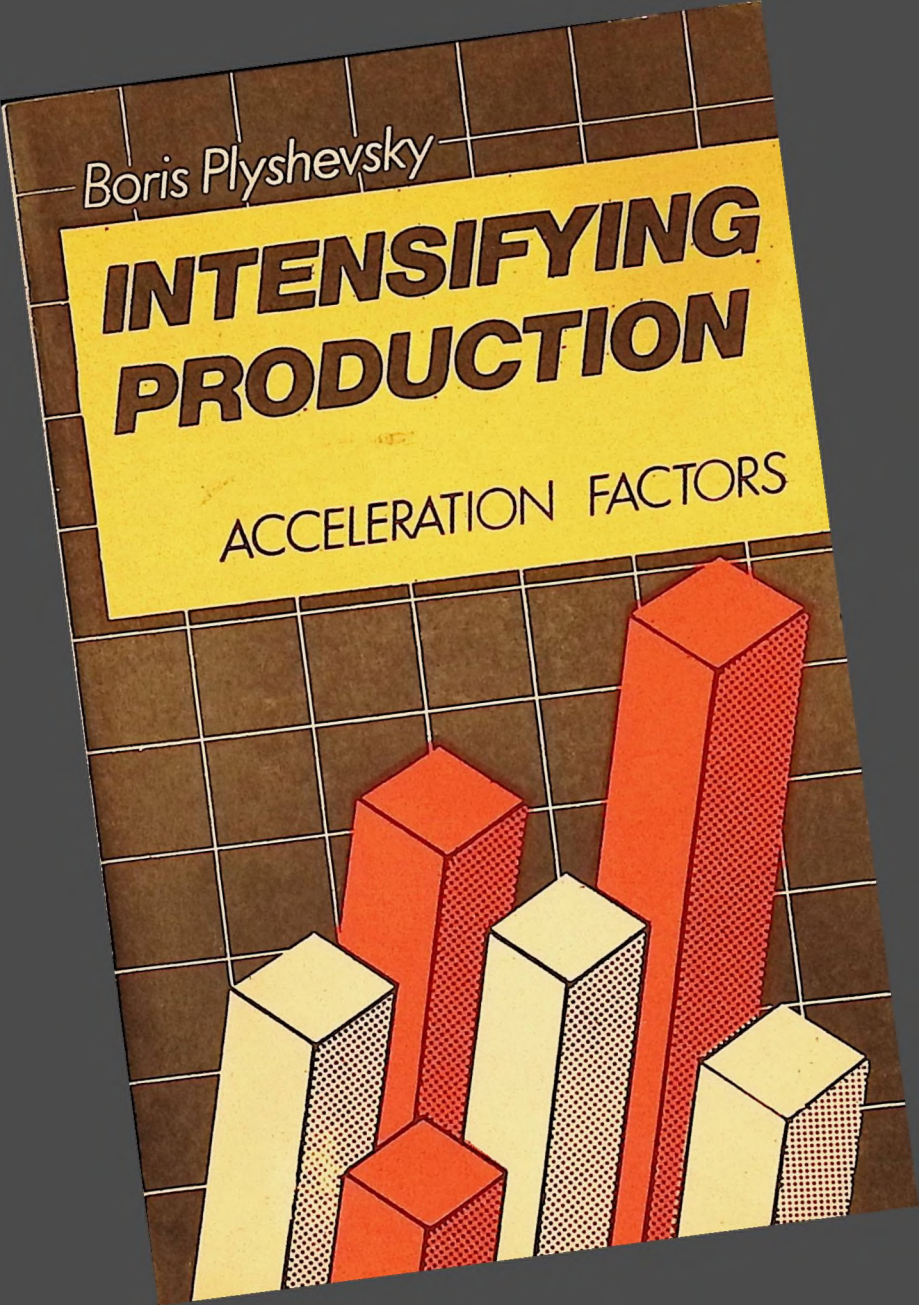
Boris Plyshevsky

INTENSIFYING PRODUCTION

ACCELERATION FACTORS



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The 27th Congress of the CPSU defined all-round intensification of production as the pivotal problem of the Party's economic strategy.

The author analyses every aspect of the problem: the results of the past five-year period, in which intensification also played a crucial role, the difficulties that have arisen in the development of the Soviet economy, the factors of intensification and the formation of its mechanism.

The pamphlet is focussed on the new provisions on these matters contained in the CPSU Programme and the Guidelines for the Economic and Social Development of the USSR for 1986-1990 and for the Period Ending in 2000.

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Contents

Introduction

The strategic line of accelerating socio-economic development mapped out by the 27th Congress of the CPSU is aimed at a qualitative transformation of every aspect of life in the Soviet society. Realisation of that line will carry the Soviet Union forward in the economic, social, political and spiritual spheres.

In order to attain the targets set, the national economy is to be raised to an essentially new scientific, technical and economic-organisational level and switched to the road of intensive development. As a result, the country is to attain the world's highest level of social labour productivity, quality of output and production efficiency, with optimal structure and balance of the integrated national economic complex. This will take several five-year periods to accomplish. By the end of the century, the national income is to be nearly doubled, and the country's production potential is to be doubled and qualitatively renewed.

The 27th Congress defined all-round intensification of production as the pivotal problem of its present-day economic strategy. The new edition of the CPSU Programme says: "A sharp turn is to be made towards the intensification

of production; every enterprise and every sector is to be reoriented towards the utmost and top-priority use of qualitative factors of economic growth."[1]

The answers to the questions posed by life itself are to be found within the framework of socialism and the Soviet system by bringing out the potentialities of the planned economy, socialist democracy, culture and the human factor, relying on the people's creative endeavor. The Party's political line is aimed at making full use of the advantages of the socialist system, removing all barriers and obstacles to the country's advance, and giving full latitude to the factors of social progress.

A broad and deep-going reconstruction is under way in the Soviet Union. Mikhail Gorbachev, General Secretary of the CPSU Central Committee, said: "The changes and reforms mapped out in the resolutions of the April Plenary Meeting of the Party's Central Committee and the 27th Congress of the CPSU amount to a real revolution in the whole system of relations in the society, in human hearts and minds, in the psychology and understanding of the present period, primarily the tasks engendered by rapid scientific and technical progress."[2]

[1] *The Programme of the Communist Party of the Soviet Union*, A New Edition, Novosti Press Agency Publishing House, Moscow, 1986, p. 29.

[2] Mikhail Gorbachev, *Restructuring: Imperative and Comprehensive*, Moscow, Politizdat Publishers, 1986, pp. 36, 37 (in Russian).

In this pamphlet, we have also tried to show the work that was done to raise the efficiency of the Soviet economy in the 1970s and in the 11th five-year period, the place of the intensification tasks in the Party's economic policy, and the continuity in their formulation and resolution, with special emphasis on the new provisions on this matter written into the CPSU Programme, the Guidelines for the Economic and Social Development for 1986-1990 and for the Period Ending in 2000, and the 12th five-year plan drawn up on the basis of these documents, and also the work being done to restructure economic management and economic activity in the country in accordance with the decisions of the Party Congress.

I. SOME RESULTS

Intensification of social production was formulated as an integral part of the CPSU's economic policy in the early 1970s. Let us take a brief look at why that was done and how the task was being fulfilled. An answer to these questions will help to bring out the new elements that have appeared in the content and methods of intensification today.

Let us first give a general outline of the Soviet economy at the turn into the 1970s. The main distinctive feature of that period was an immense growth of the USSR's national economy, its production, scientific and technical

potential. In 1970, industrial output and fixed assets started in the country exceeded the prewar level 12-fold, and the national income produced was 8.7 times the figure for 1940.

As a result, the Soviet Union's share in the world economy had markedly increased. Thus, the share of Soviet industry in world industrial production had nearly doubled in the two decades from 1950 to 1970, going up from roughly 20 per cent to 38 per cent.

The historically arisen gap between the economic development levels of the USSR and the USA, the leading country of the capitalist world, had markedly narrowed down. Soviet statistics has presented internationally compared basic economic indicators mostly since the early 1960s. These show that in 1970 the USSR's national income (a synthetic indicator) was 65 per cent of that of the USA. Its industrial output came to three-quarters of the US total (55 per cent in 1960), and its agricultural output, to about 85 per cent; its freight turnover for all types of transport exceeded that of the USA (in 1960, it was just over two-thirds of the US figure), and the freight turnover in railway transport was 2.1 times the US figure.

In the 1970s, the Soviet Union virtually caught up with the USA in capital investments as well. Although production levels in Soviet industry and agriculture were still lower, the USSR's outlays on the development and technical re-equipment of the economy were roughly as high as those of the USA, and in the produc-

tion sphere, even higher. The USSR's production potential was now comparable with the total production potential of the industrialised capitalist countries of Western Europe taken together.

The production level attained made it possible to devote much greater attention to an improvement of the Soviet people's well-being. For the first time in the history of Soviet five-year periods, the 24th Congress of the CPSU (1971) laid down an improvement of the people's well-being as the main task of the ninth five-year period, emphasising that the newly adopted line would not only be pivotal to Party activity in the five years ahead, but would also decide the general orientation of economic development over the longer term. The line towards the fullest possible satisfaction of the people's material and cultural requirements as the supreme goal of social production under socialism has been reaffirmed in all subsequent Party documents and has been consistently translated into life. It is also reflected in the new edition of the CPSU Programme.

Over the past three five-year periods—the 9th (1971-1975), 10th (1976-1980) and 11th (1981-1985)—the volume of industrial output, the starting of fixed assets, and the national income have all doubled. At the same time, the social motive in the development of production has been strengthened, and more resources have been allocated to improve the people's well-being. Thus, the share of the consumption

fund in the national income was first stabilised and then began to increase. In the 11th five-year period, 74.8 per cent of the national income went into consumption, as compared with 72.3 per cent in the 9th and 73.9 per cent in the 10th five-year period. The development rates of industries turning out producer goods and articles of consumption were evened out: whereas in the 9th and 10th five-year periods output in Group A increased 1.24 times as fast as that in Group B, in the 11th five-year period the ratio was 0.95, that is, the output of consumer goods increased faster than that of producer goods.

There has also been a considerable increase in the share of resources going to develop and strengthen the material and technical base of agriculture, the main supplier of food and of animal and vegetable raw materials. In the past two five-year periods, one-third of all capital investments in the national economy (as compared with 27 per cent in the 8th five-year period) went into the agro-industrial complex, which includes collective and state farms, industrial and other entreprises producing farm machinery, mineral fertilizers, and other technical and producer goods, and also those which process, store and market farm produce.

At the same time, the extensive sources of developing production, which used to play an essential role in boosting output, were markedly exhausted in that period. There was a slowdown, in particular, in the growth of the labour

force, of fuel extraction, production of the basic raw materials, and in capital investments. Thus, in 1971-1985, the total number of workers and office personnel increased by 27.6 million, as compared with 41.8 million in the three preceding five-year periods, with the increment declining by more than one-third. The increment in steel output was almost halved, dropping from 71 million tons in 1956-1970 to 39 millions tons in the subsequent period.

For fuel, the corresponding increment went up from 742 million tons to 915 million tons, mostly through an increase in the output of oil and gas. In 1985, 2.1 trillion tons of fuel (in terms of conventional fuel) was extracted in the country. Almost the whole of the increment was obtained in the newly developed regions of Western Siberia, which over the past three five-year periods have turned into the country's main fuel and energy base. These regions lie far away from the European zone of the Soviet Union, where most of the country's manufacturing is located and where the bulk of its population lives, something that has made fuel transportation much more costly.

Yet another and more significant point was that development of new deposits in remote areas with difficult natural and climatic conditions tends to raise the cost of the fuel itself. From 1967 to 1979, when the wholesale prices of fuel products were reviewed on two occasions, the wholesale price index for such products went up by 72 per cent, while the whole-

sale price index for all industrial goods went up by about 4 per cent. Over the past 15 years, capital investments per rouble of extracted raw materials have doubled and continue to rise, reflecting both the objective causes and the incomplete tapping of reserves in raising the returns on the production potential.

In construction, there was a less noticeable decline in the role of extensive factors. The absolute volume of capital investments continued to grow. In 1971-1985, such investments in the national economy were 2.4 times as high as those in the three preceding five-year periods. But their growth rate was also halved: from 3.8 times in the 6th, 7th and 8th five-year periods to 1.9 times in the 9th, 10th and 11th periods.

A point to note here is that an expansion of capital construction cannot be regarded solely as a sign of extensive development. That would be so if the expansion were carried out on the old technical basis. In actual fact, however, a sizeable part of capital investments always goes to develop and engineer new machinery and technologies, whose use serves to raise the technical standard of production. Here is an apparently typical example: development of the fuel industry by putting on stream new deposits in Western Siberia and other Eastern areas of the USSR. Their development has made it necessary to switch to new methods of oil and gas extraction and transportation, and markedly increased the efficiency of capital investments in

the fuel industries as compared with those going to expand fuel extraction from earlier developed deposits. The effect of capital investments on intensification is even more pronounced in the technical re-equipment of mechanical engineering, metallurgy, the chemical and other basic branches of heavy industry.

Still, the extensive tendencies in capital construction were fairly strong. Thus, the high share of capital investments in the extractive, raw-material industries and agriculture was maintained or even somewhat increased, with a slowdown in the growth of capital investments in industries that are crucial to faster scientific and technical progress, mechanical engineering above all, and insufficient technical re-equipment of existing enterprises. Newly built enterprises were often fitted out with plant and equipment which did not yield any tangible increase in labour productivity. The time it took to build many projects was much too long. There were various miscalculations and shortcomings in structural and investment policy.

The greater attention to the problems of intensification reflects the objective changes in the conditions and factors of economic development in the USSR. The resources required to boost the economy, carry out the social measures planned and raise the Soviet people's living standard could be mostly obtained through higher efficiency, through a significant increase in the volume of production and the national

income per unit of inputs—labour, material and financial.

"The Party's line *towards intensifying production* determines the need considerably to enhance the productivity of social labour and economies in raw and other materials, improve use of production assets, increase efficiency of capital investments through the introduction of new machinery, scientific organisation of production and improvement of methods of managing the national economy."[1] Similar provisions have since been included in the materials of all subsequent Party congresses. The five-year plans drawn up in accordance with their resolutions contained concrete targets in implementing these provisions.

As it was noted at the 25th Congress of the CPSU (1976), the only way to fulfil the diverse economic and social tasks was to boost labour productivity and production efficiency. In view of that, the Guidelines for the Economic Development of the USSR in 1976-1980 approved by the Congress envisaged the need to increase the efficiency of social production in every way, improve the quality of goods, and adopt drastic economies.

The 26th Congress of the CPSU (1981) specified the economic strategy with a view to the country's development conditions in the 1980s. The formula for the main task of the

[1] *24th Congress of the CPSU*, Novosti Press Agency Publishing House, Moscow, 1971, p. 150.

11th five-year period included an acceleration of scientific and technical progress, transition to intensive economic development, more rational use of the country's production potential, utmost economy of all types of resources, and better quality of workmanship.[1] All-round intensification was regarded as a major element in raising production efficiency. In the 9th, 10th and 11th five-year periods, the country's Party, state and economic organisations, production collectives and all the working people did a great deal to implement the adopted policy line. Along with the achievements, however, definite adverse tendencies were evident in the economy. Economic growth slackened, and the economic development targets set by the CPSU Programme and even the lower targets of the 9th and 10th five-year plans were not met. All of that affected the work being done to raise production efficiency, whose main indicators for that period are shown in Table 1.

The table primarily shows a steady increase in labour productivity, the main efficiency indicator. Over 15 years, social labour productivity went up by 71 per cent, including 82 per cent in industry, with an increase in the share of that factor in the national income and output growth. In the 11th five-year period, higher labour productivity accounted for 86 per cent of production growth, as compared with

[1] See: *Documents and Resolutions. The 26th Congress of the CPSU*, Novosti Press Agency Publishing House, Moscow, 1981, p. 167.

Table 1

Social Production Efficiency in 1971—1985

	1975 % of 1970	1980 % of 1975	1985 % of 1980
1. Social labour productivity	125	117	116,5
Share of national income growth from labour productivity growth (per cent)	83	78	87
Labour productivity in industry	134	117	117
Share of industrial output growth from labour productivity growth (per cent)	84	75	86
Labour economies from labour productivity growth in the five-year period (million persons)*			
in the national economy	20	15	15
in industry	10	6	6
2. Economy of material inputs in the five-year period (billion roubles)*	—	11.4	12.4
Gross social product (GSP)	136	123	119
National income produced	132	124	119
National income growth as compared with GSP growth (per cent)	88.9	104.3	100.0
3. Production per rouble of fixed assets:			
national income	87	87	87
industrial output	95	86	87
4. Input cuts per rouble of marketable industrial output (in comparable prices)	—3.1	—0.4	—1.4
5. Circulating assets, total	148	138	144
Gross social product in current prices	134	125	128

* Final year of the five-year period over its initial year.

73 per cent in the 8th five-year period. In agriculture, higher labour productivity accounted for the whole increment in farm produce. The material-intensity of the social product was reduced. Material inputs make up more than one-half of the social product, and their reduction per output unit in 1976-1985 entailed faster growth of the national income produced. The cost price of industrial products kept declining throughout the whole period.

At the same time, the Table reveals the shortcomings in tackling the tasks of intensification. Labour productivity growth rates declined: in industry, the figure for the 11th five-year period was 50 per cent down on the figure for the 9th five-year period. The output-to-assets ratio (output per rouble of fixed production assets) kept declining, and the efforts to slow down that decline were unsuccessful, so that each percentage point of production growth called for ever larger capital investments. The need for such investments grew faster than the resources.

The turnover of material resources was slowing down: production inventories and residual stocks of finished products outpaced production in industry and the national economy as a whole. Turnover circuits for circulating assets, which include material-commodity values and monetary resources, were lengthened.

There was little improvement in the quality of goods. Their quality fell short of the renewal of the material and technical facilities and the

growing requirements of the national economy and the population; as production volumes increased, this discrepancy was ever more evident.

A definite step forward in tackling the tasks of intensification was taken in the past, 11th five-year period. Economic development in that period was marked by positive and negative trends, both new and those going back to the earlier five-year periods.

The targets set by the 26th Congress had to be attained in a situation that was far from simple and, at the initial stage of the five-year period, highly complicated. The adverse economic trends that came to the fore in the 1970s were intensified: production growth rates continued to fall, the qualitative indicators of economic activity deteriorated, and in 1982 the rise in the people's real incomes came to a halt. Production efficiency indicators for the past five-year period are shown in Table 1.

On the whole, the pace of labour productivity growth in that five-year period was roughly the same as in the preceding period, but was attained with a much smaller increase in capital investments. Whereas in the 10th five-year period capital investments in production projetcs were 31 per cent up on the figure for the 9th five-year period, the figure for the 11th period was around 18 per cent. In contrast to the two preceding periods, the volume of construction-in-progress as a percentage of capital invesments was reduced from 87 per cent in

1980 to 78 per cent in 1985 (73 per cent in 1970 and 75 per cent in 1975).

The tendency towards slower growth of labour resources, with smaller absolute increments, which first emerged in the 1970s, persisted in the 11th five-year period. At the same time, labour productivity growth was far from dynamic, and most industries failed to attain the five-year plan targets for that indicator.

The conclusion was simple enough: the rate of labour productivity growth fell short of the formulated tasks, of the actual possibilities for such growth, and the created intensification potential (the technical facilities of production, the availability of material resources and research personnel).

The discrepancy is even more evident on a territorial plane. As Table 2 shows, the dynamics of social labour productivity in 1981-1985 differ markedly from one Union republic to another. Its growth rates in that period were highest where labour productivity in agriculture was considerably increased (Ukrainian, Byelorussian, Moldavian and Latvian Soviet Socialist Republics), and lowest in the republics of Central Asia, where labour productivity in agriculture went down. In the Uzbek, Kazakh and Turkmen Union republics, the overall level of labour productivity did not go up at all.

The influence of rising labour productivity on the increase in industrial output differs widely from one republic to another. That factor accounted for the whole industrial output incre-

Table 2

Labour Productivity Growth in the Union Republics
(1985 as a percentage of 1980)

	Social labour productivity	Labour productivity in:		
		industry	agriculture (social sector)	construction
USSR	116,3	117	114	114
including:				
RSFSR	117	117	120	114
Ukrainian SSR	122	115	121	115
Byelorussian SSR	130	121	143	118
Uzbek SSR	100,3	108	87	104
Kazakh SSR	100	110	91	113
Georgian SSR	120	119	114	120
Azerbaijanian SSR	111	121	103	111
Lithuanian SSR	124	120	140	112
Moldavian SSR	125	118	117	110
Latvian SSR	119	118	126	118
Kirghizian SSR		119	92	108
Tajik SSR	101	106	90	108
Armenian SSR	119	117	116	123
Turkmen SSR		105	91	115
Estonian SSR	115	114	105	116

ment in Latvia and Estonia, 94 per cent in the RSFSR, 83-85 per cent in the Ukraine and Lithuania, and 75 per cent in Byelorussia, Azer-

baijan and Kirghizia. At the same time, the Uzbek, Tajik and Turkmen Republics mostly expanded their industrial production through an increase in the number of employed. In Kazakhstan and Armenia, such an increase accounted for 42-50 per cent of the industrial output increment. That is to some extent due to the peculiarities of the territorial balance of labour, the rapidly growing population of working age in the republics of Central Asia and Transcaucasia, and the availability of the labour resources that are not employed in social production. But what is even more important here is the slow rise in the technical standard of production and the flaws in labour organisation which reduce labour productivity.

Let us emphasise the *strengthening of positive trends* in the work being done to raise the efficiency of socialist economic activity in the second half of the 11th five-year period, trends which developed along most lines of intensification. A comparison of the main indicators showing the efficiency of social production in the first and second halves of the 11th five-year period (average annual increments, per cent) gives a good idea of the changes and their scale:

	1981—1982	1983—1985
Social labour productivity	2.9	3.2
Share of national income growth from labour productivity growth	81	93
National income produced per rouble of fixed assets	—3.0	—2.5

Metal-intensity of the national income produced	—3.0	—1.3
Power-intensity of the national income produced	—1.7	—0.8

In 1983-1985, labour productivity growth in the national economy accelerated, the share of that factor in the national income increment went up, and the decline in the output-to-assets ratio somewhat slowed down. In railway transport, labour productivity growth accounted for the whole increase in carriage, whereas in the preceding two years that increase resulted from a growth in the number of employed. In construction, higher labour productivity in the three years yielded 94 per cent of the increase in construction-and-erection work, as against 88 per cent at the beginning of the five-year period.

More attention was devoted in every industry to saving material resources. In 1983-1985, 1.5 times as much boiler and furnace fuel as at the beginning of the five-year period was saved throughout the national economy, 2.5 times as much electric power, and 1.7 times as much rolled ferrous metal. From 1981 to 1985, the total saving in fuel, power and rolled ferrous metal made up one-half of the increase in their consumption. But the results attained in reducing the material-intensity of output in the second half of the five-year period are more modest.

Here are some figures for industry to illustrate the changes along other lines of intensifi-

cation (average annual rate of change, per cent):

	1981—1982	1983—1985
Labour productivity	2.4	3.6
Share of output growth from labour productivity growth	77	92
Wages growth per 1 percentage point of labour productivity growth	1.18	0.65
Output per rouble of fixed assets	—3.4	—2.3
Reduction in output costs	—0.1	—0.4
Changes in profitability	0.2	—0.2
Ratio of output growth (in comparable prices) to circulating assets growth in material-commodity stocks	0.26	0.72

In industry, the leading sector of the economy, the positive changes in economic efficiency are much more pronounced. In 1983-1985, average annual rates of labour productivity growth were 50 per cent up on the figure for the first half of the five-year period. Labour productivity was now growing faster than wages. The decline in the output-to-assets ratio was slowed down by about one-third, and the reduction in output costs was accelerated four-fold.

But the burden of shortcomings that had accumulated over a long period was so great that it proved impossible to get rid of these in a short time. The various measures that were taken could not break the negative tendencies

or put the economy on the road of steady and dynamic growth. This called for fundamental transformations, for in-depth restructuring, and the Communist Party of the Soviet Union kept looking for radical solutions to the country's problems.

The nature and causes of the adverse economic and social trends and of the omissions in political and practical activity were brought to light in the CPSU Central Committee's Political Report to the 27th Party Congress. The in-depth analysis of the causes behind the lag that had been allowed to develop focussed on subjective factors connected with the marshalling of reserves, the efficiency of management, labour discipline, and attitudes to work.

Over a period of years, problems were mounting faster than they were being solved, which was due both to objective factors and, first and foremost, to subjective ones; life in the society began to show signs of stagnation. These appeared because the changes in the economic situation and the need for profound transformations in all spheres of life were not duly assessed in good time, and there was no sufficiently persevering effort to bring about such transformations. That prevented fuller use of the potentialities and advantages of the socialist system and held back the country's advance.

Moreover, many executives, both central and local, continued to use outdated methods and were unprepared for work in the new conditions. Discipline was intolerably slackened, and

the standards of exactingness and responsibility declined. The faulty practice of plan adjustment was used on a massive scale. At that time, quite a few industries and enterprises often failed to fulfil their plans, but no principled assessment was made of these phenomena and no practical conclusions were drawn.

Until recently, the imperative need to improve the system of management was largely underestimated. Work in that area was slow and half-hearted, with a continued propensity to cling to old, mostly administrative methods. Organisational structures were improved much too slowly, the formation of production associations was unduly slowed down, so that in many industries these failed to become the crucial form of production organisation. The results of the five-year period showed once again that production could not be switched to the road of all-round intensification with the use of former methods and old organisational forms.

The economy continued to develop under its own momentum mostly on an extensive basis, being oriented towards involvement in production of additional labour and material resources. Although there was much talk about the need to transfer the national economy to intensive development methods and vigorous use of scientific and technical achievements, there was little progress. The attemps to set things right through new construction worsened the problem of economic balance. The national economy, with its immense resources, was facing their

shortage. A gap developed between social requirements and the level of production attained, between effective demand and its material back-up.

The economic situation had in effect reached a *critical point*. The imperative task now was to overcome as soon as possible the negative phenomena in the country's socio-economic development, to propel it forward at a dynamic and accelerating pace, and draw as many lessons from the past as possible, so that future decisions could be taken with maximum precision, and concrete action be purposeful and effective.

The way to resolve the pressing problems was pointed out by the CPSU Central Committee's Plenary Meeting in April 1985: general assertion of the socialist style of economic activity, based on such major Leninist demands as unity of political and economic leadership, a high level of organisation and discipline, personal responsibility for the work one is entrusted to do, and development of the masses' creative initiative.

The Communist Party's theoretical and practical activity in the final years of the past five-year period was geared to elaborate the cardinal problems of the country's further economic development. It was pivoted on drafting a new edition of the CPSU Programme and Guidelines for the Economic and Social Development of the USSR for 1986-1990 and for the Period Ending in 2000. Both drafts were put up for

country-wide discussion in October 1985. These programmatic documents included the tenets and approaches elaborated by the Party's Central Committee and expressed in the most general terms in the conception of accelerating the Soviet Union's socio-economic development. The policy formulated in the pre-congress materials was unanimously approved by the 27th Party Congress and is being translated into life in a consistent and purposeful way.

In opening the 11th Congress of the Party—the last congress in which Lenin took a personal part—he called for a thorough analysis and realistic conclusions: ". . .I am sure that if we soberly appraise what we have achieved and not afraid to look facts—which are not always pleasant, and sometimes very unpleasant—straight in the face, we shall certainly overcome all the difficulties that only now are looming ahead of us in all their magnitude."[1] It was in such a critical and constructive spirit that the 27th Congress of the CPSU discussed the basic questions of economic policy.

The results of the Soviet Union's development in the past five-year periods showed the need to draw a number of serious lessons from these results. As the CPSU Central Committee's Political Report puts it, the first is a lesson of truth, of a frank and principled discussion of

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[1] V. I. Lenin, "Eleventh Congress of the R. C. P. (B)", *Collected Works*, Vol. 33, Progress Publishers, Moscow, 1976, p. 261.

the negative processes that had appeared in the economy. A responsible analysis of the past clears the way to the future, whereas half-truth, which seeks to round corners, obstructs the elaboration of real policy and hinders progress.

Another lesson bears on resolve and purpose in practical action. The transfer of the immense Soviet economy to the intensive road is no simple matter; it calls for the utmost responsibility and will take a lot of time and effort. As it was emphasised at the 27th Congress, once the transformations are set in motion, one should not confine oneself to half-hearted measures, but should act consistently and vigorously, venturing to take the boldest steps.

The main lesson, Mikhail Gorbachev noted, is that everyone should come to realise the crucial role of the masses' active and conscious involvement in implementing the Party line. The major condition of accelerated growth is to convince the broad strata of the working people that the chosen way is correct, to offer them moral and material incentives, and to restructure the mentality of the cadres.

The priority task is to break the adverse economic tendencies in a resolute way, to make the economy duly dynamic, and to give full scope to the initiative and creative spirit of the masses, to genuine revolutionary transformations.

II. SHARP TURN TOWARDS INTENSIFICATION

The strategy of accelerating the Soviet Union's socio-economic development is aimed at a qualitative transformation of all aspects of life in the Soviet society so as to bring out the immense advantages of socialism in full measure and take a historic stride forward along the road leading to the highest phase of communism.

The Communist Party constantly correlates with the future its economic and social policy, and the tasks of organisational and ideological work. The new edition of the CPSU Programme does not anticipate full-scale communism in all its details, for the scientific notions about it will be enriched and specified with the advance to its highest phase in the light of fresh experience of communist construction. At the same time, it assumes that no time should be wasted in carrying out urgent measures and tackling new tasks.

As the CPSU has developed and enriched the earlier formulated tenets of its economic policy, it has centred its activity in directing economic construction on the task of *re-orienting the national economy towards the qualitative factors of economic growth.* A sharp turn towards intensification is the main and decisive source for attaining the other long-term goals of the economic strategy, the highest of which is a steady rise in the Soviet people's material and cultural standards.

The acceleration strategy is not confined to higher economic growth rates, however important these are in themselves. The point is to increase these growth rates on a qualitatively new basis. The essence of acceleration is a new quality of growth. In spelling out that formula, Mikhail Gorbachev emphasised such aspects as an all-out intensification of production on the basis of scientific and technical progress, fresh advances in science and technology, a restructuring of the economy, and effective forms of management, labour organisation, and incentives to work.

The impact of this acceleration factor is to increase. The average annual rate of national income growth is to go up from 3.1 per cent in the 11th five-year period to 5 per cent in the 14th five-year period, a 1.6-fold increase. That will make it possible to increase the absolute growth of resources necessary for further economic development, for a fuller satisfaction of the people's requirements, and for strengthening the Soviet Union's defence capability.

In the course of acceleration, the task is to form a more harmonious production structure in fuller accord with the growing and changing social requirements. This means that each quantitative indicator should stand for new and better products with high consumer properties, products required by the economy and the population.

The economic potential should grow simultaneously and in close connection with an im-

provement of planning, administration, and the style of economic management, with a quest for ever new ways and means of developing production.

The line towards acceleration is not confined to economic transformations, but implies a vigorous social policy, with a consistent assertion of the principle of socialist justice. Its purpose is to develop social relations, to renew the forms and methods of work of the country's political and ideological institutions, deepen socialist democracy, and resolutely overcome inertia, stagnation and conservatism—all that holds back social progress.

Planned Targets

In speaking of the programmatic goals in raising economic efficiency, let us first note their specific features and the new elements introduced into their content by the documents of the 27th Congress of the CPSU. First of all, they are large-scale in character and scientifically grounded. The tasks of intensification have been outlined for the long term and concretised for the foreseeable period up to 2000.

The 15-year perspective is based on a solid foundation, on a scientifically grounded elaboration of major problems, and complex special-purpose programmes mostly covering the period up to 2000: the Food Programme, the Energy Programme, and those for boosting mechanical engineering, intensifying the chemicalisation of

the national economy, and developing consumer goods production and the service sphere.

The long-term goal is, first of all, to attain the world's highest level of social labour productivity. Over the next three five-year periods, labour productivity is to increase 2.3-2.5 times. In the 1990s, production will for the first time develop with a simultaneous reduction in the need for labour.

In this period, the use of natural resources, raw and other materials, fuel and energy is to be radically improved. From 75 to 80 per cent of the increase in requirements should be met through an economy of resources. Hence the need to reduce material-intensity at a faster pace, with an almost 50 per cent reduction in the metal-intensity of the national income and a roughly 30 per cent reduction in its power-intensity.

A special effort is to be made to raise the technical standard and quality of output in every way. The intensification is to proceed in such a way as to ensure that the outstripping growth of the final results of production as compared with inputs is backed up with radical improvements in quality. Soviet goods should embody the latest scientific achievements, meet the highest techno-economic and other consumer demands, and be competitive on the world market.

The high targets of intensification imply the need not only to increase the output of new machinery and technology, but also to improve

the use of the available production assets, to increase output per equipment unit and per square metre of production area. The bulk of the necessary increment in production is to be achieved at operating enterprises, for which purpose their technical re-equipment and renovation are being expanded and accelerated. The intensive build-up and technical upgrading of production facilities make it particularly imperative to raise the efficiency of the fixed production assets. The movement of the output-to-assets indicator is to be reversed: in the first half of the 1990s that indicator is to be stabilised and subsequently increased.

Another peculiarity of the programmatic goals of intensification is that *they are backed up to a greater extent than ever before with the necessary instruments of economic policy.* That applies to faster scientific and technical progress as the main lever in restructuring social production, raising its efficiency and perfecting the socialist relations of production, the system of administration, and the methods of economic management.

The questions of an integrated scientific and technical policy have always been central to Soviet economic and social development plans. Since the very first five-year plan, these have envisaged measures to produce new plant and machinery, to equip with it newly built and operating entreprises, to improve the sectoral structure of production and distribution of the productive forces (in particular, to accelerate

the development of natural resources in the Eastern regions of the USSR), to develop scientific research and train personnel. Such work was also done in the recent five-year periods, but, as it was noted above, there were serious miscalculations and shortcomings in its organisation.

The inadequate pace of scientific and technical progress was primarily due to miscalculations in planning, in mapping out the prospects for the development of the various industries. Thus, there was a lag in modernising ferrous metallurgy and construction, the farm machinery industry had fallen behind, the development of material and technical facilities in agriculture was not dovetailed with that of related industries, and so on.

Another mistake was that scientific and technical policy in many industries was oriented towards the average technical level, towards a repetition of existing designs. Newly designed enterprises were often to be fitted out with old machinery and equipment, which was obsolete by the time the long period of construction was over. No systemic analysis was made of the latest world achievements. New technology was developed with hardly any attempt to attain the highest level of quality and reliability. In assessing plant and machinery somewhat outdated foreign models were taken as a standard, so that the range of the technical lag kept widening.

Yet another serious miscalculation was that

the possibilities of purchasing high technology from the capitalist countries were overestimated. Under the detente of the 1970s, the Soviet Union considerably expanded its trade with these countries and signed a number of major long-term agreements, notably, on a product-payback basis.

Use of the advantages of international division of labour has always been and remains an important instrument in raising the technical standard of production. The Soviet Union will go on using its external economic ties to accelerate scientific and technical progress. So, it is not a matter of giving up the purchase of new machinery and technology on the world market altogether, but of ending the unwarranted practice under which sectoral ministries and departments prefer to buy the necessary equipment from capitalist countries instead of developing and producing it at home. The very idea that it was easier to buy on the capitalist market than to develop machinery and technology at home was a harmful one.

The national economy has had to pay dearly for such a stand taken by some economic executives. In a number of industries the existing traditions in designing and organising the output of highly productive modern technology have to some extent been lost, and world-famous Soviet engineering design schools have disintegrated. A faulty philosophy of imitation and mediocrity had taken shape. In some lines of science and technology, industry turned out to

be unduly dependent on capitalist firms, so that special measures had to be taken to arrange domestic production of machinery and equipment.

It is also common knowledge that the machinery and technology sold by the capitalist countries to the Soviet Union is far from always the best. On the spurious pretext of refusing to supply high technology which could be used for military purpose, the USA and other capitalist states have banned the export to the Soviet Union of many general-purpose industrial goods.

Soviet foreign trade organisations, for their part, often buy less than efficient technology from capitalist firms, without reckoning with the fact that similar and even better types of machinery, equipment, instruments and materials could be produced in the USSR. Moreover, these are not always purchased in complete sets.

The efforts to pursue an integrated scientific and technical policy are adversely affected by the existing organisational and economic partition between science and production. Many research institutes and design offices, whose network in the period under review continued to expand, yielded low returns. The results of their R&D often fell short of present-day world standards, and there was no smoothly running mechanism for handing over researched themes for use in production. The associations and enterprises, for their part, showed no interest in innovation, but preferred to carry on their

activity with the existing technical facilities. As a result, it took a long time to develop and introduce new technology, production assets tended to obsolesce, and their efficiency declined.

Hence the task of radically accelerating scientific and technical progress along that strategic line. The task is reflected in the new edition of the CPSU Programme as the leading element of the Party's present-day economic strategy, and is regarded as the crucial factor of intensification. Radical changes cannot be achieved on the old material and technical basis. The Party connects such changes with a profound reconstruction of the national economy on the basis of the latest scientific and technical achievements, with a breakthrough along the vanguard lines of scientific and technical progress. The main features of the technical policy that accords with such an acceleration are listed in a special section of the Programme.

A rapid renewal of the production potential is to be brought about through wide use of the most advanced technological processes and flexible manufacturing systems, which will make it possible quickly to switch to the output of new products with maximum economic and social effect. The economic potentialities of the new technologies can be judged from the fact that a flexible manufacturing system takes half as many machine tools to produce the same amount of output as the same machine tools operating separately; cost price here is reduced

by 70-80 per cent, and labour productivity is doubled. But the main advantage of such systems is that they can be rapidly readjusted to turn out new products.

Complex mechanisation is to be completed in every sector of the production and non-production spheres, with a sharp cutback on the use of manual labour. By the year 2000, its share in the production sphere is to be more than halved, and over 20 million workers are to be released from manual operations. Production is to be further automated, with a transition to automated shops and enterprises and automated control and design systems. Electrification, chemicalisation, robotisation, and computerisation of production are to spread, and biotechnology is to be used on an ever larger scale. As science is vigorously geared to the needs of the economy, it is also important for production to turn towards science, to open out to scientific and technical achievements. As a result, science will become full-scale productive force.

The 12th five-year plan, which marks a turning point in every area, is a crucial stage in the implementation of the Party's economic strategy. Its peculiarity is that the economy is being re-equipped on a new scientific and technical basis with a simultaneous acceleration of the pace of development. The concrete tasks in this field are formulated in the 12th five-year plan based on the CPSU Programme and the Guidelines for the Economic and Social

Development of the USSR for 1986-1990 and for the Period Ending in 2000.

Under the current five-year plan, the Soviet people will have to tackle a wide range of problems in order to raise living standards, to attain the dynamic development of all sectors of the national economy, and duly to maintain the country's defence capability. "*The main task of the 12th five-year plan is to raise the pace and efficiency of economic development on the basis of faster scientific and technical progress, technical re-equipment and renovation of production, intensive use of the existing production potential, and improvement of the managerial system and the economic mechanism, and so to attain a further improvement of the Soviet people's well-being.*"[1]

The elaboration of the new five-year plan had been completed by June 1986, and its draft was approved by the fifth session of the USSR Supreme Soviet (eleventh convocation). It took a shorter time than before to elaborate the plan and bring it down to the ministries and departments, and to the councils of ministers of the Union republics. This enabled the associations and enterprises, every work collective to elaborate their own five-year plans in a more thorough way.

In almost all indicators, the plan coincides with the upper brackets of the targets set by

[1] *The 27th Congress of the CPSU*, Politizdat Publishers, Moscow, 1986, p. 277 (in Russian).

Table 3

Basic Economic Development Indicators
(growth, per cent)

Indicators	Average for the period		As a percentage of 1985		
	1981-1985	1986-1990 Guidelines	plan	1986 plan	1987 plan
National income used for consumption and accumulation	3.1	3.5-4.0	4.1	3.8	8.0
Iudustrial output	3.7	3.9-4.4	4.6	4.3	8.9
group A	3.7	3.7-4.2	4.5	4.3	8.8
group B	3.8	4.1-4.6	4.9	4.4	9.2
Agricultural output (as compared with the preceding five-year period)	1.1	2.7-3.0	2.7	4.4	7.6
Capital investments (as compared with the preceding five-year period)	3.7	3.4-4.1	4.9	7.6	4.6
Retail trade	4.0	5.8	5.9	5.9	12.2
Real income per head of population	2.1	2.5-2.8	2.7	2.5	5.0

the Guidelines, and in industry and some crucial social indicators, even surpasses them.

By 1990, the national income used for consumption and accumulation is to go up by 22.1 per cent as compared with 16.5 per cent in the preceding five-year period. Industrial output

is to increase by 25 per cent (as against 21-24 per cent according to the Guidelines), with faster growth of the industries that produce consumer goods. The output of producer goods is to go up by 24 per cent, and that of consumer goods, by 27 per cent (the Guidelines set the upper bracket at 23 per cent and 25 per cent respectively). The target for capital investments in the economy is also higher: these are to increase by 23.6 per cent over the 11th five-year plan instead of 18-22 per cent as under the Guidelines.

Faster growth is also envisaged for other sectors of the national economy—agriculture, construction, transport, and trade—and also for indicators crucial to the improvement of the people's well-being. Realisation of the social programme will make it possible in the five-year period to raise real income per head of population by 14 per cent instead of 11 per cent in the past five years.

The absolute increments of the major economic indicators are to increase. Thus, the absolute increment of the national income is to go up from 79 billion roubles in the 11th five-year plan period to 124 billion roubles in the 12th five-year period, that of industrial output, from 133 billion to 200 billion roubles respectively, and that of the average annual volume of agricultural production, from 10 billion to 29 billion roubles. The increments for consumer goods and services are to go up as well.

The present five-year plan takes account of

the experience of the past, when higher growth rates were envisaged for the final years of the period, so that attainment of the targets was in great doubt. In the new five-year plan, that flaw has been overcome. It provides for a uniform acceleration of the growth of all the basic indicators.[1] Over the five years, this will make it possible to increase the national income by an extra 30 billion roubles as compared with the one that could have been produced under the old pattern of targets for each year of the five-year period.

The plan provides for a significantly faster pace of economic development and rise in living standards from the very beginning of the five-year period. In terms of the major indicators, growth rates in 1986 surpassed the average annual rates of the 11th five-year period, paving the way for an eventual attainment of the targets set for 1986-1990. Most of the basic plan targets for the first year of the five-year period have been attained, and many have been surpassed, so the annual plan targets for 1987 are well in accord with the five-year plan targets set for this year.

In contrast to the old practice of elaborating current plans, economic development rates for 1987 were set on the basis of the plan for 1986, instead of its expected fulfilment. In other words, the five-year plan is indeed becoming the

[1] See: "Law on the State Plan for the USSR's Economic and Social Development in 1986-1990", *Pravda*, June 20, 1986.

basic form of planning, and a major step is being taken to overcome the approach to planning "from the level attained".

Industrial output is to increase by 4.4 per cent, with a 4.5 per cent increase in the output of consumer goods. Capital investments in the economy from all sources of financing are to go up by 4.6 per cent, and freight turnover in all types of transport, by 2.5 per cent.

The social programme of the planned period is to be further implemented along with the development of production. The 1987 targets for retail trade (state and cooperative) do not include alcoholic beverages, whose sales are reduced as steps are taken to combat drinking. With due account for that, trade in 1987 is to increase by 5.9 per cent, and paid services to the population, by 9.5 per cent. Other indicators characterising the people's living standards are to go up as well. In general terms, the rise in living standards is expressed in a 2.6 per cent increase in real incomes per head (target figure).

The 12th five-year plan envisages a turning point in the intensification of social production. The plan targets for raising its efficiency mostly approach the upper-bracket indicators written into the Guidelines, and those for labour productivity growth coincide with these indicators. The task of reducing the power- and material-intensity of the national income, as formulated by the Congress, has been fully incorporated in the plan. For the first time in several five-

year periods, the efficiency of capital investments is to be markedly increased (by 16 per cent). The decline of the output-to-assets ratio is to be slowed down by more than 50 per cent, while in mechanical engineering and the light industry this long-standing negative trend is to be fully overcome.

The ways and means of raising economic efficiency in the period ahead have been chosen with due regard for all its peculiarities, such as the exhaustion of the extensive factors of development. The final results are to be increased with a marked reduction in the growth of the basic types of resources.

In the current five-year period, the number of people employed in the production sphere is to grow almost 80 per cent slower than in the past five years, and fixed production assets roughly 16 per cent slower. The increase in the production of labour objects will also be smaller.

Intensification is to be stepped up through an improvement of qualitative economic indicators and vigorous use of all the instruments of scientific and technical, investment and structural policy. This will primarily mean a faster renewal of production facilities, a replacement of inefficient equipment with high technology. A growing supply of new-generation machinery and technology will create conditions for faster technical re-equipment of the economy.

Labour productivity growth is to be stepped up and for the first time is to yield the entire

Table 4

Basic Production Efficiency Indicators
(growth, per cent)

	1981—1985	1986—1990	
		Guide-lines	Plan
Social labour productivity	16.5	20—23	23
Labour productivity in industry	17	23—25	25
Reduction in:			
material-intensity of national income	2.7	4—5	
power-intensity of national income	5.4	7—9	8.5
metal-intensity of national income	10	13—15	14
Capital investments efficiency	-12	15	16

increment in the national income, the entire planned increment in industrial ouput and railway freightage. That will make it possible in 1990 to save the labour of 22 million persons as compared with 1985. Since the country's labour resources are to increase by only 3.2 million over the five-year period, the saving in labour inputs resulting from higher labour productivity is to exceed 6.9 times the possible increase in the total number of employed. It is not only possible in the 12th five-year period to make do with the existing increment in labour resources but to channel virtually the whole of that increment into education, public health and other social and cultural spheres.

This amounts to a serious structural change, for in the past five-year period the increment in labour resources was distributed in roughly equal share between the production and the non-production sphere.

The economy regime is being tightened in every industry, with a more rapid reduction in material outlays per unit product. In 1986-1990, lower rates of the consumption of fuel, raw and other materials are to meet 65-70 per cent of the increase in the need for major resources. As Table 4 shows, there is to be a most significant reduction in the power- and metal-intensity of the national income, and in the cost price of industrial ouput. One of the major tasks of intensification is to accelerate the turnover of national economic resources and circulating assets. By the end of the five-year period, the share of top-category industrial output will on average be doubled.

Acceleration of scientific and technical progress is the main lever of intensification. Use of scientific and technical achievements in production is to yield no less than two-thirds of the increase in social labour productivity. That is the purpose of the entire effort to raise the technical standard of production, primarily to restructure capital construction and concentrate resources along the major lines of scientific and technical progress: electronics, the nuclear power industry, complex automation, and technology for producing and processing new materials.

A fundamental modernisation of mechanical engineering is under way. Engineering and metal-working output is to increase by 43 per cent in the five-year period. New machinery is to be developed and brought on stream 65-75 per cent faster; its new types are to be no less than 50 to 100 per cent more productive and reliable than the ones being turned out today, and towards the end of the five-year period 80-95 per cent of the basic types of new products will be up to world standard.

Wide use is to be made of rotary-type transfer lines, which multiply labour productivity up to 10-fold. Roughly 2,000 robotic complexes and as many flexible manufacturing systems are to be put in operation in the five-year period, together with tens of thousands of modern machining centres and other progressive equipment.

In accordance with the Guidelines, the use of progressive basic technologies in the present five-year period is to go up by 50-100 per cent, and the automation level in production is to rise twice as high as it is today. A big economic effect is to be yielded by the spread of such technologies as the obtaining of materials by way of self-diffusive high-temperature synthesis, powder metallurgy, use of membrane, laser, and light-guide technology. Large intersectoral scientific and technical complexes have been set up to develop these technologies as an essentially new form of integrating science and production.

Faster development of the engineering complex will make it possible to accelerate the replacement of inefficient equipment with high technology. One-third of the active part of the fixed production assets is to be renewed over the five-year period. As the technical level of production rises, towards the end of the five-year period, as compared with 1985, it is planned to save the labour of about 12 million persons and over 100 million tons of fuel. The existing stock of machinery and equipment in engineering is to be renewed much faster: these will be retired at a rate of 9.7 per cent in 1990, as compared with 2.2 per cent in 1985. Soviet mechanical engineering has never known such a scale of qualitative re-equipment.

Along with technical progress in the main sphere of the national economy (development of new instruments and means of labour), profound qualitative changes in machinery and technology are to be effected in other spheres of the national economy: raw and construction materials, fuel, consumer goods and services.

Structural policy has a major role to play in marshalling the reserves of intensification. Just as economic policy as a whole, structural policy in a socialist society is effected by the state through its economic and social development plans. Its main purpose is to reduce the material-intensity of output, the per unit consumption of fuel, energy, raw and other materials. As a result, manufacturing in 1986-1990 is to grow 1.2 times as fast as industrial production

in general, whereas in the 11th five-year period their growth rates virtually coincided.

To perfect the structure of the engineering complex, the output of computers, instruments, electrical articles and electronics is to develop at an outstripping pace. Growth rates in these industries are to be 1.3-1.6 times as high as average growth rates in mechanical engineering.

Structural changes in the output of construction materials involve an outpacing growth of chemical and petrochemical products (1.4 times as fast as the planned growth of industry as a whole), and qualitative improvements in ferrous metallurgy. Whereas the output of traditional construction materials is to go up by 6 per cent, the figure for efficient types of metal products, plastics and other progressive materials with high consumer properties is more than one-third. As a result, growth rates in industry and construction—the main consumers of construction materials—will be 3-4 times as high as those in the complex producing these materials itself.

By 1990, the output of rolled ferrous metal is to go up to 119 million tons, while the production of pig iron is to be stabilised and coke consumption reduced ; no less than 500 new shapes of rolled stock are to go on stream. The output of oxygen-converter and electrical steel in the five-year period is to go up by 30-40 per cent, its continuous casting, by no less than 100 per cent, and the ouput of powdered metal, by more than 200 per cent.

Among the major factors of improving the structure of the fuel and energy complex one could list such progressive changes as a lead in the development of nuclear power, the gas industry, and open-cast coal mining, energy-saving measures and fuller use of oil, gas and coal deposits. In the present five-year period, 2.5 times more capacities than in the past five years are to be put in operation at nuclear power plants, and obsolete power-generating units at thermal power plants are to be replaced with new ones on a massive scale. There is to be a big increase in gas extraction, 90 per cent of which is to come from Western Siberia, mostly from its northern regions. Seven powerful cross-country gas pipelines are to be built. For the first time in recent five-year periods, there is to be a sizeable increase (69 million tons) in coal production, with almost the whole of that increase obtained through open-cast mining as a most efficient method. By 1990, the depth of oil refining is to go up to at least 65 per cent.

Structural policy is also to play a greater role in strengthening the social aspects of the plans. In agriculture and the consumer goods industries, attention has been focussed on quality, on extending the ouput of goods which are in ever greater demand but are still in short supply. The output of consumer goods other than food is to grow 1.4 times as fast as the ouput of industrial goods in general, and that of cultural, everyday and household goods, almost twice as fast.

The 27th Congress of the CPSU examined the tasks of social policy in close connection and interaction with matters of economic policy. The lessons of the past call for a new approach to the development of the social sphere, with greater emphasis on social matters. As it was noted at the Congress, central and local organs had often underestimated the imperative problems of strengthening material facilities in the socio-cultural sphere. That was expressed, in particular, in the residual principle used to allocate resources for its development. There was a certain bias in favour of technocratic approaches, so that less attention was given to the social aspects of production, to people's daily life and leisure. And that, for its part, made the working people less interested in the results of their work and led to slacker discipline and to other adverse consequences, which affected the processes of intensification. The decisions of the Congress were a reminder that production tasks could be fulfilled only when the purposeful effort to retool production was backed up with a vigorous social policy, with a consistent effort to strengthen socialist self-management at the enterprises.

The new five-year plan has made a fairly good start. Industrial production in 1986 was up by 5 per cent, while the target figure was 4.3 per cent. The plan for product realisation was fulfilled by all the Union republics and virtually all industrial ministries. There was an improvement in meeting contractural obliga-

tions (almost 99 per cent of these were met) and in attaining plan targets for output in kind. Growth rates have also gone up and qualitative indicators improved in agriculture, railway transport and other industries.

The use of intensive development factors is gathering momentum. The targets for increasing labour productivity and profits, and for reducing costs have been surpassed. Positive changes are under way in the national economy. The past year showed the tasks of accelerating socio-economic development put forward by the Party to be perfectly realistic. At the same time, many ministries, departments, associations and enterprises are still making slow headway in reorganising their work. Profound qualitative changes that would consolidate the tendency towards faster growth have not as yet taken place, and the acceleration is still far from general.

The pace of production has yet to be steadied, there is no marked improvement in the quality of output, and some industries still fall short of plan in developing and using new machinery and technology, in capital construction, in the technical re-equipment of production, and other qualitative indicators. So, a positive assessment of progressive tendencies is no reason for complacency or self-satisfaction. The main work still lies ahead.

This pamphlet deals with only some of the most important areas of economic intensification. Let us start with the changes in the ap-

proach to such a fundamental matter as the balance between the consumption and accumulation funds.

The Main Lever of Acceleration

The problem of accumulation—the dimensions, structure, and share of the resources going to expand and perfect the production potential—is central to reproduction and to the mechanism of scientific and technical progress. More than one-half of the accumulation fund goes to build up the fixed production assets, whose technical standard and efficiency, as well as the rate at which obsolete production capacities are replaced, are crucial to the development of all intensification processes. That is why the need to raise the technical standard of production as the main lever of intensification has made it necessary to change the existing proportions in the use of the national income for accumulation and consumption.

Over the past three five-year periods, the share of the accumulation fund in the national income kept shrinking: from 27.9 per cent in the 8th five-year period to 27.7 per cent in the 9th period, 26.1 per cent in the 10th period, and 25.1 per cent in 1981-1985 (in comparable 1973 prices). From the 9th five-year period onwards, the consumption fund was growing faster than the accumulation fund (Table 5).

Table 5

National Income, Consumption and Accumulation Funds: Growth Rates

	1966—1970 % of 1961—1965	1971—1975 % of 1966—1970	1976—1980 % of 1971—1975	1981—1985 % of 1976—1980
National income used	139	134	124	117
including:				
consumption	131	134	127	119
accumulation and other expenditures	142	133	117	113

Under the 12th five-year plan, on the contrary, the accumulation fund is to grow faster than the consumption fund, and its share in the national income is to go up from 25.9 per cent in 1985 to 27.6 per cent in 1990.

From the 9th five-year period onwards, the five-year plans gave priority to a drive for higher living standards, whereas technical progress, intensification and efficiency were regarded as ways of tackling that task. In general politico-economic terms, this interconnection will undoubtedly remain valid in the foreseeable future. Under the present five-year plan, however, priority in formulating the main task has once again been given to questions which used to be regarded as means for attaining the supreme goal.

In accordance with the task of accelerating socio-economic development, the increase in

productive investments is to be stepped up. In the 12th five-year period, their volume is to go up by 25 per cent, as against 16 per cent in the 11th five-year period. The move to increase the share of the accumulation fund in the national income is necessary to attain both current and strategic goals. Subsequently, the share of accumulation is to be stabilised and even somewhat reduced.

An increase in the share of the accumulation fund, together with higher efficiency and faster development of social production, will also make it possible to accelerate the growth of the consumption fund, which is to increase by 74 billion roubles as compared with 55 billion roubles in the preceding period. Such a development pattern fully corresponds to the long-term line for strengthening the social purpose of plans. Let us recall that in 1971-1985, in spite of the priority given to increasing the consumption fund, the rise in the people's living standards on the whole slowed down.

The change in the proportions between accumulation and consumption in favour of the latter was a truly new feature of balanced development in the 1970s. Before that—during industrialisation, in all prewar five-year periods, and throughout most of the postwar periods—the share of accumulation in the national income had kept rising. Let us examine the causes of the reduction in the share of the national income used for accumulation and the extent to which that reduction was due to the uniformi-

ties of intensification. An important point to establish, in particular, is whether that process is indeed one of the main uniformities behind the changing proportions of reproduction at the present stage, and whether it is right to regard it—as some authors do—as the crucial specific feature in the operation of the law of socialist accumulation at this stage.

That view was fairly widespread in Soviet economic writings in the 1970s and early 1980s. The arguments in its favour are as follows: the build-up of a powerful production potential, which can be expanded and renewed with a smaller increase in capital investments; the narrowing-down of extensive factors in the development of production and the growing prevalence of intensive factors; the increase, starting with the 8th five-year period, in the share of consumption in the five-year plans; the ever greater orientation of economic development towards a rise in the people's living standards, and the centering of the Party's economic policy on the tasks connected with an improvement of the people's well-being. Each of these agruments merits attention, but a closer analysis will show that these processes do not reflect many present-day conditions of economic development and, in particular, the uniformities of the technical improvement of production.

The view that it is worth reducing the share of the accumulation fund in the national income took shape, in particular, under the impact of the shortcomings in construction that were

revealed in the course of the past few five-year periods. The excessive increase in capital investments, inflated volumes of construction by the ministries, and the scattering of resources among numerous construction sites made it impossible to complete projects on schedule, so that large resources were frozen and the returns on capital investments were lower than planned.

The attempts to step up economic development by building more new enterprises worsened the problem of economic balance, and the national economy faced a shortage of resources. To restore the balanced nature of production and increase the efficiency of capital investments, it was decided somewhat to restrict their growth, bringing it into correspondence with the dynamics of the national income. In the 9th five-year period, the growth of capital investments already slowed down, the 10th five-year plan envisaged the same growth rate for capital investments and the national income, and the 11th five-year plan, a faster increase in the national income. The idea was that the smaller number of new production capacities commissioned as a result of cutbacks in capital construction would be compensated for by better use of the available production potential, by higher returns on capital investments.

The planned ratios were not attained. The national income increased slower than planned. At the same time, capital investments (in long-term plans, these are determined for the whole five-year period) usually exceeded the

initial targets: in 1971-1975, the increase was 41.7 per cent, in 1976-1980 it was 28.7 per cent (instead of 26 per cent), and in 1981-1985, 17.9 per cent (instead of 10-12 per cent). The plan targets for capital investments were exceeded for a number of reasons: to a certain extent, that compensated for the lag in the growth of labour productivity and accumulation efficiency; at the same time, it was a reflection of the objective need for capital investments to raise the technical standard of production and intensify it at a faster pace.

The overall dynamics of capital investments in that period coincided with the growth of the national income, although in the 1970s capital investments grew somewhat faster than the national income. What is more, the slowdown in the growth of capital investments was accompanied by a decline in the rates of increase of the national income.

Table 6

Growth on the Preceding Period
(per cent)

	9th five-year period	10th five-year period	11th five-year period
National income	134	124	117
Capital investments	141	128	117

The existence of a powerful production potential undoubtedly reduces the need for capital investments to build new enterprises. But the need for new construction is not eliminated altogether, since there is a demand for large outlays to develop new industries and lines of production and to apply scientific and technical achievements. In the present five-year period, work is under way on a number of large projects, which will yield their major effect only in the 1990s, that is, when this period is over.

A large volume and high technical standard of the production potential reduce the requirements of the national economy for the accumulation of production assets along three lines: through a reduction in the share of capital investments owing to the use of more effective scientific and technical designs in production and capital construction, something that was impossible at earlier stages of industrial development; through an increase within the production assets of the share of outlays going to replace retiring fixed assets, with the replacement being carried out at a lower cost than that of new construction; and an increase in the rate of return on the existing production potential owing to its better use and progressive forms of organising production.

At the same time, certain factors in the past period served to increase the share of productive accumulation. Here are the most essential of these.

Capital investments in the extractive and raw-material industries today are increasingly influenced by the use of lower-grade mineral resources, deeper mining, and development of more remote deposits. The average iron content of ores went down from 48.7 per cent in 1955 to 40.6 per cent in 1965 and to 36.5 per cent in 1975. In 1955, it took 1.2 tons of raw ore to produce one ton of marketable ore, in 1975 it already took 1.94 tons, and in 1980, 2 tons.

Mines are getting much deeper: in the past five-year period, more than 100 coal mines and almost as many ore deposits had to be worked at or below the 60-metre mark, and some of these even exceeded the 1 kilometre mark. The average depth of oil and gas test wells increased from 1,350 metres in 1950 to 2,500 metres in 1970, and to nearly 3,000 metres in the early 1980s. In some areas of the USSR, oil and gas deposits are being prospected for and worked at a depth of 4-5 kilometres or more.

Since many old mineral deposits in the European part of the country and in the Urals have been depleted, the costs of maintaining the extraction of many types of fuel and raw materials on the same level have gone up. The share of capital investments going into the expanded reproduction of fixed assets in order to ensure the simple reproduction of output in the extractive industries has increased. That applies to mineral deposits which have reached or passed their productivity peak (like the oil and gas deposits in the Volga region or the Azerbaijan

SSR, and recently also the richest oil deposits of Western Siberia).

The country's need for production investments has also increased in view of structural changes caused by larger investments in the more capital-intensive sectors. Thus, the share of capital investments in agriculture (across the whole range of operations) went up from 20 per cent in the 7th five-year period to 27 per cent in the 10th and 11th five-year periods. In industry, over one-third of all capital investments goes into the fuel and energy complex.

Industrial development also entails an objective increase in outlays on protecting the environment and improving the quality of life.

A concrete analysis of accumulation should also take into account the upset balance in the investment sphere itself: the growing difficulties in the material back-up of capital investments. There was a slowdown in the growth of supplies of rolled ferrous metals and some other construction materials for the building industry. There was also a growing discrepancy between the volume of capital investments and the capacities of construction-and-erection organisations, especially in areas of massive new construction.

Another limiting factor was that construction was falling behind schedule, and the pace of construction-and-erection work slowed down: in the 9th five-year period, its total volume increased by one-third, in the 10th period, by only 5 per cent, and in 1981-1985, by 10 per cent.

In June 1985, a conference at the CPSU Central Committee on matters of accelerating scientific and technical progress gave an in-depth analysis of the contradiction of reproduction caused by serious shortcomings in the work to raise the technical standard of the national economy. In particular, the renewal and replacement of fixed assets had slowed down. The share of new fixed assets installed in the 9th and 10th five-year periods went down from 37 per cent of their total volume in the national economy in 1975 to 34 per cent in 1980 and 35 per cent in 1985.

In most industries, there was a slowdown in the replacement of fixed assets, in the write-off of worn-out machinery and equipment, buildings and installations. In industry as a whole, the share of retired fixed assets went down from 2.1 per cent in 1965 to 1.4 per cent in 1985. Production facilities were becoming obsolete, the wear and tear of assets increased, and many elements of them continued to be used even after their service life had run out. As a result, the sphere of repairs swelled inordinately. About 35 billion roubles and almost 20 per cent of all the ferrous metal are used for repairs every year; repair shops use one-quarter of the country's stock of machine tools and employ 6 million workers. In some industries (like ferrous metallurgy), outlays on the repair of fixed assets are equal to the capital investments going to build new production capacities.

Service-life overhaul costs for a machine tool

are often several times as high as the cost of the new machine tool itself. The costs are so high because repairs are usually made by the equipment users themselves in makeshift conditions, and unproductive manual labour prevails in repair shops. The low efficiency of repair work is ultimately due to the shorter lifetime of repaired machinery (1.5-2 years) as compared with new machinery (roughly 5 years). As world experience shows, there are two ways of reducing the sphere of inefficient repairs: a faster replacement of obsolete and worn-out machinery, and repairs and maintenance services by the manufacturers themselves. Work in that direction is to be carried on along both lines.

The retirement rate for fixed assets is to go up from 1.8 per cent in 1985 to 3.1 per cent in 1990, and for their active part, from 3.2 to 6.2 per cent. The retirement of fixed assets in absolute terms is to increase 2.2 times as compared with the past five-year period. All of that is being done in accordance with the line for a steady renewal of the country's production potential.

So, the reduction in capital investments to an extent which made it possible to back these up with metal, equipment and building capacities as a measure intended to balance out investment proportions was essentially short-term and did not eliminate the shortage of resources. The reduction in the share of accumulation ultimately impeded the development of the invest-

ment sectors themselves, for it slowed down their technical re-equipment. The connection between the declining rates of accumulation, slower renewal of fixed production assets, and smaller returns on capital investments is far from simple and calls for additional analysis. One could draw the conclusion, however, that the work being done to improve the use of the production potential did not offset the influence exerted on economic growth rates by the reduction in the share of the productive accumulation fund in the national income. Moreover, the faster decline in output per rouble of fixed assets was largely due to that reduction.

To increase the returns on the existing production assets and accelerate the replacement of obsolete production capacities capital investments in their technical improvement are to be increased rather than limited. Actually, it is not a matter of choosing between a high share of accumulation and a low rate of replacement, or vice versa, as the question was often seen in Soviet economic writings, but of an inevitable deceleration of replacement under a low rate of accumulation. The problem can be solved by increasing for a time the share of productive accumulation in the national income.

The present investment policy is aimed at accelerating scientific and technical progress and bringing about a qualitative transformation of the material base and structure of production. That is primarily expressed in a larger share of resources going into major country-

wide programmes: more than 80 per cent of the increase in capital investments now goes into such programmes, instead of one-half as in the past five-year period. Outlays on housing construction and on strengthening material facilities in the socio-cultural sphere have also been markedly increased. Priority here is given to the technical re-equipment and renovation of operating enterprises, and capital investments for these purposes are to go up by 70 per cent on the 11th five-year period, or a 3-fold increase as compared with their total volume.

The work being done to restructure capital construction is also clearly evident in the changing sectoral proportions of capital investments. Their volume in the engineering complex is to increase 1.8 times in the five-year period. The retirement of fixed production assets is to increase by 70 per cent from the average annual level of the past five-year period.

Already in 1986 the installation of fixed assets in the engineering complex branches grew by 5 per cent, including in instrument making, by 36 per cent, and in machine-tool industry, by 18 per cent.

In the basic branches of heavy industry, capital investments in the fuel and energy complex are to increase faster than the rest. In the five years, these are to increase by 47 per cent, whereas outlays on the development of lines of production that ensure efficient methods of fuel extraction and processing are to be doubled.

The share of the agro-industrial complex

(AIC) in the total volume of capital investments is to remain the same, with emphasis on branches processing agricultural raw materials: capital investments in these are to go up by 51 per cent, or 2.3 times more than for this complex as a whole. That will help to overcome the serious disproportions obstructing the growth of the final product.

So, the higher rate of productive accumulation envisaged by the 12th five-year plan creates prerequisites for enhancing the influence of investment and structural policy on intensification processes.

Roughly similar conclusions could also be drawn in analysing the *interconnection between accumulation and intensification of production.* The narrowing-down of extensive factors reduces the need for additional capital investments. The switch from manual to mechanised labour, with a release of personnel from operating production, is often less costly than the creation of new jobs. The need for capital investments is also reduced as a result of steps to reduce the material-intensity of production, to cut back loss and waste of raw and other materials, and optimise the proportions between the raw-material and manufacturing industries as a whole. The present stage is marked by development of manufacturing with a stabilisation of production in an ever greater number of extractive industries (mining, oil, timbering, etc.).

Along other lines, however, accumulation should compensate for the depleted extensive

sources of developing production. The slower growth of labour resources should be more than compensated by an increase in assets per worker in order to raise labour productivity. To a certain extent, that also applies to the country's needs for minerals, primary goods and energy materials, since the tasks of intensification are being tackled under worsening conditions for the development of many extractive industries.

At the same time, the reserves for saving capital investments were not being fully tapped in view of the remaining extensive tendencies in construction, industry and other sectors. Many enterprises and projects were built from designs which were insufficiently economical and did nothing to tighten construction schedules. The possibilities for expanding production capacities through the technical re-equipment and renovation of existing enterprises instead of building new ones were not realised either. An imbalance developed between the number of workplaces and labour resources, which were insufficient to man all the newly built enterprises or to ensure the normal operation of existing ones.

The role of accumulation in the intensification process is thus more complicated than it is presented under the simplified scheme according to which a lower rate of accumulation is an intensification factor, whereas a higher rate indicates extensive development. Extensive accumulation of production assets occurs under a steady or declining technical standard of new

assets. That standard was undoubtedly rising, but in the period under review it was rising while enterprises were largely fitted out with insufficiently productive machinery and technology. The extensive tendencies in accumulation were also caused by the slower turnover of production assets, the accumulation of outmoded assets, and their longer service. Consequently, many of the signs of extensive development in recent five-year periods were in evidence even while the rate of productive accumulation was going down. That in itself shows that there is no direct connection between the changing rate of accumulation and the type of reproduction.

Theoretically, intensive or extensive development may proceed under a different rate of accumulation. Today, however, the transition of the Soviet economy to the road of intensive development is connected with a growing share of the accumulation fund in the national income.

Over the next few years, the factors that serve to increase the rate of accumulation will apparently exert a stronger influence on accelerating scientific and technical progress and improving the proportions within the investment sphere itself. This will be so up to the time when it is possible to lift the present restrictions on the efficiency of capital investments and the returns on the existing production potential (by improving their material back-up and the state of construction-in-progress, and by extending the capacities of building organisations). Within

this prevailing trend, however, there are reserves for significantly reducing the influence of pro-accumulation factors through a faster turnover of resources and elimination of the recent immobilisation of a part of the accumulation fund in excessive stocks of technical and producer goods, construction-in-progress, and goods in trade.

III. WAYS OF STEPPING UP INTENSIFICATION

Better Use of Labour Resources

Employment in the Soviet Union covers a high proportion of the able-bodied population, while unemployment was eliminated back in the period of industrialisation in the early 1930s. The national economy now employs 130.5 million men and women, including 117.7 million workers and office personnel and 19.8 million collective farmers (working in the social economy of the collective farms). Thus, the level of employment in the national economy is essentially higher than that in other countries.

In the postwar period, the scope of general education and occupational training has gone up sharply. In 1985, the number of specialists with a higher or secondary education was up to 33.9 million, a 14-fold increase as compared with 1941. The increase in the number of spe-

cialists over that period was four times as high as the increase in the total number of workers and office personnel. One-quarter of all the working people now employed in the economy have a higher or specialised secondary education. The availability of skilled personnel capable of developing and applying modern machinery and technology, and progressive methods of management and labour organisation are major conditions for intensifying production.

In the 1970s, however, along with the positive changes in the structure of labour resources and employment, the economy was confronted with difficulties in meeting the needs for labour. There was a labour shortage, as the number of jobs exceeded the number of employed. The labour shortage was only partially due to the slower growth of labour resources: to a much greater extent it was due to the ill-balanced extension of the building of new enterprises and the slower renewal and replacement of outmoded assets.

Better use of labour resources influences the intensification process along several lines: by helping to meet the economy's needs for labour, by raising returns on the existing production potential, and by enhancing the efficiency of capital construction. That influence is particularly strong today, for certain discrepancies took shape in the past period in the balances of labour and fixed assets, while scientific and technical progress opens up new possibilities for their more efficient use. As always, the cre-

ative element in improving the interaction between the worker and the means of production is the working person himself. That is why in examining the concrete ways of intensification it is best to begin with measures designed to improve the use of labour resources.

The conditions for supplying the national economy with labour in the 12th five-year period on the whole have the same peculiarities as in the preceding five years. In the second half of the 1980s, many of the trends that emerged in the 1970s are even more pronounced. Absolute increments in labour resources keep shrinking. In the RSFSR, the Ukraine, Byelorussia and the Baltic Republics, the population of working age is expected to decrease in absolute terms, whereas overall population growth in the country is largely due to population growth in the republics of Central Asia and Transcaucasia.

On the whole, the territorial structure of the labour balance in the period ahead will differ even more from the planned proportions for the development and distribution of the productive forces in the European part and especially in the eastern regions of the USSR. The discrepancy is to be overcome by increasingly orienting scientific and technical progress towards economy in labour inputs, by offering enterprises greater incentives to more efficient use of labour, and by increasing the interest of the working people themselves in raising labour productivity.

Table 7

Faster Growth of Labour Productivity

	Average annual growth, per cent			
	1981—1985	1986—1990		1987 plan
		Guide-lines	Five-year plan	
Social labour productivity	3.1	3.7—4.2	4.2	4.0
Labour productivity in:				
industry	3.2	4.3—4.6	4.6	4.4
construction	2.7	2.8—3.0	3.9	3.8
railway transport	1.2	2.0—2.3	2.3	4.6

In the 11th five-year period, labour productivity growth accounted for 86-87 per cent of the increase in the national income and industrial output. In 1986, such growth yielded 97 per cent of the increase in the national income and 95 per cent of that in industrial output. In 1987, that factor virtually accounts for the entire increase in the national income, in output and operations in the sectors of material production.

The main reserve for raising labour productivity is to switch all industries to new machinery and technology. Thus, a numerically controlled machine tool releases 3-4 workers, an integrated transfer line, up to 30 workers, and

automated section up to 60 workers. All enterprises cannot be simultaneously re-equipped with new machinery. This work will take considerable time and will be carried out step by step within each industry and region. But all this machinery will yield due returns only if it is used efficiently. A solution to economic problems is just as important in this respect as the engineering and technical side of the matter.

All enterprises have now focussed their attention on better planning and labour organisation. It is more important than ever before to reduce the losses of working time, slow down the labour turnover, improve rate-setting and production organisation in order to maximise the use of the existing reserves. Most operating enterprises should actually release workers on the basis of broader technical re-equipment. These workers are to be employed at newly built enterprises and production capacities, at service enterprises and organisations, and are also to fill vacant jobs in industry, construction and other branches of the production sphere.

Mechanisation of manual labour remains one of the main lines in meeting the country's labour requirements. In the past five-year period, the total number of manual workers in industry for the first time decreased in absolute terms (previously, the decrease had been relative). Nevertheless, about 50 million people in the economy still work by hand: one-third of all workers in industry, one-half in construction, and three-quarters in agriculture. Materials-

handling, freight-handling and storage work is the least mechanised, with more than 7.6 million people doing such work in the country.

In the 12th five-year period, the number of workers by hand is to be reduced by 5-6 million through a renovation of existing enterprises. For the bulk of enterprises, the most realistic way to end the labour shortage is to reduce manual work, to move workers by hand to other production units in a balanced way, and give them refresher training.

It is highly important in social terms to release workers from lines of production with unhealthy working conditions. The very approach to that problem is being changed. Until recently, 80 per cent of all outlays for these purposes went to alleviate or eliminate the adverse effects of such conditions, notably, through higher wages and benefits for work in such conditions, and only 20 per cent went to improve the working conditions themselves through technical re-equipment of production. In the current five-year period, the latter line of work is gradually to become predominant. As experience shows, the labour shortage is worst at those enterprises where nothing is being done to improve working conditions, whereas at enterprises where these problems have been solved, work collectives are usually stable.

So, an in-depth analysis shows that in many industries there is no real shortage of labour. At most enterprises, the labour shortage is due to a low level of labour productivity, poor or-

ganisation and ineffective incentives. One should also add the often unwarranted decisions by planning and economic organs to create extra jobs.

Job rating and rationalisation opens up considerable opportunities for eliminating the shortage of workers and specialists. That work was first started at the Dnepropetrovsk Harvester Plant and at a number of engineering works in other regions back in the 10th five-year period. In the past five years, the first round of job rating in the Dnepropetrovsk Region made it possible to release more than 7.500 workplaces and roughly 8,000 units of equipment, thus reducing the labour shortage by 80 per cent. At present, job rating is developing in breadth, as it spreads to ever new enterprises across the country, and in depth, as an integral part of the plans to modernise production.

To improve the use of the labour available at the enterprises, the team form of labour organisation is being used to an ever greater extent. The past five years saw a spread of new types of production teams: integrated and start-to-finish teams, working under a single contract with payment for the final results. Since 1981, teams working on the principles of economic calculus *(khozraschyot)* have been operating in the country. These have achieved faster growth of labour productivity and production efficiency, and better quality of workmanship. Labour productivity in such teams is on average 10-15

per cent higher than under individual piecework.

However, such teams are often set up merely as a formality, with emphasis on quantity instead of quality. No work is being done beforehand to improve inner-factory planning, technology, production and labour organisation, and remuneration systems. Many enterprises have yet to specify the responsibilities of managerial, engineering and technical personnel in the workshops, departments and services for ensuring highly productive work by the teams. Many workers in industry have yet to become members of such teams. In 1985, only 36.7 per cent of all workers were members of economic-calculus teams, in which labour productivity growth is most tangible. Although about 63.6 per cent of all industrial workers are members of teams using the labour-involvement coefficient (which takes into account the worker's attitude to his duties and the quality of his labour, and which is set by the teams themselves), the extra earnings are often distributed equally instead of being linked to the final results of production. Foremen, engineers and technicians, who have an ever greater role to play in organising efficient work under scientific and technical progress, are still slow to join production teams.

Here is how Yu. Metyolkin, who heads a team of milling-machine operators at the Leningrad Optico-Mechanical Association, answered the question of what could be done by the management to raise labour productivity:

"The main thing is a well-thought-out, scientifically and economically grounded system of work in general. There are still many shortcomings in this area, with elements of egalitarianism, undue rate-setting and planning which hold back labour productivity growth. It's no secret that if a worker does more than he usually does, some of his work sheets will be tallied up only the following month, and his wages will be averaged out to keep within the workshop wages fund. Such a system is an element of the statesmanlike approach to production no more than in form. In actual fact, it discourages hard-working and capable people."

One of the most urgent problems of intensification is to ensure faster growth of labour productivity as compared with wages. As Table 8 shows, over the past three five-year periods such a pace of labour productivity growth was maintained only in industry as a whole, whereas in other sectors of the national economy wages tended to grow faster. In industry as a whole where that correlation was to some extent normalised in the second half of the 11th five-year period, wages in a number of industries and associations and at many enterprises continued to grow faster than labour productivity (Table 8).

Repeated attempts were made in the past to improve that correlation by limiting wage increases. But such measures had an adverse effect on the working people's incentives to higher labour productivity, for they clashed with

Table 8

Increase in Average Wages per One Percentage Point of Labour Productivity Growth (per cent)

	1971—1975	1976—1980	1981—1985	1971—1985
Industry	0.64	0.84	0.80	0.70
Agriculture (social sector)	3.63	1.71	1.83	2.48
Construction	0.62	1.31	1.21	0.93
Railway transport	1.17		1.62	2.05
Trade	0.91	2.04	0.65	1.20

the socialist principle of payment for work in accordance with its quantity and quality. Each period has its own minimum rate at which piece-wages for extra output should be increased, and at which payment for higher indicators should be raised for other categories of working people. If wages do not rise, that is bound to lead to egalitarianism in payment for work.

As the performance of front-ranking work collectives shows, the real way to improve the above correlation is to accelerate labour productivity growth through faster scientific and technical progress and better production organisation. That is the only way for enterprises to ensure a steady base for raising remuneration in accordance with the working people's actual labour inputs.

A switch to normative methods of planning wages and economic-incentives funds helps enterprises to use organisational and economic incentives to raise labour productivity. Under these methods, stable coefficients are established for work collectives on the basis of five-year plan targets for determining wages and funds for payment of bonuses, for housing and socio-cultural construction per each percentage point of production growth, labour productivity growth, and other basic indicators. The actual size of the wages fund and other funds maintained by the enterprises is not reduced. The normatives are chosen and fixed by the management together with the trade union organisations, and take into account the sectoral specifics of production and the working conditions at each enterprise.

The experiments staged in the past five-year period reaffirmed the considerable stimulating effect of that procedure. In the present five-year period, it is being used on a wider scale as industry and other sectors of the economy go over to new terms of economic activity. The ministries were notified of the corresponding normatives based on the target figures for the five-year period before they got down to drafting their five-year plans. These normatives are to remain the same throughout the whole period, thereby helping the various industries and enterprises to marshall their reserves.

Changes in the procedures for introducing new basic wage rates and salaries help to in-

vigorate the work being done to accelerate labour productivity growth. In the postwar period, new basic rates were introduced in a centralised manner, through additional state-budget appropriations for the various sectors of the economy in accordance with a definite order of priority. Subsequently, the sectoral approach was supplemented with a territorial approach: new basic rates were introduced zone by zone, starting from the USSR's eastern and northern regions. From now on, basic wage rates are to be mostly raised at the expense of the funds earned by the industries themselves, remaining within the limits of the wages fund planned for them. Associations and enterprises which will be quicker than others in creating conditions for raising basic rates through economies in the wages fund will have an advantage over the rest. Under such a procedure, enterprises will find it more profitable to increase their production while reducing the number of personnel, whereas in the past they were interested in doing the reverse.

In the present five-year period, new basic wage rates and salaries are to be introduced for 75 million working people in all the production sectors of the national economy. Stable normatives for the formation of wages funds have been established for the associations, enterprises and organisations. All their earnings from an improvement of labour organisation are to go to increase wage rates and salaries. Wage rates for workers are to go up by 20-25 per cent, and

the salaries of managerial staff, specialists and office personnel, by 30-35 per cent. Preference here is to be given to those who develop new machinery and technology: designers, industrial engineers and highly skilled workers.

The new terms of economic activity extend the right of enterprises to pay their workers, foremen, engineers and technicians extra money for doing more than one job. This helps to interest the working people in mustering reserves without fear of a drop in wages, and orients economic executives and managers towards tying in payment for work with its final results. The new terms of remuneration will make it possible, in particular, to raise the wages of engineers to a significant extent. Wage patterns are becoming more flexible and are being restructured in order to induce highly productive work by bigger earnings. So, enterprises and higher organs of economic management will be able to make fuller use of improving distributive relations in order to accelerate labour productivity growth and intensify production.

Saving Material Resources

A major line of intensification is to rationalise the use of resources: fuel, energy, raw and other materials. Under the present scale of production, a reduction in the material intensity of the social product by one percentage point yields a 8 billion rouble increase in the nation-

al income, whereas an increase in social labour productivity by one percentage point yields a 5 billion rouble increase in the national income, which is nearly 40 per cent less. So, as the level of industrial development rises, the economies resulting from a reduction in the material-intensity of products tends to become an ever more weighty factor of intensification.

In fuel, iron ore, ferrous metals, mineral fertilizers and cement, the Soviet Union has for a long time now been first in the world, surpassing the USA and such European capitalist countries as France, the FRG and Italy taken together (Table 9). It has a powerful mining industry and not only meets its own needs, but also exports large amounts of energy resources and some types of raw materials to the socialist countries and the world market.

The correlation in manufacturing output is less favourable: the Soviet Union here is still markedly behind the industrialised capitalist countries. True, if one takes into account the massive imports of fuel and raw materials by the USA and the European capitalist states, the Soviet lead in their consumption will be less than in their production. But even so, consumption of fuel, raw and other materials per unit of final product and national income is still higher in the Soviet Union than in the capitalist countries with modern machinery and technology.

Such a state of affairs, which took shape in view of the historical peculiarities in Soviet

Table 9

Major Types of Heavy Industry Output in 1985[1]

	USSR	USSR as a percentage of	
		USA	Great Britain, FRG, France and Italy
Electric power, bln Kwh	1,544	58	127
Electric power consumption in industry, bln Kwh	894	103	1.5 times as much
Oil (including liquefied gas), mln tons	595	136	4.5 times as much
Natural gas, bln cubic metres	599	124	17.2 times as much
Coal (marketable), mln tons	648	64	210
Pig iron, mln tons	110	248	156
Steel, mln tons	155	191	144
Iron ore, mln tons	248	474	15.1 times as much
Mineral fertilizers, mln tons	33.2	158	259
Sulphuric acid (monohydrate), mln tons	26.0	72	287
Caustic soda, mln tons	3.1	31	42
Chemical fibre, thous tons	1,394	38	62
Synthetic resins and plastics, mln tons[2]	4.1	19	25
Removal of logs, mln cubic metres of dense timber	368	93	4.4 times as much
Sawn timber (including sleepers), mln cubic metres	102	131	4.4 times as much
Paper, mln tons	6.0	18	30
Cement, mln tons	131	170	135

[1] *The USSR National Economy in 1985*, pp. 588-590, 596 (in Russian).

[2] *Ibid.*, p. 146.

economic development, no longer corresponds to its technical level or its capacity for perfecting technology. Reductions in the material-intensity of output are now a major source of intensifying production.

Back at the beginning of the 11th five-year period, the CPSU Central Committee and the USSR Council of Ministers passed a resolution "On Stepping Up the Effort to Save and Make Rational Use of Raw Materials, Fuel, Energy and Other Material Resources" (June 1981), calling attention to the great potentialities for saving and increasing the output of the final product from the country's resources. The task was to put these reserves at the service of the society, to eliminate the shortcomings in the use of resources. The organs of economic management and work collectives were urged to effect a resolute turn of the whole of planning and economic activity, the development of science and technology towards more efficient use and economy of material resources.

The 11th five-year plan set higher and more demanding targets for cuts in material inputs than the preceding plan. There was a broader and fuller reflection of resource-saving measures in state plans and the plans of the various industries and enterprises. The range of products for which the state laid down resource-saving targets was extended, and in 1985 these covered roughly one-half of all the material resources (in terms of value) allocated by the USSR State Planning Committee.

Economic incentives to save resources have been increased: the enterprises are now entitled to use from 25 to 75 per cent of the sum obtained from economies (depending on the type, value and availability of the material resources) as bonuses for their personnel. The range of products for whose economy bonuses are paid out is now much wider, just as the circle of persons entitled to such bonuses.

The list of measures aimed at ensuring economical use of material resources emphasises the need to recycle spent resources, both industrial and household. Plans for the ministries and the enterprises now envisage materials-salvage targets. Work collectives have also been given greater incentives to produce more output from wastes, refuse and local raw materials.

Although in the 11th five-year period material-intensity was reduced somewhat faster than before, the economy has only made the first few steps along this way. Material inputs in most industries could be significantly reduced with the available modern machinery and technology, provided there is a drive to eliminate mismanagement at the enterprises.

The consumption of construction materials and fuel in production is still excessive. Thus, one-quarter of all metal in engineering goes into waste, and for several five-year periods that share has virtually remained the same. The utilisation of rolled ferrous metal in the automotive industry and electrical engineering is particularly low (under 70 per cent). The

weight-power ratio of Soviet machinery and equipment is 20-25 per cent higher than that of the best world models. Too much metal goes to produce wheel tractors and farm machines, whose weight could be reduced by as much as 30 per cent, equipment for the light and food industry, lorries and other products.

The significance of each percentage point in saving resources both in physical terms (tons, metres) and in value terms keeps rising, especially in view of the current rise in the prices of fuel and raw materials. With a relatively small increase in the general wholesale price index for heavy industry (roughly 5 per cent in 1966-1979), as compared with 1965 these prices went up by 14 per cent for electric power, 72 per cent for fuel, 50 per cent for the products of ferrous metallurgy, and 20 per cent for those of the timbering, wood-working, pulp-and-paper industries. Over the past decades, capital investments in the extraction of fuel and raw materials increased to an even greater extent. Whereas in the early 1960s it took 2.3 roubles of capital investments to increase their output by one ton, in the early 1980s it took 7.4 roubles (3.2 times as much). Economies of material resources usually require much smaller capital investments (from one-third to one-fifth) than a corresponding increase in the volume of their production. Hence the economic advantages of resource-saving technologies and their growing role in intensification.

Here are some of the tasks for the 12th five-

year period: "To enhance the saving of resources. To work hard for a rational and economical use of all types of resources, reduce their losses, and go over to resource-saving and waste-free technologies without delay. Markedly to improve the reclamation of refuse and production waste, develop production capacities for their recycling, improve the collection of spent products, notably, from the population, and build up the material and technical facilities of procurement organisations. Make thrifty use of energy and other resources in daily life."[1]

In 1990, 200-230 million tons of organic fuel (in terms of reference fuel) is to be saved in the national economy as compared with 1985. About 75-90 million tons (from 37.5 to 39 per cent of the total) is to be saved owing to the development of the nuclear power industry. In rolled ferrous metals, economies in 1990 are to amount to 12-14 million tons as compared with 1985, exceeding the increase in production. The specific consumption of rolled ferrous metal in construction is to go down by 13-15 per cent, that of cement, by 8-10 per cent, and that of timber, by 12 per cent.

These targets are quite high, and the various industries and enterprises are taking the necessary organisational and economic steps to ensure

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[1] Guidelines for the Economic and Social Development of the USSR for 1986-1990 and for the Period Ending in 2000, *The 27th Congress of the CPSU*, Moscow, Politizdat Publishers, 1986, p. 279 (in Russian).

their attainment. In recent years, plan targets for saving resources were not met in full measure. Although central planning of resource-saving measures has markedly expanded in the 1980s, it covers no more than one-tenth of the total value of material inputs. So, the extent to which economy targets are met still largely depends on the work being done in the industries and at the enterprises themselves.

Plan rates for the consumption of material resources are being tightened, generally reviewed and better validated in techno-economic terms. The organisational work being done to meet these rates, involving the whole work collective, is thus an integral part of the technical upgrading of production. The main accent here is on improving technology, replacing worn-out and obsolete machinery, and reducing spoilage and direct unproductive expenditures.

Reserves for saving materials exist at every stage of the economic turnover of resources: from their extraction to their use in production or public consumption, in the public utilities or everyday services.

It has been estimated that complex treatment of raw materials in the mining industry would make it possible to increase its output by 25-30 per cent with minimum additional expenditures. That would do a great deal to strengthen the raw-material base of manufacturing and construction.

The work to salvage wastes and refuse started in the past period is to be continued. The

share of many recycled materials in the country's raw-material balance could be increased several times over. At present, only 64 per cent of all the waste paper that could be collected goes into recycling, 34 per cent of secondary textiles, 70 per cent of glass breakage, only 10 per cent of polymers, roughly one-third of wornout tyres, and one-half of waste timber in the timbering industry. The waste dumps of metallurgical, power and mining plants are sometimes richer than mines.

In the past five-year period, the Ukrainian SSR gained rich experience in salvaging spent resources. It now recycles 85 types of wastes and refuse, whereas the figure for the USSR as a whole is 40 types. In the 11th five-year period, the republic's industry utilised 550,000 tons of refuse and industrial wastes, or 30 per cent more than in the preceding period. Their share in the republic's total consumption was up to 12.2 per cent (with recycled materials estimated in terms of the value of the primary materials they replace). The targets of the 11th five-year period for reducing material-intensity were exceeded by almost 100 per cent. In the 12th five-year period, economies in raw and other materials, fuel and energy, and recycling of wastes and refuse will save the republic 9-10 billion roubles worth of primary resources.

Lines of production which make it possible to utilise many waste products to a much greater extent are to be developed in other Union republics and economic regions of the USSR.

On average, the share of recycled resources is to go up to 10-12 per cent.

In the current five-year period, lower consumption rates are to help meet 67 per cent of the increase in the country's requirements for rolled ferrous metal, 51 per cent for fuel and energy, 93 per cent for cement, and 69 per cent for timber.

More vigorous use is to be made of economic levers for reducing material-intensity by restructuring the material and technical supply system. Since the early 1930s, material resources have been allocated under orders handed out by supply bodies to the enterprises on the basis of adopted production plans. The enterprises deliver their products to consumers accordingly. At present, one-quarter of all the supplies channelled through the USSR State Supply Committee (Gossnab), which is in charge of material and technical supplies, and through its territorial agencies are effected under direct ties established between enterprises for a period of five years. A considerable part of the country's wood, sawn timber, cement, rolled ferrous metals and other products are realised in this form. Since 1987, supply organisations are being switched to the principles of wholesale trade. Tens of thousands of enterprises and organisations are to obtain their funds and resources in this way; as it gains experience, the wholesale supply system will be extended to replace the unwieldy and multi-stage procedure for allocating technical and producer goods,

which no longer ensures efficient use of such goods.

The essence of the new system is that in all matters of supply (except the most sophisticated equipment) the enterprise is to deal with only one territorial supply agency. An order placed by the consumer enterprise at any time it finds convenient will be the only basis for obtaining resources, instead of the applications that are now filed by the enterprises to the supply organisations from six to eight months in advance of the plan year. That will streamline the supply system and remove departmental barriers to the movement of resources. Associations and enterprises will be able to get the products they need much sooner, optimise their inventories, release additional resources through their faster turnover and, most important of all, meet their own requirements to a fuller extent, increase their interest in and their economic responsibility for efficient use of producer goods.

Higher Returns on the Existing Production Potential

Apart from better use of material resources and labour inputs, intensification also implies the need to make more efficient use of the existing production potential and capital investments for its improvement.

That potential is now immense. At the beginning of 1986, the country's fixed assets

amounted to 1,570 billion roubles, an almost three-fold increase as compared with 1970. Serious changes are under way in its sectoral and territorial structure. The influence of scientific and technical progress is expressed in the faster growth of fixed assets in mechanical engineering, primarily its latest industries, the chemical and petrochemical industry, and nuclear power engineering. The ever more pronounced social purpose of Soviet economic development is evident in the work being done to strengthen material and technical facilities in agriculture and other branches of the agro-industrial complex as the decisive condition for realising the Food Programme.

The changes in the distribution of the productive forces are epitomised by the accelerated build-up of production capacities in the USSR's eastern regions. In the 1970s, Western Siberia became its main fuel and energy base. Virtually all branches of the mining industry have been developed in the east, and ever new branches of manufacturing are being set up on that basis. In the past five-year period, a major railway track was completed and traffic started along the whole length of the Baikal-Amur Mainline (BAM), and one-half of it is already fully operational.

The major lines of the state's investment policy are on the whole quite clear. Capital investments in the 12th five-year period are concentrated on large-scale programmes, rapid introduction of scientific discoveries and techni-

cal designs tested in practice, build-up of fixed assets in industries that are crucial to scientific and technical progress, and priority funding of industrial renovation projects.

All sectors of the economy are going over to the intensive road of development on the basis of a new approach to matters relating to the expansion and use of the production potential. First of all, efforts are concentrated on its qualitative upgrading, in contrast to the earlier orientation towards its quantitative expansion.

Over the past few five-year periods, the expansion of fixed assets far outpaced the work being done to arrange their efficient use. That is evident from the fact that in the past 15 years the output-to-assets ratio in the national economy declined by one-third, and in industry, by almost 30 per cent.

In the 1970s, the decline in the output-to-assets ratio accelerated and spread to virtually every sector of the national economy. The targets for better use of fixed assets laid down by the 10th and 11th five-year plans were not met: the actual decline in the output-to-assets ratio was almost twice as fast as planned.

The past fifteen years were marked by falling output-to-assets ratios in all industrial complexes (in the 9th five-year period, these ratios increased in the engineering complex, in the chemical and petrochemical industry). The decline was particularly steep (almost 60 per cent in 15 years) in agriculture and construction. In

Table 10

Changes in the Output-to-Assets Ratio in the Economy[1]

Indicators	1975 % of 1970	1980 % of 1975	1985 % of 1980	1985 % of 1970
National income per rouble of fixed assets	87	87	87	67
Production per rouble of fixed assets:				
industrial output	95	86	87	69
farm produce	66	75	83	41
construction and erection work in the building industry	80	67	78	42
freight turnover in transport	94	89	84	70

[1] Calculated from *The USSR National Economy in 1985*, pp. 36, 48.

these sectors, which got down to industrial development later than industry itself, initial mechanisation of many production processes was still under way. Moreover, the period after 1978 was bad for crops in agriculture, which further reduced the output-to-assets ratio. One should bear in mind, however, that to ensure stability in agricultural production the Soviet Union needs to make additional inputs, for the biological potentialities of its farmland, determined by annual temperatures, the amount of rainfall, the length of the

Table 11

Output-to-Assets Ratio in Industry (per cent)

Indicators	1970	1975	1980	1985
Heavy industry	100	101	91	81
engineering complex	100	107	101	96
industries producing construction materials and chemical goods	100	93	76	68
ferrous and nonferrous metallurgy	100	90	73	61
chemical and petrochemical	100	104	89	82
timbering, wood-working, pulp-and-paper	100	89	70	64
building materials	100	92	74	67
fuel-and-energy complex	100	95	82	65
electric power	100	99	95	87
fuel	100	93	73	51
Light industry	100	86	75	61
Food industry	100	91	74	68

summer period, and other natural and climatic factors, are 58 per cent lower than those of the USA.

The movement of the output-to-assets ratio is determined by a number of circumstances, whose influence is far from simple. Among the objective causes for its reduction one should primarily list the larger outlays on mechanising production and reducing the sphere of manual labour, which do not yield any increase in production, and also the growing share of capital-intensive branches (the fuel, energy and

raw-material industries and agriculture) within the composition of the fixed assets. Thus, the output-to-assets ratio in mining is more than 70 per cent below the average for industry as a whole, and it tended to decline at a faster rate. In agriculture, that indicator is 60 per cent lower than in industry.

At the same time, there are various instruments for promoting scientific and technical progress and improving production organisation which could help to increase output per rouble of fixed assets.

One should naturally reckon with the objective processes that serve to reduce that indicator, and the first practical conclusion is that the decline in the output-to-assets ratio cannot be wholly attributed to poor use of fixed assets, let alone to their declining efficiency. At the same time, one should not exaggerate the importance of so-called objective factors or present these as being prevalent. The main reasons behind the declining output-to-assets ratio lie in the flaws of production organisation, the miscalculations of technical and structural policy, and underestimation of technical progress. Since those are largely subjective factors, which depend on the quality of administration and management, the attitude to work, and the attention paid to the use of production capacities, the reserves for increasing the output-to-assets ratio could be used to a much fuller extent.

The second conclusion is that more effective measures should be taken to minimise the in-

fluence of cost-hiking and other factors of reproduction which tend to reduce the output-to-assets ratio, and at the same time to make much more vigorous use of scientific and technical, structural, investment and economic instruments which help to stabilise and increase that ratio.

The reserves for a significant increase in the returns on the existing production potential are to be found at every stage in the reproduction of fixed assets and in most industries, manufacturing above all. The sources for raising output-to-assets ratio could be grouped according to the stages of the formation and use of fixed assets: the periods in which enterprises and other projects are built and those of their subsequent operation in the industries to whose balance sheet they have been transferred.

The documents of the 27th Congress of the CPSU put forward three major tasks in mustering reserves to increase the output-to-assets ratio in the formation of fixed assets: to shorten construction schedules over the next decade by half, radically to improve feasibility studies for new enterprises and other projects, and to accentuate the technical re-equipment and renovation of existing enterprises.

Construction schedules influence the output-to-assets ratio by determining the time it takes for capital investments to start yielding products. The shorter that time, the sooner are the capital investments materialised in production assets and capacities handed over by the

builders to the customers. A study of 753 large enterprises put on stream in 1984 showed that one-third of these had taken twice as long to build as scheduled or even longer. Whereas the normative construction period for production enterprises avarages 3-3.5 years, the actual figure is 9 years. Dragged-out construction puts a heavy burden on the economy, in effect pulling it back to low growth rates and efficiency, to disproportions.

A shortening of construction periods by one year could yield 10-12 billion roubles in addition to the national income. The magnitude of the figure will become clear if one recalls that under the past five-year plan the national income increased by an annual average of about 15 billion roubles. In other words, such a shortening of construction periods could increase national income growth by 75 per cent, and the output-to-assets ratio by two kopecks.

The major condition for reducing the time it takes to build new enterprises and other projects is a concentration of capital investments, with a narrower front of construction. The simultaneous construction in the USSR of more than 300,000 big and small projects leads to unwarranted scattering of material resources and efforts. That is why since 1987 steps are being taken to plan construction in strict accordance with the existing standard schedules. A number of non-priority construction projects, and also those being built from obsolete designs are being suspended in order to re-allocate ma-

terial and labour resources for a faster completion of crucial projects. Although the switchover is highly complicated and calls for a review of many earlier decisions on the development of separate industries and territories, it could not be put off any longer. It will help to accelerate the completion not only of the enterprises that are listed as crucial, but also of the suspended projects.

The experience of the Byelorussian SSR shows that construction periods and building costs can well be reduced. In the 11th five-year period, the number of projects being built simultaneously in the Republic was reduced by 21 per cent, and construction periods, by almost 29 per cent. In view of that, installation of fixed assets was almost 1.3 times higher than the increase in capital investments, and the scale of construction-in-process was normalised.

Another significant circumstance here is that shorter building schedules are the best guarantee against any moral depreciation of the technical designs used. Technical progress is continuous, with new, more efficient and economical machinery and technology appearing every year. The sooner the technical and engineering ideas embodied in designs are materialised in actual production capacities, the shorter is the economic payback period.

Hence the great responsibility for the efficiency of the new capacities and the resultant output that falls upon designers and builders. The results of their work directly determine the eco-

nomic effect of production and the output-to-assets ratio at the new enterprises and other projects. Higher-quality design and cost estimates help both to reduce construction costs and timetables, and to minimise the costs of operating fixed assets, so ultimately reducing all the current expenditures that determine product costs. That is why additional measures are now being taken to raise the quality of the studies done to evaluate the efficiency of the machinery and technology being developed—to compare lump-sum capital investments (with due account for the time factor) with the estimated project costs and to ensure that actual payback periods correspond to the normative periods.

Soviet designers have developed many effective designs which are well-known both in the USSR and abroad. In some instances, however, the economic aspect of construction is underestimated, some enterprises are being built without the due plans and specifications, sometimes regardless of expense, and other projects are built from outdated designs. Design organisations have no direct economic stake in turning out modern designs or getting the builders and customers to meet design indicators. The performance of many R&D institutes still falls short of the need to step up scientific and technical progress. Under poor control from the ministries and the USSR State Building Committee, they continue to turn out low-quality designs.

Under the 12th five-year plan, which gives

priority to the technical re-equipment and renovation of operating enterprises, essential changes are being made in the policy of expanding and strengthening the production potential. From the early days of industrialisation in the USSR, priority was given to the construction of new enterprises. That was necessary and justified when the country did not as yet have an adequate production base, when it had yet to create many of the key industries, and when it lagged behind in economic and technical terms. But even in the new situation, when such a base had been created and when the need for technical re-equipment of earlier-built enterprises was ever more insistent, the decision to renovate these enterprises was unduly delayed.

The need to restructure capital investments in favour of the technical re-equipment of existing production has been urged for many years. Enterprises in some industries have gained considerable experience in effective renovation. Its economic advantages are obvious. A study of 3,500 building sites carried out by the USSR Bank for Construction (Stroibank) in the middle of the past five-year period showed that capital investments per rouble of ouput came to 1.21 roubles for new construction, 1.09 roubles for an expansion of operating enterprises, 0.98 roubles for renovation, and 0.83 roubles for technical re-equipment. Outlays on retooling and renovation are paid off sooner than those on building new enterprises.

A tangible step towards renovation was taken

only in the past five-year period, when capital investments for these purposes were 40 per cent up on the preceding period, rising about twice as fast as those in productive construction as a whole. In 1985, the share of capital investments in the technical re-equipment and renovation of existing enterprises was 38.5 per cent, as compared with 29 per cent in 1980, and in mechanical engineering and some other industries it was 50-60 per cent.

Still, the heads of some ministries and the managers of many enterprises preferred to build new projects instead of renovating existing ones. Renovation was much too slow even in manufacturing, in spite of all its objective prerequisites. The ultimate reasons for that lie in misguided planning, in the flaws of the existing system of financing and material and technical supplies for construction sites, and the way in which the work of the customers and building organisations is assessed.

In the 12th five-year period, outlays on the improvement and renewal of the existing fixed assets through technical re-equipment and renovation are to be 1.7 times as high as in the past five years, instead of 1.5 times as envisaged in the Guidelines.

In marshalling reserves for raising the rate of return *on the operation of fixed assets*, the main thing is to reduce the time it takes to bring production at newly installed capacities up to design level, and to ensure fuller loading of all production assets. The share of annually in-

stalled capacities is relatively small: at the beginning of 1985, the figure was 8.3 per cent of all fixed assets in the economy. But it is those new capacities which characterise the present technical standard of production and largely determine its efficiency throughout the whole lifespan of the installed capacities.

In some industries and in many areas, newly installed plant and equipment is underloaded. Thus, a statistical survey of 1,852 enterprises, workshops and other projects started in the 11th five-year period showed that 1,237 of these (two-thirds of the total) were not being fully used or were being brought on stream behind schedule. The actual volume of production at these projects was one-third short of target.

Estimates show that full use of design capacities at new enterprises and other projects in industry as a whole could yield 15-16 billion roubles worth of additional output and add 7-8 billion roubles to the national income. Thus, if all new capacities in the heavy industry were to reach rated level, production growth rates would almost double. If the present lag in bringing new capacities up to design level could be halved over the next few years, the growth rates of industrial production and the national income would be at least 25 per cent higher than they are today.

There is also a vigorous drive to increase the output-to-assets ratio through better use of production capacities at enterprises started under preceding five-year plans. The importance of

that reserve is evident, for instance, from the fact that industrial production growth in the 8th and 9th five-year periods showed a lead over the starting of corresponding capacities. Later, however, the degree of their utilisation was reduced, and in the 10th five-year period production growth was almost fully regulated by the starting of new capacities. The 11th five-year plan paid more attention to increasing output through fuller use of the existing production capacities. In three-quarters of all industries, roughly 20 per cent of the overall increase in output was obtained through fuller loading of these capacities; in more than one-quarter the figure was 40 per cent, and in one-sixth it was 60 per cent.

Another proof of the growing returns on the production potential in that period is that in 1983 the number of basic industrial goods produced with a capacity utilisation rate of more than 95 per cent was almost twice as high as in 1980, and those produced with a rate of under 90 per cent was down. Nevertheless, many production capacities continue to be underutilised in view of sectoral and intersectoral disproportions, a shortage of raw materials and completing units, and other factors. So, plans for the various industries, associations and enterprises envisage measures enabling them to make fuller use of their production potential.

An essential factor in raising the output-to-assets ratio is to eliminate the territorial disproportions between the number of jobs and the

available labour. In areas with a labour shortage, almost one-fifth of all jobs at new industrial enterprises remain vacant. One of the major tasks of the present five-year plan is to balance these out. In accordance with the availability of labour in various economic regions and industries, changes are being made in the deployment of the productive forces, in the proportions between new construction and the technical upgrading of existing enterprises, and between new and existing jobs.

In the eastern regions, which in the 1970s became the country's main fuel and energy base, and where a growing scale of new construction is combined with a pronounced labour shortage, the main emphasis is on measures aimed at eliminating that labour shortage by building high-technology enterprises. That makes it possible to reduce the need for additional labour to a minimum.

In the European zone, where most of the country's manufacturing, agriculture and population are concentrated, and where the growth of the labour force has been slowing down, the main emphasis is on technical re-equipment and renovation of existing enterprises in order to overcome the labour shortage mostly by releasing ever more labour from existing production.

In the republics of Central Asia and Transcaucasia, where labour resources have been growing at a high rate and where a considerable part of these are still engaged in housekeeping, new jobs are to be created to draw

them into social production. New enterprises here are primarily being built in industries which determine their specialisation in the country's macroeconomic complex, the light and food industries, and the services.

In examining the new lines of approach to the problem of raising returns on the existing production potential, one should take special note of the work being done to spread the initiative of the Leningrad Party organisation in switching industrial enterprises to a two-shift schedule, and of the job rating campaign launched in the past five years.

The tasks of increasing the shift-work ratio for equipment have figured in all the past few five-year plans. But that ratio has in effect been stabilised at a much lower level than it used to be in the 1960s, before the switch to a 40-hour working week. Most mechanical engineering enterprises in effect work in one shift. That is largely because their stock of equipment contains large quantities of obsolete machinery, which helps to cushion various discrepancies in production and in material and technical supplies at the entreprises. The demand for a general increase in the work-shift ratio, which is still often put forward in economic writings, has little meaning in the present conditions. The main thing now is to increase the work-shift ratio for the most productive equipment, supplied to industry and other sectors of the economy in ever larger quantities. If the output-to-assets ratio is to be increased, it is first of all

necessary to ensure the full loading of high technology.

Expensive numerically controlled machine tools, especially robots, are economically valid only with continuous three-shift loading. Meanwhile, surveys show that at a number of engineering plants the shift-work ratio for these machine tools is no higher than for conventional ones. Even at Leningrad enterprises, which on the whole have been making fairly good progress in intensifying production, the average operating rate of modern automatic equipment and computers is 60-70 per cent. The 27th CPSU Congress criticised the inadequate use of machining centres and NC machine tools at the enterprises of a number of ministries. There should be an essentially new approach to the use of such progressive and expensive technology, with a simultaneous write-off of obsolete machinery. That is precisely the way taken in Leningrad.

Obsolete equipment in the city and the region constitutes roughly one-third of the fixed assets and diverts many workers. That is largely why the number of workplaces in the region is almost 25 per cent in excess of the number of workers, so that the returns on progressive, highly productive equipment are low. At many enterprises, it is used no more than five or six shifts a week (out of a total of 21 shifts), for there is no one to operate it.

In the course of the work to elaborate the five-year plan and map out the lines for inten-

sifying industrial production, an analysis was made of the draft plans of enterprises. It turned out that most ministries continued to seek extensive development of their enterprises in the region: about 40 per cent of all capital investments were earmarked for new construction or for an extension of existing enterprises, while the scale of technical re-equipment was obviously inadequate.

After an all-round discussion of the state of affairs, the Leningrad Regional Committee of the CPSU decided to use the new and progressive part of the production assets in two or three shifts, to eliminate obsolete equipment and use the free space to install modern production facilities. That could yield 3 million square metres of production space, make it possible to almost double the share of advanced technology in the machine tool pool, and improve qualitative indicators in industry.

As enterprises increase their shift-work ratio, changes are being made in the work schedules of transport, trade, children's and medical institutions, and so on. Leningrad industry has been working in two or three shifts since July 1986.

The CPSU Central Committee approved that initiative, primarily in mechanical engineering, as a highly promising line of industrial development in other parts of the country as well. To stimulate a switch to multi-shift schedules, the country's regions, territories and republics have been guaranteed a fixed volume of capital in-

vestments for the five-year period. They are entitled to use the funds saved from new industrial construction to renovate enterprises and develop social and cultural facilities.

The Leningrad initiative has been taken up by enterprises in other industrial centres. Since August, Kharkov enterprises have been working in two or three shifts. In the first month, the city's mechanical engineering plants alone released about 2,000 machine tools, and the number of second-shift workers went up from 22 per cent to almost one-third. The Kharkov Region's target for the five years is to release up to 11,000 units of outmoded equipment, vacate no less than 200,000 square metres of production space, and raise the equipment shift-work ratio from 1.47 to 1.8.

At present, there are something like 700,000 job vacancies in industry alone. With a work-shift ratio of 1.7, the number of such vacancies would exceed 4 million. While obsolete equipment is being used at operating enterprises, there is no one to handle machine tools at new ones. Tens of billions of roubles have been spent on their construction, but without due returns. If the returns are to be increased, fuller use should be made of job rating and rationalisation. Any enterprise can use this organisational and economic instrument of intensification by stepping up its work along these lines.

The Dnepropetrovsk Harvester Plant, which was the first to get down to job rating, has

eliminated over 800 superfluous workplaces and released over 750 workers, who have been moved to newly created sections; there is no longer any need to use engineers as machine-tool operators. By selling off the excess equipment for more than a million roubles, the plant vacated almost 4,000 square metres of production space. The shift-work ratio for its machine tools went up to 1.62, and the output-to-assets ratio, to 2.82 roubles. Over the past five years, labour productivity at the plant increased by 50 per cent, the volume of output, doubled, and the service life of the harvesters increased from 6 to 8 years owing to their higher quality and reliability.

In 1985, job rating was under way at 17,000 industrial enterprises, or 38 per cent of the total. By the end of the five-year period, the process is to be completed in industry and extended to other sectors of the economy. The aim here is not only to extend the work being done in this direction, but also to make it much more efficient. The enterprises are to be given greater incentives to carry out job rating: it is conceived as an integral part of the overall drive for technical re-equipment and a condition for the introduction of new wage rates and salaries in the production sphere.

Better Economic Management

Faster progress along the road of intensification implies the need to raise the level of eco-

nomic activity as a whole, the quality of economic management in every area. First of all, this calls for radical changes in matters of reducing costs, accelerating the turnover of material resources and circulating assets, and raising product quality. Under the past few five-year plans, there has been virtually no improvement in these areas, with a distinct turn for the worse in some respects. Elimination of the resultant shortcomings is thus an essential prerequisite for raising economic efficiency. The tasks formulated in the 12th five-year plan are to be largely realised through more vigorous use of the three instruments of intensification listed above.

The cost price of output, an indicator whose decline markedly slowed down in the 1970s (Table 12), plays an ever more important role in improving the country's economic performance in the 12th five-year period. The slowdown was due both to a slackening of the effort to reduce production costs in the industries and at the enterprises, and to the rise in wholesale and procurement prices in that period.

According to the Table, industries fall into two groups: those with rising and falling costs. The first group mostly includes the extractive industries (fuel, timbering, ginning, fishing), which have contributed most of all to the slowing decline in cost reduction in industry. Electric power engineering and ferrous metallurgy were also marked by rising costs, which persisted through the 11th five-year period. The second group with falling costs includes the

Table 12

Changes in Inputs per Rouble of Commodity Output in Industry and Construction Costs[1] (per cent, annual average for five years)

	1971—1975	1976—1980	1981—1985
Industry, total	—0.6	—0.1	—0.3
including:			
Electric power engineering	+0.5	+0.16	—0.2
Fuel industry		+1.7	+2.5
Ferrous metallurgy	+0.1	+1.1	+0.4
Chemical and petrochemical industry	—2.8	—0.02	—0.6
Mechanical engineering	—2.0	—1.3	—1.2
Timbering, wood-working, pulp-and-paper industry	+0.5	+1.0	0
Light industry	+0.18	0	—0.3
Food industry	—0.06	—0.1	+0.1
Construction, building and erection costs	—0.5	+0.6	—0.2

[1] For industry, in prices comparable with those of the preceding year. In construction-building and erection costs in the prices of the corresponding years. Calculated from *The USSR National Economy in 1975*, p. 229; *The USSR National Economy in 1980*, p. 152; *The USSR National Economy in 1985*, pp. 161, 895.

manufacturing industries: the decline was most pronounced in mechanical engineering, and in the chemical and petrochemical industry. In construction, cost prices in the 10th five-year period tended to increase, but went down again in the following five years.

In the present five-year period, cost-cutting

targets have been set not only for industry, but also for construction and state farming. The cuts are to be much larger than those attained in the preceding five years. In mechanical engineering and in the chemical and petrochemical industry, which are being modernised on a particularly large scale, cost prices are to go down faster than elsewhere. Under the five-year plan, introduction of new machinery and technology should serve to reduce the cost of industrial output by 28 billion roubles. As compared with the preceding five-year period, cost prices in the various sectors of the economy should go down as follows:

	1985 % of 1980	1990 % of 1985
Industry	-1.4	-4-5
Construction	-0.9	-2-3
State farming		-5-7

The targets are undoubtedly high, but realistic, for they are backed up with further measures to save material inputs and tap the reserves of labour productivity growth. That is bound to strengthen the economic groundwork for economic calculus in production, for an increase in socialist accumulation and higher profitability of enterprises.

In 1986, the cost price of industrial output was to have been reduced by 0.9 per cent, or

by nearly as much as in the first four years of the preceding five-year period, and in construction, by 0.5 per cent. Industry has coped with these targets, and an economy of inputs in industry surpassed the four-billion roubles mark. In 1987, industrial costs are to go down by another 0.8 per cent. In the national economy as a whole, cost-cutting measures are to yield over one-half of the increase in profits, which is much more than in the 11th five-year period.

The tasks of reducing cost prices in agriculture, where these have kept rising since the 1950s, are even more urgent. Thus, in the 8th five-year period the current expenditures of collective and state farms per rouble of gross agricultural output (in comparable 1973 prices) were 0.7 rouble, whereas in the 9th five-year period the figure was up to 0.89 rouble, in the 10th period to 1.11 roubles, and in the first half of the 11th period to 1.3 roubles. The continuing rise in the cost of farm produce is mostly due to rising wholesale prices and wage rates in industry and to higher payment for work on collective and state farms. In 1983, material inputs were 4.3 times as high as in 1965, with a 5.3-fold increase in spending on industrial products and a 2.3-fold increase in payment for work.

Under a resolution of the CPSU Central Committee Plenary Meeting in May 1982, there was another round of increases in state procurement prices in 1983. To ensure stable eco-

nomic relations of the collective and state farms with industry, with the enterprises and organisations servicing them, the USSR Central Statistical Agency was instructed to calculate price indexes for the farm produce being realised by agriculture, the producer goods it acquires and the services it pays for. Agricultural enterprises settle their accounts with enterprises in other sectors of the economy with due regard for changes in these price patterns. The mechanism that helps to compensate the collective and state farms for additional expenditures caused by the rising prices of technical-producer goods and services has in the main been adjusted, and the thing to do now is to improve its use in the specific conditions of farming in different zones of the USSR. The existing material and technical facilities and the economic mechanism that is now being formed in the branches of the agro-industrial complex create prerequisites for stemming and reversing the rise in the cost price of farm produce. The main factor here, as in industry, is better use of the available resources and cuts in losses and unproductive expenditures, which are still in evidence on many farms.

Cost-cutting measures are ever more important in boosting profits and profitability. Profitability is a synthetic economic-calculus indicator showing the efficiency of the economic performance of associations and enterprises. At first glance, its movement in industry in the 11th five-year period was more reassuring than in the

10th period, when profitability declined from 15.8 per cent in 1975 to 12.2 per cent in 1980 (in 1985, it stood at 12.1 per cent). But that was largely due to a mark-up in wholesale prices as of January 1, 1982 (but even with higher prices, the coal-mining industry continued to make losses). In most industries, with the exception of mechanical engineering and the chemical and petrochemical industry, profitability continued to decline even under the new wholesale prices, largely in view of the falling output-to-assets ratio, the slower turnover of material resources and circulating assets, and also the underfulfilment of plan targets for profit.

Profitability in other sectors of the economy was also on the decline. Thus, collective farms operated at a loss until a new mark-up in the procurement prices of farm produce in 1983. At the beginning of the five-year period, the collective farms did not make virtually any profit at all, using almost the whole of their gross income as payment for work. The higher procurement prices increased their accumulations: in 1984, their net income already constituted more than one-third of their gross income. Until recently, cost-cutting measures had little effect on profitability. Meanwhile, a rise in profitability at the expense of that factor is an essential sign of social production going over to the intensive road of development.

Further intensification depends on a faster turnover of material resources and circulating

assets. In the past few five-year periods, managers and economic services at the enterprises paid less attention to these matters than before. In the work being done by central economic departments and sectoral ministries to improve the economic mechanism, these matters also came to be regarded as secondary.

All of that had an adverse effect on the proportions between the growth of production and inventories of material-commodity values (raw and other materials, goods- and construction-in-process, finished products). Inventories increased much faster than output, especially in construction (Table 13).

From 1970 to 1985, inventories as a share of the gross social product increased by one-third, almost doubling in agriculture and going up 3.7-fold in construction.

Large surplus inventories have been amassed at many enterprises and significant material resources have in effect been withdrawn from the economic turnover, so increasing tensions in material supplies for production.

The number of enterprises which are short of circulating assets has increased. In some instances, enterprises and economic organisations have been over-using bank credits to pay suppliers' bills and settle mutual accounts.

The turnover of circulating assets slowed down from 145 days in 1980 to 160 days in 1984 at all stages of the reproduction process. Of the total 15-day increase, the average period between the purchase of the necessary products

Table 13

Correlation Between the Growth of Circulating Assets and Production Volumes[1]

	1975 % of 1970	1980 % of 1975	1985 % of 1980	1985 % of 1970
Industry				
Circulating assets	134	137	142	259
Gross output				
in current prices	137	121	130	215
in comparable prices	143	124	120	214
Construction				
Circulating assets	264	161	138	588
Construction and erection work (in comparable prices)	132	105	110	154
Trade				
Circulating assets	132	122	148	239
Turnover				
in current prices	136	129	120	209
in comparable prices	136	124	116	196

[1] Calculated from *The USSR National Economy in 1985*, pp. 34-37, 364, 459, 464, 554.

and their use in production increased by one week, the length of the production cycle by 4 days, and the time it takes the enterprises to store their finished products prior to their delivery to the consumers, by 3 days. The 11th five-year plan targets for shortening the storage period were not attained. In 1981-1984, 4.1 billion roubles worth of material resources were to have been drawn into the economic turn-

over, whereas in actual fact their stockpiles were increased by an additional 6.2 billion roubles.

Production inventories in industry make up almost 60 per cent of all the material residues of circulating assets. The period between the purchase of the necessary products and their use in production is almost one-and-a-half months. In order to shorten that period, as many material resources as possible are to be moved from factory warehouses to those of supply-and-marketing organisations, which can speed up the use of these resources by dispatching them to enterprises which need them most.

One of the main instruments used to accelerate the turnover is tighter plan discipline, with associations and enterprises fulfilling their plans for the production of a definite product mix and meeting their contractual obligations for the delivery of products. As many years of experience have shown, failure to fulfil these plans is one of the main reasons for the disruption of planned economic ties and the resultant slowdown in the turnover of material resources. Under the present five-year plan, measures to ensure on-schedule delivery of products under contract are a central element in improving the economic mechanism. Scrupulous fulfilment of contractual obligations will make it possible to improve material and technical supplies to the enterprises (raw and other materials, completing parts, etc.), and so to create conditions for greater stability in their work. And that, in turn, will reduce the economy's need for

circulating assets along two lines: by bringing into play the surplus stocks of some enterprises and by eliminating the shortage of material resources experienced by others.

Another major reserve in accelerating the turnover of material-commodity values is a reduction in goods-in-process, which make up more than 22 per cent of total industrial inventories. If that reserve is to be mustered, it is first of ali necessary to improve production organisation and, over the longer term, to raise technical standards and introduce modern high technology.

The negative tendencies in the turnover of resources are in large measure due to dead stocks of products in some industries resulting from their low quality. The share of finished products in the total circulating assets has over the past few years increased to 12 per cent of total industrial inventories. Surplus finished-product residues have particularly increased in industries which find it difficult to market their products, such as the light industry and some branches of mechanical engineering. Better quality is a long-term factor in speeding up the turnover of circulating assets, for it reduces the period during which they are materialised in stocks of finished goods.

Yet another reserve in accelerating the turnover is faster delivery of finished products to the consumers. The key to that lies with the transport workers. Under the present five-year plan, they are to accelerate freight traffic and

delivery, and raise the efficiency and quality of work in every unit of the transport system. In 1987, a faster turnover of circulating assets is to help release 1.3 billion roubles worth of these in industry alone.

All-round intensification of production is closely bound up with a radical improvement in product quality. Quality is the most objective synthetic indicator of scientific and technical progress, production and labour organisation, and production efficiency. In view of the scope and significance of the practical measures now being taken in this field, higher quality is now becoming a truly novel component of economic growth.

Matters of product quality were often examined in the past, but were regarded as a relatively secondary line in raising economic efficiency. At present, they have acquired much greater (sometimes crucial) importance. Although in many quantitative indicators of production and capital construction the Soviet Union has for a long time now been among the world's leaders, in terms of quality it continues to lag behind in many respects. Only one-fifth of all new technology is produced on the level of inventions. The goods produced often do not measure up to the best world standards. Mikhail Gorbachev said at a CPSU Central Committee meeting on matters of accelerating scientific and technical progress: "... We must admit that the quality, techno-economic and aesthetic standard of products is one of the most vulnerable ele-

ments in our economy, the source of many difficulties and problems".[1]

The Party's economic policy starts from the assumption that a wider scale of production without quality improvements is bound to hold back economic intensification to a significant extent. The task is formulated as follows: it is now vitally important not only to turn out more goods, but primarily to improve their quality, to bring it up to the highest world standards.

High quality means, first and foremost, an economy of labour inputs. Thus, although it takes fairly small additional expenditures to fortify automobile tyres, their run can be increased by 10 per cent, which is tantamount to producing an additional 6 million tyres a year. That is practically as many as the country is short of today to meet the needs of the economy and the population. Such examples are no exception, but a widespread rule and are to be found in every industry.

Naturally, higher quality does not result merely from changes in product models, but is determined by the technical standard and novelty of the new designs. More reliable metal-cutting lathes would in effect reduce the demand for these by 16 per cent; for metal-shaping machines the figure is 26 per cent, and for trucks, 8 per cent. That is the practical

[1] Mikhail Gorbachev, *Selected Speeches and Articles*, Progress Publishers, Moscow, 1986, p. 144.

way to solve the quantity problem through better quality.

High quality is an economy of material resources. Where metal quality is low, machine-builders are obliged to design and produce machinery and equipment with heavier parts and units in order to make them stronger and more reliable. As a result, the overconsumption of metal in the manufacture of travelling cranes and some makes of trucks and cars comes to 20-25 per cent. An improvement in the quality of metal would make it possible for consumers, primarily in mechanical engineering and construction, markedly to reduce metal consumption. A more rational structure and better quality of building materials could reduce their weight by at least 25-30 per cent, considerably reducing labour inputs and building schedules.

So, higher quality ultimately means fuller satisfaction of social requirements, both production and personal. With higher quality, fewer goods (in physical terms) go to satisfy a greater volume of requirements, which amounts to expanded reproduction of use-values.

Of course, a solution of the quality problem will take several years of difficult and multi-faceted work, and calls for an integrated approach to the various technical, economic and organisational matters involved. It is necessary, in particular, to fine-tune the economic mechanism for improving quality, including planning,

price formation, and economic incentives to design offices, inventors and rationalisers, and plants manufacturing new products. At the same time, the problem is so pressing that the overdue changes can no longer be put off, as they were often put off in the past.

With the switch to new terms of economic activity, the importance of product quality in assessing the economic performance of enterprises sharply increases. More importance is attached to such an instrument of economic administration as rating of products by quality grade. The number of such grades has been reduced from three to two: higher and first. Officials have been made responsible (materially and administratively) for the objective nature of the information on attaining the world standard with which product quality is compared. It is particularly important to ensure that in technical and other terms Soviet goods actually meet the highest world and national standards, for quality rating is the basis of economic quality control. The wholesale prices of technical-and-producer goods rated as higher-quality goods may be marked up by as much as 30 per cent, depending on their economic efficiency. This premium is retained if subsequent quality ratings reaffirm the grade of the product. Enterprises are being given additional incentives to produce more machinery, equipment, instruments and spare parts to be exported for convertible currency.

More vigorous use is being made of wholesale

price discounts for outdated products. Such discounts could be established in the past, but were used very rarely, for enterprises with the support of ministries and departments marshalled numerous arguments against them. Since January 1986, discounts are compulsory. Thus, products rated as first-grade ones are sold wholesale at a discount of 5 per cent in the first year, 10 per cent in the second year, and 15 per cent in the third year. The corresponding amounts are not included in the fulfilment of the product realisation plan and are remitted by the enterprises into the state budget. If the second quality rating does not upgrade the product to higher category, it should be taken off the production line. Wholesale price discounts reduce the income of the enterprise and directly affect the material incentives held out to the work collective. Up to 70 per cent of the discounted amounts are to be refunded from the material-incentives fund.

Consumers are entitled to cancel contracts unilaterally if the suppliers keep providing them with low-quality products. The activity of technical control services at the enterprises is being restructured; their remuneration is now linked solely to the quality of products and does not depend, as it used to, on the results of the economic activity of the enterprise. A special non-departmental control organ—government quality inspection under the USSR State Committee for Standards—has been set up. Since 1987, such inspection has been introduced for

associations and enterprises which turn out products of key importance for the economy, and also consumer goods.

Over the next few years, the output of higher-quality products is to be extended, machine reliability is to be increased, and the introduction of integrated quality control systems is to be completed in the main. The quality of farm produce, construction and services is to be markedly increased. Although the five-year plan targets are quite high, they should nevertheless be regarded as minimum, so as to find additional reserves for improving quality in all sectors of the economy.

IV. FORMING THE INTENSIFICATION MECHANISM

The transition of the Soviet economy to the road of intensification involves an improvement of economic administration and management. Comprehensive development of the economic system should ensure close unity and effective interaction of planning, economic instruments and incentives, and the organisational structures of management.

Economic management is in need of constant improvement. At present, however, the problems that have accumulated in this area have reached such a scale that partial changes will no longer do, and a radical reform is necessary. Its purpose is to gear the whole of production

in practice to meeting social requirements and individual human needs, and to orient management towards raising efficiency and quality, accelerating scientific and technical progress, giving the working people a greater stake in the results of their work, developing initiative and socialist enterprise in every unit of the national economy, the work collectives above all. In effect, it is a matter of forming an economic mechanism of intensification that would meet the programmatic tasks of the state's economic policy.

A Brief Retrospect

The successes of the Soviet economy are inseparable from socialist planning. The Soviet Union was the first country to start developing a planned system of economic administration, based on social property in the means of production, on the socialist economic system. Intrinsically socialist methods of balanced organisation of production on the scale of the whole economy have been elaborated within its framework. These methods, which are fundamentally distinct from capitalist methods, include as an integral part a system for planning the work of socialist enterprises and stimulating its efficiency, achieving higher efficiency of socialist economic activity as a whole.

A new, balanced organisation of labour has taken shape in the socialist society, accelerating the development of the productive forces in the

interests of the whole people. That invalidates the bourgeois claims that private property in the means of production is a natural and most rational form of economic organisation.

Under capitalism, socially necessary labour inputs are reduced through the mechanism of competition. Production of goods for the market and the quest for profit induce capitalists to improve the technical facilities of production, reduce costs, renew their output and improve its quality. But capitalist rationalisation is attained through exploitation of the working class and is essentially antagonistic. Under capitalism, the productive power of labour constitutes the productive power of capital.[1] Its inevitable result is ever more haphazard and anarchical social production.

The contradictions of capitalist reproduction and the resultant gap between the potentialities of technical progress and their actual use have taken a particularly sharp turn under imperialism. The rule of the monopolies, their coalescence with the state apparatus, and the arms race unleashed by them have increased the costs of capitalist competition, making it ever fiercer and more destructive.

The successes of the Soviet Union and the other socialist countries have also influenced the theoretical notions of bourgeois political economy about the mechanism and incentives

[1] See Karl Marx, *Theories of Surplus-Value*, Part I, Progress Publishers, Moscow, 1978, p. 392.

of the functioning of capitalist production. In contrast to the traditional notions about competition and the market as the most rational forms of economic organisation, the postwar capitalist world came to accept the Keynesian ideas on the need to combine competition with measures of state economic regulation in order to eliminate the adverse effects of spontaneous economic development. Recognition of the limitations of the market mechanism means that bourgeois political economy has in effect given up its hard and fast postulate on competition as a means of realising the most effective lines in the development of production. At the same time, it indicates an attempt to adapt certain tenets of socialist planning to capitalist conditions in order to introduce some elements of planning into the essentially spontaneous mechanism of capitalist reproduction.

The profound economic crises of the 1970s showed that the bourgeois state could not cure the capitalist economy with Keynesian recipes. In the 1980s, a tide of conservatism swept across the USA and a number of West European countries, with a return to methods of private enterprise. But the past few years have made it clear once again that a stake on elemental market forces cannot put capitalism on the road of stable crisis-free development.

Now that deep-going economic and social transformations are under way in the Soviet Union, there is renewed interest both in its past experience and in its present-day practice.

Under socialist economic planning, the mechanism and incentives to raising economic efficiency are fundamentally different from those operating under capitalism. The assertion of social property in the means of production has enabled the socialist state to allocate the country's resources in accordance with the long-term goals and tasks of economic construction and to eliminate the social losses engendered by capitalist competition. Life has borne out Engels's brilliant prediction that "the socialised appropriation of the means of production does away, not only with the present artificial restrictions upon production, but alsi with the positive waste and devastation of productive forces and products that are at the present time the inevitable concomitants of production, and that reach their height in crises".[1]

The planning mechanism for raising the efficiency of social production includes both the planning of efficiency-boosting measures and targets and use of economic-calculus methods and incentives for these purposes. The latter are not an external element, but an organic component of the whole system of economic planning.

Since the very first annual and five-year plans, labour productivity growth and cuts in cost prices have been established as plan targets for raising production efficiency. These tar-

[1] Frederick Engels, *Anti-Dühring*, Progress Publishers, Moscow, 1975, p. 324.

gets have been gradually supplemented with an ever wider network of techno-economic indicators, expressing the material and labour inputs per unit of output.

Back in the prewar period, new macroeconomic criteria for assessing production efficiency were formulated to meet the socio-economic purposes of the plan, with a definite range of efficiency indicators to be set as plan targets for the various industries and enterprises. At that same time methods were devised for planning these indicators on the basis of measures to raise the technical standard of production in the system of techno-economic and balance studies for the production programme of the plan and the planned lines of capital investments. In the course of the work being done to draw up and implement the five-year plans, Soviet economists have also elaborated the forms and methods of attaining plan targets (including efficiency targets), which embrace both central planning and economic calculus in the industries and at the enterprises.

The economic management system in the USSR has not remained unchanged, but has kept developing together with the productive forces and in accordance with the new tasks facing the country. Among the major stages of its development in the postwar period, one could note the changes in planning, administration and management in the mid-1960s and the present reconstruction of the economic mechanism. At each of these stages, the general

principles of central planning remained intact, but there were changes in the balance between centralism and independent activity by the ministries and enterprises, in the concrete mechanism connecting the plan, economic calculus and economic instruments, and in the organisational forms of management.

Significant changes in the methodology used to plan and determine social production efficiency were made in the 8th and 9th five-year periods. The development of the methodology of macroeconomic planning in that decade was marked by greater emphasis on efficiency indicators in drawing up plans and assessing their fulfilment, by an improvement of these plan indicators themselves, and a quest for new forms and methods of management and production organisation that would best accord with the tasks of greater intensification.

Fulfilment of production development plans and the work of industrial enterprises was now assessed on the basis of realised rather than gross output. Production was thus geared to a greater extent to the needs of the economy and the consumers. Commodity output indicators were introduced to measure labour productivity growth. The role of profit in planning increased, with corresponding changes in the organisation of economic calculus. The economic status of the enterprises, their production-development and incentives funds (bonus, housing and socio-cultural funds) were now heavily dependent on the amount of profit

received. These changes were meant to give the enterprises a greater stake in raising labour productivity, cutting costs, and tapping production reserves.

Profitability of production, calculated on new lines, was introduced as a plan indicator. Profitability in industry is now calculated as the ratio of profit to the value of fixed production and circulating assets assigned to the enterprise rather than to the cost price of its output, as in the past. Cuts in cost price and in inputs per rouble of commodity output were no longer subject to central planning.

As the number of binding targets written into the national economic plan was reduced, the list of production efficiency targets conveyed to the industries and enterprises was reduced as well. Apart from cost price, the enterprises were now entitled to plan their own number of employed, the level of material inputs and, in the 8th five-year period, labour productivity as well.

State farms, transport and trading organisations, economic-calculus service enterprises and, in the 9th five-year period, most building organisations followed industry in going over to the new methods of planning and economic incentives.

The formation of production and science-production associations in industry increased the possibilities for raising production efficiency through concentration and deeper specialisation of production. At the beginning of 1976, pro-

duction associations were turning out 24 per cent of the total volume of industrial output. Concentration was also developing in agriculture with the establishment of agro-industrial associations. At the end of the 9th five-year period, the work being done to set up lower-echelon production associations went hand in hand with the formation of middle-echelon all-Union and republican industrial associations operating on the principles of economic calculus.

The development of the methodology of production efficiency planning led to the elaboration of a comprehensive system of efficiency indicators for every tier of the economy. The basic elements of that system were formulated in a set of instructions on how to draw up the 9th five-year plan. In the instructions on the 10th five-year plan, the system of plan indicators for production efficiency, the principles and methods of calculating these indicators, and the ways in which they are used in planning were already spelled out in detail.

The system of planned production-efficiency indicators contains both established (directive) and calculation indicators, elaborated for the economic validation of plan targets for the development and location of production. Directive indicators include those of labour productivity growth and profitability (in some industries, that indicator has in recent years been replaced with targets for reducing inputs per rouble of commodity output). Other efficiency indicators

are planned by the industries (ministries), associations and enterprises on the basis of the state plan targets and normatives conveyed to them.

The system of planned production-efficiency indicators hinges on synthetic efficiency indicators and those which characterise the use of labour resources, fixed assets, capital investments and material inputs. Along with aggregate value indicators (such as labour productivity, output-to-assets ratio, efficiency ratios and payback periods for capital investments, material-intensity of output), the corresponding sections of the system contain supplementary techno-economic or physical indicators.

But the changes in the economic mechanism proved to be inadequate for a solution of the fundamental problems of intensification. The planning system, remuneration patterns and economic incentives continued to be largely oriented towards an increase in quantitative, volume indicators, clashing with the new economic conditions and with the need to give the work collectives a much greater stake in tapping reserves and making fuller use of the existing production potential. Moreover, the 1970s saw a limitation of the rights extended to the associations and enterprises, with some return to tighter administrative regulation of their activity, which served to weaken the impact of the steps being taken to boost their efficiency.

The need to restructure the economic mechanism at root, to overcome its pro-cost orientation

was ever more insistent. At the same time, the ways of meeting that need were also more discernible. That was clearly demonstrated by the past five-year period, when a more vigorous effort to improve economic administration and management yielded a noticeable improvement in the qualitative indicators of economic development.

The Record of the 11th Five-Year Period

Under the decisions of the 26th Party Congress, a set of efficiency-boosting measures was carried out in that period by the country's economic departments, sectoral ministries and work collectives. These matters were repeatedly examined at the CPSU Central Committee's plenary meetings in discussing draft state plans of economic and social development, state budgets, and pivotal problems of the country's economic development. On the most important issues, the Party's Central Commitee and the government adopted special resolutions, whose implementation helped to eliminate the existing shortcomings. Let us examine the main lines of the work done in this field—to perfect planned administration and management, tighten labour discipline, improve production organisation, and strengthen economic instruments in running enterprises—and also the specific features of the new approach to basic problems.

The first thing one is bound to note in the

Party documents is the measures aimed at invigorating the use of such an intensification instrument as *improvement of central planning*. They provide, in particular, for broader use of the special-programme method, whose advantages and potentialities were discussed for many years, right through the 1970s. In the 11th five-year period, many long-term complex economic programmes were elaborated and approved by the directive organs: the Food Programme (1982), the Energy Programme (1983), and programmes for land improvement (1984), for boosting mechnical engineering, chemicalisation of the national economy, production of goods and services for the population, and scientific and technical progress in the CMEA countries (1985).

Many of these programmes are to last until 2000 or even well beyond. But the initial stages of their realisation coincided with the 11th five-year period, and the targets deriving from them were incorporated in the plans for the corresponding years. That made it possible to take a definite step forward in implementing the long-term programmes and helped towards greater economies in some sectors of the national economy.

Much was being done to put in order the planned administration system and to stabilise annual plan targets. At the beginning of the five-year period, there was an increase in the number of proposals for the development of certain industries and economic regions submitt-

ed by ministries and departments, by the councils of ministers of the Union republics, and by local Party and Soviet organs; many of these proposals reached the directive organs after the approval of state plans and contained requests for sizeable additional funds, which were beyond the available means. The planning organs often supported such proposals without considering whether these could be actually backed up with material and financial resources.

Such practices, however well-intentioned, undermined the organising role of the state plan as the main instrument of socialist economic administration and made it difficult to attain balanced, proportionate development of the economy. It was decided that relevant proposals be submitted, as a rule, while the plan was still being formed, so as to tie in these proposals with approved and long-term plans. Special attention was called to the need to improve the balance validation of these proposals, to back them up with the necessary resources by reallocating these among the various lines within the plan limits. The CPSU Central Committee and the USSR Council of Ministers also specified the decision-making procedures for measures the need for which arose after the approval of the five-year plan. Such measures were to be allowed where it was necessary to develop new natural resources without delay, apply scientific and technical achievements, make basic changes in production technology, etc.

Significant steps were also taken to tighten plan discipline, control over the fulfilment of plans. In the past, these matters were usually considered at the USSR Council of Ministers in discussing the results of economic development for the preceding quarter, six months, or the year as a whole.

From the middle of the five-year period onward, central and local Party organisations came to play a more active part in controlling plan fulfilment. That reflected the strengthening Party direction of economic construction, primarily from the standpoint of implementing the Party's economic and social policy. Matters relating to plan fulfilment were now discussed on a regular basis at the CPSU Central Committee, the central committees of the communist parties of the Union republics, the territorial, regional and district committees, and primary Party organisations. In the course of such discussions, they analysed the successes scored, exposed shortcomings, and mapped out measures to ensure the successful attainment of plan targets.

The results of the greater attention paid by Party organisations and work collectives to organising plan fulfilment are evident from the economic results for the corresponding years. Whereas at the beginning of the five-year period industrial development rates fell short of plan targets, in the second half of the period the targets were successfully attained. In 1983, industrial production increased by 4.2 per cent

instead of the planned 3.2 per cent, and in 1984, by 4.2 per cent instead of 3.8 per cent. In 1985, the increase was 3.9 per cent, as planned.

Measures were also taken to stabilise plan targets, to end the practice of their unjustified adjustment to coincide with the degree of their actual fulfilment. The scale of downward plan adjustment was markedly reduced.

Attention was also focussed on such an instrument of strengthening plan discipline as fulfilment of contractual obligations for the delivery of products. A persevering effort was being made to raise the responsibility of ministries, departments and enterprises in these matters. As the economy continued to go over to an assessment of the performance of enterprises and ministries on the strength of product realisation under contract (a transition started back in the 10th five-year period), there was a sharp cut in the legalised percentage of short-delivered goods under which realisation plans used to be considered fulfilled. The material incentives offered to work collectives were tied in closer with fulfilment of contracts. Some essential changes were made in the methods of planning, financing and labour organisation in the industries and at the enterprises themselves. The most important of these were examined in Chapter III in the context of the practical measures being taken to improve the use of material and manpower resources.

From the middle of the five-year period onward, attention was focussed country-wide on

the need to strengthen socialist labour discipline. Economic means of combatting breaches of discipline were strengthened alongside legal and administrative instruments. The discipline drive yielded tangible results. In 1983, losses of working time in industry and construction were already down by as much as in the preceding eight years taken together. The social and moral consequences were just as significant: there was greater order in production throughout the country, with people showing a more responsible attitude to their duties.

The law on work collectives and their greater role in running enterprises, establishments and organisations was passed in June 1983. On the basis of the USSR Constitution and the experience of front-ranking enterprises, that law enshrined their broader rights in ensuring highly productive work, organising fulfilment of state plans, and scrupulous abidance by Soviet laws and government decisions.

The heads of work collectives and trade union organisations were entitled to make wider use of enterprise funds to provide additional benefits for front-rank workers and innovators, and also for veteran workers with a good service record in production. Fuller account was now taken of individual labour results in drawing up holiday timetables and in distributing flats and vouchers to sanatoria and rest homes. At the same time, economic responsibility for breaches of discipline was being introduced alongside administrative responsibility. Workers

and office personnel who missed a working day without good reason, and also those who were absent from work for more than three hours had their scheduled holidays curtailed. The management was now entitled to transfer those who violated labour discipline to lower-paid jobs for terms of up to three months and to reduce their bonuses; material responsibility for damage done to the enterprises, including spoilage, was increased.

Having started with a drive to strengthen labour and production discipline, the CPSU began to elaborate and launch far-reaching reforms. Apart from tackling separate pivotal problems of socialist economic management, the Party's theoretical thought and practical activity increasingly concentrated on a general conception of how to bring the economic mechanism into accord with the demands of the present economic strategy for better use of the advantages of planned economic activity.

Some of the main lines of that work in the field of improving central planning were examined above. Let us now look at another aspect of that work, *development of the initiative of enterprises*, an aspect whose importance in the practice of improving management has markedly increased since the middle of the 11th five-year period.

Practical experience showed the need for additional measures to extend the powers of industrial associations (enterprises) in planning and economic activity, and to increase their

responsibility for the results of their work. A set of basic propositions was formulated for a new stage in improving management, elaborated with the participation of many leading cadres from the enterprises, ministries, departments and Union republics, researchers and practical specialists, and also in the light of critical remarks and proposals published in the press.

The task was to improve the planning of the activity of production associations and enterprises, to create conditions that would stimulate quality and efficiency, initiative and socialist enterprise, and would help to accelerate scientific and technical progress and intensify production. The projected measures were aimed to perfect and strengthen centralised economic administration while developing democratic principles in administration and management, increasing the role of work collectives in running enterprises and associations, and introducing economic calculus in a consistent way.

With that aim in view, an economic experiment was staged in January 1984. It included five ministries: two all-Union machine-building ministries (heavy and transport machinery manufacturing, electrical machinery engineering) and three republican (food industry of the Ukraine, light industry of Byelorussia, and local industry of Estonia). That experiment had a generally positive effect on the economic performance of associations and enterprises. Plan fulfilment improved in terms of one of the main indicators: product realisation with due account

for contractual obligations. In 1984, these associations and enterprises obtained the whole increase in output from labour productivity growth and surpassed their targets and socialist pledges to cut production costs. Fuller use was made of the existing reserves. Many work collectives accelerated the pace of production growth and of the rise in product quality.

At the same time, the preliminary results of the experiment showed that the possibilities offered by the new conditions of economic activity were not utilised in full measure. What limited the experiments was the inadequate reconstruction of the work of sectoral ministries and central economic departments, which persisted in their attempts to restrict the rights of the enterprises. Another limiting factor was that the incentives to higher efficiency envisaged in the general provisions were not conveyed to every workshop, team and workplace. The collectives of enterprises, all-Union and republican industrial associations, ministries and central economic departments, local Party and Soviet organs had to make a more vigorous effort to restructure economic activity and improve the style and methods of administration and management.

The need for that was all the greater since in 1985 the new terms of economic activity were being extended (on the proposal of the USSR Council of Ministers and the Union republics) to enterprises in other industries: mechanical engineering, ferrous metallurgy, the

light, food and local industries, and everyday services.

In the final year of the five-year period, these enterprises also improved their performance, especially where a serious effort was made to master the new economic methods. Associations and enterprises showed greater responsibility for work under contracts, which were now being fulfilled to a greater extent. The new conditions of economic activity help to fulfil plans with fewer personnel and give the enterprises a freer hand in using their production-development and economic-incentives funds.

At the same time, the broader experience reaffirmed the need to perfect some of the terms of the experiment, primarily in order to increase the influence of the economic mechanism on scientific and technical progress, to strengthen economic calculus and take fuller account of sectoral specifics.

The burden of shortcomings that had accumulated over the years was so great that it could not be eliminated in a short period. The various measures taken could not break the negative tendencies or put the economy on the road of steady and dynamic growth. The insufficient returns on the economic experiment were largely due to its non-comprehensive nature.

The new methods were in effect fitted into the fabric of the obsolete economic mechanism, without affecting every tier of administration and management or every aspect of economic relations. There was no improvement in plan-

ning methods on a sectoral, territorial, or macroeconomic level. The sphere of material and technical supplies and marketing, the financial and credit system, and price formation remained the same. Branches related to industry—capital construction, transport and trade—continued to operate as before. All of that made it hard to create the administration and management mechanism which could have interested work collectives in fulfilling the plan with the least possible inputs, to overcome excessive regulation and petty tutelage of enterprises.

Fundamental transformations and profound reconstruction were to be given priority status, and the Party kept looking for radical solutions to the country's problems. The CPSU Central Committee's Plenary Meeting in April 1985 paved the way for such reconstruction and marked a turning point in the life of the Soviet society.

Fundamental Reconstruction

The 27th Party Congress has formulated new theoretical notions and conceptions, which ideologically pave the way for the formation of an economic intensification mechanism on the basis of past experience of planned administration and management. That also applies to such basic questions of the political economy of socialism as interaction of the productive forces and the relations of production, socialist proper-

ty and the economic forms of its realisation, commodity-money relations, and combination of centralism with independent activity by economic organisations.

The idea that socialist production relations automatically correspond to the character of the productive forces has been rejected as untenable. The spread of such views slowed down the elaboration of new methods of socialist economic activity. Now that certain forms of production relations which took shape under extensive economic development have been recognised as obsolete, theory and practice are oriented towards a resolute rejection of outdated economic methods and their replacement with new ones.

Immense theoretical importance attaches to Party criticism of traditional notions (let alone preconceptions) about the criteria of correspondence of economic forms and methods to the principles of socialism, when any change in the economic mechanism was regarded as all but a departure from these principles. In fact, real economic and social results, actual moves to strengthen socialism are the supreme criterion of such correspondence. That criterion should be used to assess the legitimacy and efficiency of the correlation between directive indicators and economic normatives, the independence and responsibility of enterprises. Economic science and practice should analyse the situation and make a resolute effort to restructure all that is obsolete and outdated. All of that should be

done without any ostentation, without substituting palliative solution for essential changes.

Ideas that are of high theoretical importance in this respect were formulated in Mikhail Gorbachev's Political Report, which urges the need to deepen socialist self-management, to ensure the priority of the whole people's interests over departmental and local interests, and to use commodity-money relations to strengthen economic calculus and incentives to highly productive work.

The resolutions of the 27th CPSU Congress project the basic lines for and practical approaches to a profound reconstruction of the economic mechanism and the formation of a comprehensive, effective and flexible system of administration and management, and formulate the tasks facing Party organisations and state administrative organs in this area. The Congress instructed the CPSU Central Committee and the USSR Council of Ministers to carry out as soon as possible a set of measures aimed at bringing the forms and methods of economic administration and management into accord with present-day demands.

The main thrust of these measures is to raise the efficiency of centralised administration in realising the main tasks of the Party's economic strategy with a simultaneous strengthening of the role and independence of associations and enterprises, to ensure a transition to economic methods at every level of the national economy, to modernise the structure of administration

and management, and to ensure an optimal balance between sectoral and territorial economic administration. In a resolution on the Central Committee's Political Report, the Congress stressed that new ways of thinking, a clear understanding of the new tasks by the economic cadres and the working people, and a break with old stereotypes are important for an improvement of administration and management.

The process of reconstruction is well under way; it proceeds both from above and from below, gradually spreading to every echelon of administration and management, to every part of political and state leadership, interlocking with the reconstruction in the work collectives.

Mikhail Gorbachev said at the CPSU Central Committee's plenary meeting in January 1987: "Reconstruction means a steadily growing role for intensive factors in the development of the Soviet economy; reinstatement and development of the principles of democratic centralism in running the national economy, general introduction of economic methods of administration and management instead of command and administration by injunction, a transfer of all economic units to the principles of full economic calculus and new forms of labour and production organisation, and all-out inducements to innovation and socialist enterprise."[1]

In the first year of the present five-year

[1] *Plenary Meeting of the CPSU Central Committee, January 1987*, Politizdat Publishers, 1987, p. 15 (in Russian).

period, the economy surpassed the basic plan targets, and impressive backlogs were created for a further advance. Noticeable changes are under way in Soviet life, positive tendencies are gathering momentum, and a new moral atmosphere is taking shape. Openness, truthfulness, an irreconcilable attitude to shortcomings, and a striving to work better are increasingly asserting themselves as active principles.

The main element in the formation of the new economic mechanism is further strengthening of central planning, whose forms should be markedly changed in accordance with present-day conditions and the need to answer new questions and give up old methods. The 27th Party Congress listed the following demands in strengthening central planning: the upper echelons of economic administration should primarily concentrate their effort on the crucial problems of socio-economic development, improvement of national economic proportions, realisation of key scientific and technical tasks, and improvement of conditions for the work of associations and enterprises.

As the sphere and functions of directive administration were extended, the central economic organs were overburdened with relatively minor current matters, and that increasingly affected the quality of decision-making on key long-term problems. A wide range of planning questions are now being handed over to the industries, regions and enterprises. That helps to make central planning more scientific and,

consequently, more efficient, and so to improve the use of intensification reserves.

In perfecting the economic mechanism, a special effort is being made to develop economic calculus, to establish closer links between the final results of the activity of associations and enterprises and the size of their production-development and economic-incentives funds. These funds will increasingly determine the production and social aspects of their activity.

Economic calculus is being developed along the following lines:

turning the production-development fund into the main source of technical re-equipment and renovation;

increasing the role of the work collectives' own earnings in improving the working people's housing and other social and everyday conditions;

increasing the dependence of each working person's remuneration on his personal contribution to the final results of production;

blocking the channels along which mismanagement at some enterprises is compensated for by the high results of others;

expanding the sphere of contractual relations and raising the responsibility of enterprises for the fulfilment of their obligations to the consumers.

That work is being backed up with measures to give the enterprises a greater say in all matters of planning and administration, to prevent petty tutelage and interference by higher organs

in the legitimate rights of the work collectives, and to switch enterprises to self-finance and self-recoupment. As the rights of the basic production unit are being extended, the economic activity of ministries, territorial administrative organs and all other units of the economic mechanism is being restructured.

The concrete forms of the economic intensification mechanism take shape as all sectors of the economy go over to new methods of economic activity and as the organisational structures of administration and management are being perfected.

The beginning of the 12th five-year period coincided with the practical realisation of the decisions taken in late 1985 to improve the running of *mechanical engineering and the agro-industrial complex.*

A Bureau on Mechanical Engineering has been set up under the USSR Council of Ministers. Its main purpose is to work out and implement a comprehensive scientific and technical policy, to ensure the complex development of engineering industries and their scientific, technical and producer cooperation, and to integrate them into a single national economic complex, with specialisation and concentration of the production of output meant for intersectoral use. As of January 1986, all-Union and republican industrial associations in engineering were abolished and replaced with a mostly two-tier administrative structure, and the leading functional divisions of the ministries were reinforced.

Production and science-production associations have been enlarged. Further steps have been taken to integrate sectoral science with production by incorporating most research and design organisations into production and science-production associations.

Agriculture started the five-year period with new administrative organs, which link up (economically and organisationally) the collective and state farms with enterprises and organisations that service them. A central state organ—USSR Gosagroprom—has been set up to run the country's agro-industrial complex and to direct the work of agro-industrial associations in the republics, regions and districts. Gosagroprom operates under the government's control and, together with the councils of ministers of the Union republics, is fully responsible for the production of food. As a central organ of administration, it focusses its attention on accelerating scientific and technical progress and balancing out the development of all the branches of the agro-industrial complex, including sectoral ministries connected with agriculture and food production. Territorial agro-industrial associations operating on the principles of economic calculus have been set up in the country's regions and districts; alongside agricultural enterprises, these include enterprises from other sectors which service agriculture.

Under the 12th five-year plan, stable annual grain procurement plans have been established for collective and state farms on the level of the

1986 targets and, by way of incentives to increase grain production, 50 to 100 per cent procurement price premiums for grain sales over and above the plan. Collective and state farms are also to be sold more industrial goods in high demand. The foodstuffs produced over and above the state plan remain at the disposal of the Union republics and the local Soviets. Up to 30 per cent of the planned procurement volume for potatoes and vegetables, and also above-plan produce can now be sold by agricultural enterprises to the consumer cooperative network or on the collective-farm market at contract prices.

Since the beginning of 1986, associations and enterprises turning out more than one-half of the country's total industrial output have been operating under new conditions, and since 1987 these have been joined by the rest of industry. Comprehensive measures are being taken to improve the economic mechanism in all its components: organisation structures, planning, finances, supplies, price formation, incentives, and other elements of commodity-money relations.

The CPSU Central Committee's Plenary Meetings in June 1986 and January 1987 sharply criticised planning, financial and supply organs and sectoral ministries for being much too slow to implement democratic centralism in administrative practice, for their continuing bureaucratic regulation of the multifaceted activities of production, research and design

collectives, and for their lag in mastering economic methods of administration. In many areas, the economic reconstruction is still fitful, old approaches remain a drag, and inertia is still strong. Rush work is still being practiced at many enterprises, and the slogan, "plan fulfillment at any price", is still current. The turn towards quality, efficiency and new methods of management is a difficult and painful one. In a number of industries, gross indicators still predominate in planning and evaluation, and attempts to revive these indicators are often being made under the banner of reconstruction. The measures being taken and the work being done do not always correspond to the scale and gravity of the existing problems, and are sometimes less vigorous and effective than they should be.

The difficulties and contradictions of the reconstruction are understandable. The economy faces many unresolved problems (as examined in Chapter III), which have an objective effect on the elaboration and use of new economic methods. Besides, the new coexists with the old, for the introduction of new regulations does not always coincide with the abolition of the old ones. There are also subjective difficulties, which are primarily due to the fact that some executives, engineering and technical personnel, workers and collective farmers are slow to assimilate the new economic methods, while some others are low-skilled, conservative and skeptical. Such are the real conditions of

development. The main thing, however, is that most working people realise the need for change and are prepared to learn to work in the new conditions. That is the crucial factor of acceleration, a factor which guarantees confident progress.

In its Resolution "On Reconstruction and the Party's Cadres Policy", the CPSU Central Committee's plenary meeting in January 1987 emphasised the historic responsibility of the leading cadres, Party organisations and all Communists for the fulfilment of the tasks set. The main thing in their activity is to continue invigorating the reconstruction efforts, to intensify these along every line. Today, at the initial stage, it is very important to take a realistic stand, to give an objective assessment of what has been done, and view our achievements not only in the light of the past, but mainly in the light of the plans elaborated and approved by the Party. The pledge of success lies in honest work by all without exception. The CPSU is resolved to realise its line step by step, with perseverance and without hesitation, preventing any gap between the decisions taken and their practical implementation, and to make the transformations irreversible.

The tasks of intensification are being tackled in the course of a drive to overcome the contradictions engendered by the restructuring. Let us take a look at what has been done to improve administration since the 27th CPSU Congress, bearing in mind that many of the new propo-

sitions are just beginning to be translated into life.

The first point to note is that intersectoral administration has been strengthened and its organisational structure improved. In addition to the earlier established bodies for running groups of inter-related industries, new ones have been set up in a short period: the USSR Council of Ministers' Bureau for the Fuel and Energy Complex, which has been put in charge of the Energy Programme and which is to organise the fulfilment of development plans by the fuel and power industries; the State Construction Committee, and the State Foreign Economic Commission. The formation of these organs has been backed up with a drive to restructure economic relations in construction and external economic ties. All these measures, together with the transformations in industry and the agrarian sector, have extended the structuring to most of the national economy.

A number of major decisions specifying the way to resolve the tasks formulated by the Congress have been adopted in the past period. Although these decisions apply to different areas and problems, all of them have been elaborated in accordance with the general principles of the Party's present economic and social policy. They envisage, in particular, a greater role for the five-year plans in running the economy, fewer directive plan indicators, and assessment of the activity of work collectives by the final results of production (primarily

fulfilment of contracts and the profit indicator). The economic incentives system is being switched to stable five-year normatives for the formation of the wages, material-incentives and socio-cultural funds. The powers of associations and enterprises are being markedly extended, especially in matters of technical re-equipment and the social development of work collectives, with a simultaneous increase in their responsibility for meeting plan targets.

All these documents start from the need to take greater account in administration of the demand for the complex development of territories, and to extend the powers of the local Soviets of people's deputies, primarily in running branches of the economy that work to meet the people's requirements. These approaches have been embodied in the plan for 1987 and the draft Law on the Socialist Production Enterprise (Association), which was put up for discussion by the whole people in February 1987.

The administration of the *construction complex* has been reorganised in order to raise it to a new industrial and organisational plane. The State Committee for Construction has been reorganised into a Union-republican State Construction Committee (USSR Gosstroi). Until recently, the construction complex was run through all-Union and republican construction ministries. The administrative system tended to become ever more complicated and multi-tier, and different projects in one and the same area

were built by organisations belonging to different ministries, which led to undue scattering of efforts and resources.

Under the new system, sectoral administration is combined with territorial administration. The Russian Federation now has four all-Union territorial construction ministries: one in the northern and western regions, one in the southern regions, one in the Urals and Western Siberia, and one in the eastern regions of the USSR. Building organisations that used to be run by the Union-republican construction ministries have been handed over to the councils of ministers of the Union republics. The sectoral principle of administration has been retained solely for specialised construction ministries. Construction in every area is to be carried on, as a rule, by the building organisations of one and the same ministry.

As the building ministries go over to a new organisational structure, gradual steps are being taken to switch construction and erection organisations to full economic calculus and self-financing, to extend their powers and raise their responsibility for the final results of their work. The relations between customers and contractors and their mutual responsibility for fulfilment of state plans are regulated by contracts for capital construction.

Economic calculus is to be pivoted on the contract price of construction output, which is to be formed on the basis of normative rates used in estimating project costs. The difference

between cost price and contract price will be the source of profit for building organisations.

An efficient economic mechanism is to be formed for running *external economic ties*. While the principle of state monopoly in external economic activity is to be maintained and developed, it has been decided to extend the powers and increase the responsibility of ministries, departments, associations, enterprises and organisations in this sphere, allowing them to deal on the external market. That will give them a greater stake in developing international cooperation, accelerating the introduction of the latest scientific and technical achievements, and raising the efficiency of foreign trade. Major associations, enterprises and organisations of a number of ministries are now entitled to establish direct links with enterprises and organisations of other CMEA countries, to take independent decisions on matters of production, scientific and technical cooperation, and to determine the economic terms of such cooperation. The right to conduct direct export-import operations has also been granted to a number of ministries and departments of the USSR and the Union republics. Steps are being taken to set up foreign trade organisations operating on the principles of economic calculus in the ministries and departments, and similar foreign trade firms as part of science-production and production associations, enterprises and organisations which have the potential for sizeable

exports of high-quality products. The USSR Ministry of Foreign Trade remains in charge of trade in fuel, raw materials, food, some types of machinery and other key products.

Various elements of the new economic mechanism are also being tried out in industry, which was the first to start the economic experiment. Since 1987 all branches of industry are involved in the experiment.

In mechanical engineering, most sectoral R&D organisations (about 75-80 per cent of the total) have been incorporated into production and science-production associations. Leading sectoral institutes were virtually the only ones to retain their independent status. Working in close contact with academic science, they are to lay down guidelines for development in their field, to set concrete goals for the enterprises and associations in developing and producing new technology, to choose the ways of their attainment, and bear full responsibility for their choice.

Something like 430 powerful production and 150 science-production associations have been set up under mechanical engineering ministries. That immense potential could embrace all the basic problems of technical progress and provide the necessary R&D for mechanical engineering. Intersectoral scientific and technical complexes have been formed in the main areas of scientific and technical progress; these include a full range of research, design and development organisations and pilot plants.

In order to develop economic methods of management, steps are being taken to spread the experience of the Avto-VAZ production association and the Mikhail Frunze mechanical engineering association in Sumy, which have been working under self-recoupment and self-finance. Since 1985, these associations have been conducting an experiment to strengthen economic calculus and enhance responsibility for the final results of the work. Under the five-year plan for these associations, stable rates are established for profit deductions into the budget, and also those for the ministry, for the formation of production-development funds, for an integral scientific and technical development fund, for socio-cultural and housing construction, and for material incentives.

The experiment has served to develop the principle of self-recoupment, when the associations themselves finance their own expanded (and not only simple) reproduction. The production-development fund is formed from profit deductions as a percentage of the total amount of depreciation for a complete renewal of fixed assets and from the proceeds of the sale of retired equipment. The other funds of these associations are also formed as a percentage of profit at stable rates. The production-development fund is meant for technical re-equipment, whereas extension of the existing enterprises is financed from the profits retained by the associations, and also from credits, which are subsequently repaid from profits as well. New con-

struction is financed from centralised sources of capital investments.

Since 1986, five ministries have been switched to self-recoupment and self-finance: chemical machinery and oil-extractive machinery manufacturing, instrument making and means of automation and control systems, the petroleum-refining and petrochemical industry, the automotive industry, and the merchant navy, and also 36 large enterprises and associations from 17 other ministries.

These will now have to ensure their scientific and technical, production and social development largely at the expense of their own earnings, with full responsibility for the results of their economic activity and for the fulfilment of their obligations to suppliers and consumers, budget and banks.

Economic calculus at the associations and enterprises of a ministry is based on profit as the crucial synthetic economic indicator, the main source of funds for their production and social development. There is a direct connection between the resources and incomes that are at the disposal of the associations and enterprises and the efficiency of their work. Commodity output remains solely as a calculation indicator for assessing the dynamics of production development, structural relations, sectoral and territorial proportions in the five-year plan.

New procedures have been adopted for settlements with state and local budgets. Instead of centralised settlements by ministries, each as-

sociation and enterprise settles its accounts at stable normative rates. Another feature of deepening economic calculus is that the enterprise's expenditures on scientific and technical, production and social development are now directly dependent on their earnings. Capital investments in the technical re-equipment, renovation and extension of existing associations and enterprises are financed from the fund for the development of production, science and technology, and also from Bank for Construction credits. Capital investments in housing construction, socio-cultural projects and public utilities are financed from the socio-cultural and housing construction fund, and also from Bank for Construction credits, to be repaid from that fund as well.

Along with the measures taken to strengthen economic calculus, more vigorous use is being made of other economic instruments. Thus, product development engineers are to bear a greater responsibility for ensuring the high quality and technical standards of the products they design, while the manufacturers are to bear a greater economic responsibility for meeting these standards; economic and administrative sanctions have been introduced for breach of standards and specifications. Products turned out with a departure from the accepted standards are excluded from plan fulfilment reports, and the receipts from their realisation are remitted into the state budget.

Since January 1, 1987, the main indicator of

the results of economic activity is 100 per cent fulfilment of assignments and contractual obligations for product delivery. When enterprises in any industry fully meet their contractual obligations, their material-incentives fund is increased by 15 per cent, but when they fail to do so, it is reduced by 3 per cent for each percentage point of underfulfilment.

The heads of associations, enterprises and organisations are now entitled to determine the size of their staff. The number of managerial personnel and outlays on their remuneration are no longer limited. The staff of executives, engineering and technical personnel and office workers, and their wages funds are established by the enterprises themselves on the basis of general normative rates.

Major changes have been made in the economic mechanism of the *light industry and trade*, that is, branches whose main purpose is to meet the people's needs. Gross and commodity output as plan indicators have been abolished. The very principle on which these industries are run has been changed: their plans are now drawn up on the basis of contracts instead of centrally established targets, which used to be insufficiently substantiated in economic terms.

Plans for enterprises in the light industry are to be formed on the basis of orders from trade organisations. Direct long-term economic ties with enterprises in related industries and trade organisations are to be further developed under

long-term contracts. Economic instruments encourage the light industry to turn out more goods that are in high demand among the population, to renew the product mix and improve quality.

Trade organisations are to enjoy greater independence on the principles of economic calculus, with greater responsibility for how they determine and meet consumer demand and fulfil industrial orders. Their five-year and annual plans are to contain a limited number of indicators: trade turnover (without alcoholic beverages), centrally allocated capital investments, construction and erection work, contractual operations, and starting of fixed assets, production capacities and projects. Trade enterprises are also to have stable five-year normative rates for income deductions into the budget, into centralised reserve funds and the funds of higher organisations, and also normative rates for distributing the remaining income among their own remuneration, production and social-development funds. Their wages and material-incentives funds are being integrated into a single remuneration fund.

One of the most complicated problems of planned administration is to harmonise sectoral and territorial administration. That is particularly important for the Soviet Union, with its vast territory and wide diversity of natural and climatic conditions. Since the early years of the Soviet power, centralised direction of the main branches of heavy industry and the transport

network has been combined with broad economic powers of the Union republics and local organs.

On the basis of the decisions of the 27th Party Congress, measures were adopted in July 1986 to *increase the role of the Soviets of people's deputies and strengthen their responsibility for accelerating socio-economic development.* That opens up new possibilities in the work of the Soviets and makes it possible better to combine territorial and sectoral principles in administration and deal with matters relating to the Soviet people's daily life.

Here are some of the new provisions on developing the territorial aspects of the economic mechanism. The Soviets are to play a greater coordinating role in the solution of complex economic and social problems on their territories, and are to have more say in forming the plans of associations, enterprises and organisations in matters within their jurisdiction. To back that up, the local Soviets are to be given greater incentives to improve the work of the associations and enterprises on their territory.

With that aim in view, the Soviets are empowered to make broader use of above-plan output, and local budgets are to be more dependent on the performance of enterprises and organisations of Union and republican subordination. In 1988-1989, a part of the profits made by Union-run industry are to be handed over to the Soviets, payments to them from the profits of republican-run enterprises are to be extend-

ed, and fixed turnover tax deductions as a percentage of retail trade (state and cooperative) are to be introduced.

An exceptionally important role in accelerating the reconstruction of the economic mechanism is played by the USSR Law on the State Enterprise (Association), which establishes the basic legal principles of the economic activity of enterprises in accordance with the CPSU's present-day economic strategy. The draft Law strengthens the centralised elements in tackling the crucial tasks of economic development as a single whole and, at the same time, aims to strengthen the economic methods of management, with broad use of full economic calculus and self-finance. It is meant to develop socialist self-management, and regulates the relations between enterprises and the organs of state power and administration.

The principles governing the activity of enterprises are clearly formulated in the draft Law on largely new lines: responsibility for meeting consumer demand, work under the state plan as the main instrument in realising the economic policy of the CPSU and the Soviet state, full economic calculus and self-finance. Production and social activity, and payment for work should be financed from the earnings of the work collective itself, and profit or income is to become a synthetic indicator of economic activity. A part of the income is to be used by the enterprise to meet its obligations to the state budget, the banks and the higher

organs, and the rest is to remain at the full disposal of the enterprise and, together with the remuneration fund, constitutes the economic-calculus income of the collective.

Socialist self-management is up to a new level in terms of its role and importance. The work collective is full master at the enterprise, independently deciding all matters of production and social development. The gains and losses in the work of the enterprise directly affect the size of the collective's economic-calculus income and the living standard of every working person. A greater role in the activity of enterprises is to be played by economic emulation to meet consumer demand for high-quality goods and services at the least possible cost.

The provisions of the Law are a practical reflection of a crucial tenet formulated by the 27th Congress of the CPSU: the line for efficient use of genuine democracy. The practice of elective leadership, including directors of enterprises and associations, is to be gradually extended, and steps are being taken to set up councils of work collectives, empowered to decide all production, social and personnel matters.

The draft Law starts from the assumption that the relations between enterprises and higher organs—ministries, departments, local Soviets of people's deputies—should be built on the basis of planned administration and management, and scrupulous observance of the prin-

ciples of full economic calculus and self-management. The higher organs are to direct the activity of enterprises primarily by economic methods on the basis of five-year-plan targets, state orders and long-term economic normatives. It is their duty to ensure conditions for efficient work by the enterprises and strictly to observe their rights.

Alongside the radical reform of the economic mechanism in the state sector of the economy and in collective farming, decisions of essential economic and political importance have been adopted with regard to individual labour. In November 1986, the USSR Supreme Soviet approved, after a preliminary discussion at work collectives in different republics, territories and regions—a Law on Individual Labour Activity, which went into effect in May 1987.

At present, the number of persons doing individual work in the sphere of the services is estimated to be about 2 million (in terms of average annual workers). Since most of them do such work only from time to time, the actual number of those who do additional work in the sphere of the services is closer to 17-18 million. Almost 28 million people are employed in agriculture (including service organisations and personal subsidiary holdings), and virtually all of them have some kind of subsidiary farm. Tens of millions of industrial and office workers, especially in the smaller towns, live in individual houses, most of which also have subsidiary

holdings. In addition, many city dwellers have summer cottages in the countryside.

For many years, the importance of individual labour activity was underestimated, and some of its types were not regulated by legislation. It was seen as distracting people from work in social production, and that had an adverse effect on meeting the people's requirements for some goods and services. The unwarranted limitations in this sphere are now being lifted.

Western commentaries on the new law, which often betray ignorance in this matter and sometimes deliberate intent, claim that it allows private enterprise and means a departure from socialist economic principles. It is also claimed that the very adoption of such a law amounts to an admission that the planned economy is inefficient and cannot meet the people's needs.

Since the law reviews some of the existing norms and provisions, it naturally means a rejection of old stereotypes. The 27th Congress urged the need to overcome these not only in running socialist enterprises, as described above, but also in steering the development of spheres which are not subject to direct state planning. The new law is fully in accord with the socialist economic system and does not in the least indicate a return to private enterprise in any form.

Development of social production has been and remains the major source of meeting the Soviet people's material and everyday requirements. This includes higher payment for work,

larger social consumption funds, and development of state and cooperative trade, housing and socio-cultural construction, which are financed from the state budget and from the funds of associations and enterprises.

Individual labour activity is to be developed solely on the basis of the people's personal labour, without any hired labour. Private enterprise and man's exploitation by man continue to be ruled out. Citizens are only allowed to work on their own or to set up cooperatives. Under the USSR Constitution, the state is to help develop individual labour activity, using it in the interests of the society. The law determines the economic and legal instruments (the terms and procedures for issuing permits and patents, taxation, etc.) by means of which individual labour activity is fitted into the general economic mechanism and interacts with the whole system of management. The main instruments used in this sphere are those of indirect economic regulation.

Cooperatives being set up in industries producing consumer goods, in the sphere of the services and public catering help to meet the people's demand for goods and services to a fuller extent. In accordance with their rules, cooperatives will operate on the principles of self-recoupment and will be fully responsible for the results of their economic activity. Among their members are pensioners and other citizens not employed in social production, and also students and pupils. Local organs of power

should do their utmost to promote the formation and successful work of cooperatives.

The Law on Individual Labour Activity should not be separated from the work being done to improve the economic mechanism as a whole, let alone contrasted with it. Its implementation is directly connected, in particular, with a more intensive struggle against unearned income, which is formed wherever any channels for embezzlement of socialist property remain open, where the existing laws on the economic activity of socialist enterprises and individuals are violated, or the socialist principle of payment for work in accordance with its quantity and quality is distorted.

The economic mechanism is being restructured with close involvement of working people themselves. The more vigorous that involvement, the more successful will be the use of the new economic methods.

Improvement of the economic foundations of socialism, all-round development of socialist democracy, and deeper self-management help to release the masses' creative energy and to give them a real say in all matters of social life. Let us examine one of the many questions arising in this context: how to raise the efficiency of socialist emulation. The growing economic independence of associations and enterprises offers fresh opportunities in this respect.

The beginning of the current five-year period has engendered new and valuable initiatives, and emulation is gradually turning round

towards qualitative indicators. Tens of thousands of working people in town and country pledged to attain the targets of the first two years of the five-year period for labour productivity growth and high product quality by the 70th anniversary of the establishment of Soviet power. The CPSU Central Committee has called upon the Soviet working people to launch a broad socialist emulation campaign for successful fulfilment of the 12th five-year plan, so as to translate the bold plans and projects into vigorous practical action.

But the restructuring of emulation has only just begun. There are many instances when whole collectives, to say nothing of individuals, continue to work differently in equal conditions, and the spread of progressive experience is much too slow. There is still a lot of routine and many outmoded forms in the way emulation is organised. First of all, its results are still assessed on the strength of gross indicators, which distort the actual results of production; socialist pledges are often copied without due account for the opinion of the work collective, and inadequate attention is paid to improving the people's working and living conditions.

In its address, the Central Committee put forward the task of deformalising socialist emulation, making it truly spirited and competitive, open and public, just as it used to be at the beginning of socialist construction, in the early five-year periods. Socialist pledges should be a major instrument in forming tight plans. With

this aim in view, the number of emulation indicators should be reduced, emulation results should be summed up annually as five-year plan targets are attained, and the bonus system of the enterprises and organisations should be tied in with fulfilment of plans and pledges.

* * *

The Soviet Union has reached a crucial stage in its development. Life in the Soviet society is taking a radical, essentially revolutionary turn, with reconstruction in every sphere. This is no once-off act, but a process which will take time. The main line of the economic reconstruction is all-round intensification of production on the basis of scientific and technical achievements and use of modern methods of administration and management, with broad and tangible involvement of the working people in tackling these tasks. In the course of the reconstruction, the Soviet society is growing ever stronger, gaining experience and learning to work in the new conditions.

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