism requires an all-out effort to raise labour productivity on the basis of the latest achievements in science and technology. This can best be done by increasing the material interest of individuals in both the social and personal results of their work.

The advancement of the Soviet system of economic management is based on the Leninist principle of democratic centralism. This principle implies a combination of centralised man-

agement with the broad initiative and creative ingenuity of all the production units of the socialist system in order to ensure the successful solution of the problems facing socialist society.

The changes occurring in the course of the current revolution in science and technology affect all the elements of production. We are witnessing the emergence and development of new branches of production replacing or revolutionising old ones, and an increasing differentiation of the sectoral and production structures and its growing capacity for a flexible and prompt response to the appearance of new demands and at the same time for speeding up the rates of renewing production.

The progress of science and technology, and of the organisation of production and management provides the material foundation for social progress in general. To prove in practice the superiority of socialism over capitalism in all fields of development, including efficient economic management, is of paramount importance for social and economic progress throughout the world.

Б. Г у б и н

ЭФФЕКТИВНОСТЬ УПРАВЛЕНИЯ
СОЦИАЛИСТИЧЕСКИМ ПРОИЗВОДСТВОМ

на английском языке

Цена 34 коп.

