The book spells out the major tasks of "The Guidelines for the Development of the National Economy of the USSR for 1976-1980", as adopted by the 25th Congress of the Communist Party of the Soviet Union. The authors—leading members of the staff of the USSR State Planning Committee—analyse the projected changes in the basic economic proportions, the ways along which the major sectors of the economy are to develop, the level of technical progress, and the range and direction of the measures aimed to raise the Soviet people's living standard and strengthen the socialist way of life.

The authors emphasise the ways of enhancing the efficiency of social production, improving quality standard in every sector of the Soviet economy, and perfecting the planning and management system. A special chapter deals with the prospects of economic development up to 1990.

XXV

CONGRESS
OF THE COMMUNIST PARTY
OF THE SOVIET UNION

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THE USSR ECONOMY IN 1976–1980

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**ЭКОНОМИКА СССР
В ДЕСЯТОЙ ПЯТИЛЕТКЕ**

На английском языке

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INTRODUCTION

Under social property in the means of production, socio-economic planning has to take all-round and exact account of the objective economic laws of socialism, its basic economic law and the law of balanced economic development above all, so as correctly to determine socialist society's current and long-term goals and ways to attain them. The Soviet state has performed this complex administrative task through a comprehensive system of national economic plans, comprising three types of dovetailing plans, which differ, above all, in duration and, consequently, in the scale of the tasks being tackled: long-term (15-year) plans, medium-term (five-year) plans, and current, annual plans. Current plans are part of five-year plans, and the latter are organic components of long-term plans. The need for a coherent planning system derives from the fact that in socialist society all current economic tasks are geared to long-term strategic goals, minor tasks to major tasks.

The coherent economic plan system covers every sphere and sector of the economy and

serves to harmonise the various stages of the country's economic development to make these consistent with each other and ensure their continuity, to tie in Soviet society's current tasks with its long-term goals, guarantee that every successive annual and five-year plan takes the country another step closer to the fulfilment of the long-term plan. Consequently, the planning system directs and coordinates the various technological, economic and social processes going forward in the country.

It was Lenin who pointed out the need for a system of current and long-term plans. He initiated and directed the elaboration of the world's first long-term plan known as GOELRO (State Plan for the Electrification of Russia).

The USSR's record shows that administration through a system of economic plans enables society to make economic development effective, dynamic, proportional, rapid and sustained, to raise the people's living standard at a measured pace, and tackle an ever wider range of social problems.

Under full-scale socialism, the coherent system of economic plans is a crucial condition enabling society to exercise effective planning, accelerate technical progress, formulate scientifically substantiated structural policies, distribute the productive forces in a rational way, maintain a high and steady rate of socio-economic development, and enhance the role of intensive growth factors in social production. That is why "The Guidelines for the Development of the National Economy of the USSR for 1976-1980", as approved by

the 25th Congress of the CPSU, formulate the task of improving the system of interconnected economic plans: long-term, five-year and annual.

The organic ties between the three types of state plan derive from the fact that they are geared to one and the same goal, use the same approach in tackling socio-economic problems, are worked out and fulfilled on the basis of the same methodological principles, have continuity of targets, and are laid down as directives. At the same time, every plan within the system has its own specific role to play and its own functions to fulfil. So long-term 15-year plans provide general guidelines for the country's socio-economic development, determine the nature, scale and priority of the tasks facing the country, thus enabling the state to channel its efforts and resources wherever necessary within the framework of five-year and current plans. They also give an idea of the problems that are bound to arise in the future and the difficulties in solving them, and provide a framework for large-scale and complex programmes and projects that tend to spill over the five-year period.

Five-year plans are drawn up in accordance with the goals and tasks written into the long-term plans, and are then broken down into annual, current economic plans for the country's everyday economic activity. This is why the long-term plan has some important specific features as compared with five-year and current plans, which lays down directives by branches. The long-term plan is largely a programme describing in general

form the main social, economic, scientific and technical tasks and the ways and means of their fulfilment.

Conditions are now being created for a deeper international division of labour, and this also has to be planned well in advance.

The switch to qualitatively new economic proportions and a new sectoral structure within the latitude offered by technical progress cannot be effected in a single five-year period. Moreover, technical progress calls for the establishment of intersectoral territorial complexes, especially in the newly developing raw-material and fuel-rich areas of Siberia and the Far East, which have to be built up over a period of years.

The need for long-term planning also stems from the fact that investment is basically long-term. On the one hand, investments go to create the fixed production assets, which have a life-span of something like 15-20 years. On the other hand, the formation of fixed assets in any one industry necessitates a series of interconnected investments in other industries.

If the decisions on what kind of natural resources have to be worked and in what order, and on the specialisation and complex development of economic areas are to be correct, these have to be taken with a view to the country's long-term needs in energy, structural materials and instruments of labour, the sources for meeting these needs, and also the prospects for the development of the industries involved in other parts of the country. In these conditions, a scientifically grounded long-term plan enables society to

fulfil its tasks in due succession and to prevent any disproportions from arising between the output of some product and the demand for it at the time when the new enterprises will be operating at full capacity.

The long-term plan is comprehensive and indicates the best way for developing the country's economy in the foreseeable future. It lays down a general long-range strategy for socio-economic, scientific and technical development which has to be reckoned with in the country's everyday economic activity at every administrative level, and also in the framing of five-year plans.

The long-term plan, which contains a set of pivotal economic programmes, determines the potential resources, specifies the structural changes and major quantitative parameters for economic development and for raising the people's living standards, and makes it possible to envisage the fundamental changes in the location of production and the development of economic areas and industrial complexes. It helps to groom the whole economy for applying and mastering new lines and achievements of technical progress, and for engineering even more sophisticated lines of production on that basis. It also helps to forecast and take account of any technical breakthroughs, which could bring about important structural changes in the economy and help to raise its efficiency.

The Tenth Five-Year Plan for 1976-1980 was elaborated concurrently with the initial economic guidelines for the period up to 1990, and that made it possible to tie in its targets with the long-term economic strategy and to

take account of the specifics of the 1980s with respect to manpower resources, the tapping and working of mineral deposits, the potentialities of technical progress, and so on.

In the 1980s, the natural increase in the USSR's manpower pool will be only a third or a quarter of that of the 1970s because of the second postwar demographic dip, one of the delayed-action aftereffects of the 1941-1945 war against nazi Germany, which cost the country 20 million mostly young lives.

Another specific feature of the 1980s is that the country's fuel base will be relocated to the eastern areas, for the state is planning to invest on a large scale in the development of mineral deposits in areas with harsh climates.

Larger funds are to be channelled into the protection of the environment.

The long-term programme for the period until 1990 hinges on the tasks of building up the material and technical basis of communism and raising the Soviet people's living standards to a qualitatively new level. Estimates show that in the 1976-1990 period, the country will command roughly double the material and financial resources it has had in the past 15 years.

The country's scientific establishments have played an important role in estimating the size of these resources and projecting the ways of their rational use. Under government assignment, the country's academic institutes, together with sectoral research institutes, elaborated a draft Comprehensive Programme of Scientific and Technical Progress and Its Socio-Economic Consequences for 1976-1990.

The Programme is an organic component of all current and long-term planning, and sets guidelines for successful economic administration.

In formulating the need to attain a qualitatively new level and develop the substantive features of the socialist way of life, the Soviet state maintains that the social programme for the period up to 1990 is a broad complex of well-coordinated state measures aimed to mould, develop and ever more fully satisfy the material, spiritual and social requirements of society's members and to ensure every individual's all-round harmonious development.

The need to raise the people's well-being and follow a purposeful policy in shaping the people's way of life on communist lines springs, above all, from the requirements of the latest stage in the full-scale construction of the material and technical basis of communism, when the high level of the people's spiritual and material well-being is not only a result but also a major prerequisite of the development of social production.

In accordance with the projected growth of material and financial resources, the social programme of the tenth five-year period is focussed on three main lines.

First, it provides for a further improvement in the relations of production. The nature of labour is to be substantially changed, and working conditions are to be improved in accordance with the potentialities of scientific and technical progress and the people's rising educational standards. Particular attention is to be given to fostering a communist attitude

to work among the Soviet people, enhancing their labour initiative, and establishing a truly creative atmosphere in every labour collective.

Second, there is to be a purposeful effort to mould and satisfy man's intellectual and social requirements in knowledge, socio-political initiative and activity, creativity, and broad social intercourse; the key targets here are to raise the educational and cultural levels, increase the working people's leisure time and help them use it to better purpose, raise the level of the people's social consciousness, initiative and activity, and eradicate offences against the law and other antisocial acts.

Third, the people's material conditions are to be improved and their requirements met in food, clothes, footwear and consumer durables.

So, in the tenth five-year period, the country is to tackle two groups of large-scale and complex tasks: further boosting of the people's living standards, and building up of the country's production potential.

CHAPTER ONE

THE SOVIET ECONOMY'S SCALE AND DYNAMISM

The Soviet Union's economic record shows how a poor, economically and technically backward agrarian country with a low cultural level among the bulk of the population has rapidly developed into an economically powerful industrial country with a high standard in education, culture and science.

In its development since the October Revolution in 1917, the USSR has gone through several stages: the period of transition from capitalism to socialism, the period of socialist construction; it has now built a full-scale socialist society, and has launched upon the construction of the material and technical basis of communism.

To appreciate the Soviet Union's present economic level and the goals and tasks written into the Tenth Five-Year Plan, one has to have a distinct idea of the Soviet economy's antecedents. Here is a short retrospect.

In 1913, on the eve of the First World War, Russia's industry lagged far behind that of the USA, Britain, Germany and France. Thus, its industrial output in 1913

came to only 12.5 per cent of the US figure, and engineering accounted for only 6 per cent of Russia's total industrial production. About 80 per cent of the population was illiterate. The bulk of the national income came from an inefficient and fragmented agriculture, which employed 80 per cent of the population. A point to emphasise here is that Russia's lag in the major industries was steadily growing. Thus, in 1900, its steel production amounted to 20.7 per cent of the US total, in 1913, it was down to 14.3 per cent, and in 1917, to 6.7 per cent. In the 17 years before the Revolution, its cement output declined by a third as compared with that of the USA. From 1900 to 1913, Russia's extraction of oil and coal (in terms of conventional fuel) dropped from 10 to 7 per cent of the US total. Russian industry was largely in the hands of foreign monopolies and businessmen, who had no incentives to develop industries producing the means of production, but did their best to make and export as much profit as they could. About 65 per cent of all peasant households were in the poor bracket: 30 per cent of them had no horse of their own, 34 per cent had no farming implements, and 15 per cent had no sowing land at all. The best lands were in the hands of the landowners, the royal family and the church.

In other words, the October Revolution was an objective economic need for Russia, for it was the only way to throw out the exploiting classes, which had just about ruined the country.

On the basis of Marx's and Engels's doctrine and the objective tendencies of capitalist development, Lenin proved that mankind could not move forward without advancing towards socialism. He elaborated a plan for socialist construction in Russia. But before the young Soviet Republic could get down to building the material and technical basis of socialism, it had to beat back an armed intervention by 14 imperialist states, which had joined forces with Russia's ousted exploiting classes in a bid to throttle the new social system. Once the Republic had overcome its internal and external enemies, it had to rehabilitate the ravaged economy, for by the end of the Civil War and the intervention in 1920, it was producing only one-seventh of the 1913 total: for steel, in particular, the figure was under 5 per cent of 1913; for cement, just over 3 per cent; cotton fabrics, 4.5 per cent; leather footwear, just over 4 per cent; and sugar, 6.6 per cent. In 1920 the country (with a population of 160 million) produced only 1 per cent of the US total for electric power and steel, 0.4 per cent of the cement, and 2 per cent of the coal. It produced only 500 million kwh of electric power, 190,000 tons of steel, 8.7 million tons of coal, 3.9 million tons of oil, 120 million metres of cotton fabrics, and 89,000 tons of sugar, and the transport network and the other sectors of the national economy were a shambles.

Consequently, the development of the Soviet economy had to start virtually from scratch. Hunger and poverty were rife in the country, so that Western statesmen and journalists were busy predicting the imminent downfall of the world's first working people's state. The French newspaper *L'Information*

wrote, for instance, that everyone was agreed that the Soviet regime was about to collapse and that the only issue was the time and the details. That profound delusion was due to a failure to understand the role of the working class led by the Communist Party.

By 1926, the economy had been restored to the prewar level, but the USSR still trailed 50-100 years behind the USA and other industrial countries. The only way to boost the whole economy, including agriculture, and raise the people's living standards was to industrialise the country, to ensure priority development of heavy industry, engineering above all.

The world's first long-term (10-15-year) plan for economic development (GOELRO), elaborated in 1920 under Lenin's guidance, was used to draw up the first five-year plan for the development of the USSR's national economy from 1929 to 1932.

Lenin repeatedly pointed out the goals of production, the need to gear it to improving the people's well-being, and his ideas have been further elaborated at each successive Party congress in accordance with the growth of the country's productive forces. This will be seen from a look at the main targets of each five-year plan, which show that with the development of the productive forces, these plans have devoted more and more attention to gearing production to the people's needs. The main tasks of the ninth and tenth five-year periods have laid particular emphasis on this aspect of the matter.

Every Soviet long-term plan has had its own particular purpose. The planning agencies always start by determining society's needs and the possibilities of satisfying these, and seek to balance out consumption and accumulation with a view to current and long-term goals, the ultimate goal being to develop the productive forces to a level which would enable society to satisfy every individual's needs in goods and services at scientifically grounded norms.

In view of this, the problem of boosting economic-development rates and production growth, the output of raw materials, fuel, machinery and equipment in particular, is still high on the order of the day, for that offers the only possibility to provide the whole population with material goods and services at scientifically grounded norms. The task here is to raise the efficiency of the means of production so that a relatively smaller amounts of these would produce more goods and services for the population, and the five-year plans for the country's socio-economic development have been geared to this aim.

Even during the prewar five-year periods the Soviet state used the advantages of socialist economic planning and concentrated the country's efforts and resources on the development of the key branches and lines of production, so ensuring a high and steady rate of economic development (Table 1).

On the basis of the five-year plans, the country was in the main industrialised in a very short historical period: it now had a large-scale industry, which made it possible drastically to reorganise the various other sectors of the national economy on machine

Table 1

AVERAGE ANNUAL GROWTH RATES
(per cent)

Five-year period	National income	Gross industrial product
First (1929-1932)	16.2	19.2
Second (1933-1937)	16.2	17.1
Third (1938-1942)	10.0	13.2

lines. In 1937, by the end of the second five-year period, the Soviet Union had emerged as the world's second biggest industrial producer, having outstripped industrial European states like Great Britain, France and Germany. Its rate of industrialisation was 2.4 times higher than that in the major Western countries. It took the United States some 40 years to boost industrial output to the level attained by the USSR in 9 years, that is, in the first two five-year periods.

In the prewar five-year periods (1929-1940), average annual growth was 14.6 per cent in the national income, 16.8 per cent in industrial production (in the means of production it was 24.2 per cent and in the articles of consumption, 12.6 per cent), 2.3 per cent in agricultural production, 7.3 per cent in retail trade, and 7.7 per cent in the fixed production assets. So, over the 12 years, the national income increased 5.1-fold, gross industrial production 6.5-fold (the output of the means of production 10-fold).

Owing to its faster economic growth, the USSR's share in the world's industrial production in 1940 came to about 10 per cent, as compared with 4 per cent in 1913.

In 1940, Soviet industrial production was about 20 per cent of that of the USA. The USSR-to-USA ratios in the major lines of production had also markedly changed: from 1928 to 1940, the ratio for electric power went up from 4 to 26 per cent; for oil, from 9 to 17 per cent; for coal, from 7 to 33 per cent; for pig iron, from 9 to 35 per cent; and for steel, from 8 to 29 per cent.

The country's rapid industrialisation helped it to take a major stride towards reorganising on machine lines all other sectors of the national economy, agriculture in particular. In the 1930s, about 25 million individual peasant households joined together in large collective farms, which heavy industry supplied with machinery, electric power, mineral fertilisers and transport facilities. In 1940, gross agricultural production was 32 per cent up on 1928.

Considerable headway was also made in the people's well-being. By 1930, unemployment had been wiped out for good, and the people's educational and cultural levels had gone up. So, socialist industrialisation in the USSR meant a balanced effort to create and develop, on the basis of socialist property in the means of production, the whole range of industries producing instruments of labour, something that served to create the prerequisites for the technical reconstruction and eventual industrial development (through electrification, mechanisation and chemicalisation) of every sector of the economy, aimed at a steady growth of labour productivity and

the national income, and at an all-round rise in the people's living standards.

Nazi Germany's treacherous attack against the USSR in June 1941 cut short the implementation of the Third Five-Year Plan. The Great Patriotic War, which lasted more than four years (from 1941 to 1945) and ended in the enemy's total defeat, inflicted immense losses on the Soviet economy. The material damage it caused was 20 times the country's 1940 national income and amounted to 2,600 billion rubles. Meanwhile, the US national income increased by $ 96 billion.

The early postwar five-year periods enabled the Soviet people to rehabilitate and develop the economy at a steady pace.

By the beginning of the ninth five-year period, objective prerequisites had been created for tackling the need to raise the people's well-being on a larger scale than ever before. The improvement in their living standards was truly sweeping: about four-fifths of the national income (70 per cent more than in the eighth five-year period) was allocated for standard-of-living purposes (housing, civic and cultural construction, in particular), and that served to increase real incomes per head of the population by almost one-quarter.

The bulk of the outlays on the people's well-being was used to increase payment according to work, the chief source of the population's incomes. Minimum wages were raised, and also the wage rates and salaries of medium-bracket industrial and office workers in material production; wage rises were also given to teachers, doctors and some other

categories in the nonproduction sectors. measures covered more than 75 millio dustrial and office workers (three-quart the total). Moreover, the wages of industrial, agricultural and office workers also rose with their growing labour productivity and improved skills, and with a further extension of bonuses and other rewards from the enterprises' own inducement funds. Thus, in the five years from 1971 to 1975, bonuses and lump-sum inducement payments to industrial and office workers from the enterprises' material-inducement funds went up by about 80 per cent. The average wage of industrial and office workers increased by 20 per cent, with their average annual earnings going up by almost 300 rubles. Farmers' incomes from collective farms increased by an even larger margin, 25 per cent.

Social consumption funds also play an important role, alongside income from work, in raising the people's living standards. In 1975, these totalled almost 90 billion rubles, 40 per cent up on 1970. These funds have been used to increase pensions, student grants (50 per cent for technical colleges and 25 per cent for institutions of higher learning), the length of paid leave for women caring for sick children, and also payments for maternity leave, and to introduce child aids for the less-well-off families. Over the past decade, all these new measures, together with greater outlays on some of the earlier measures, have served to double every Soviet citizen's benefits from the social funds. In 1975, cash payments, material benefits and services from these funds amounted to 1,400 rubles for a family of four, which is

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equal to almost 10 months' wages of a middle-bracket worker. A point to note here is that rents and state retail prices of goods and services have all this while remained stable. In the ninth five-year period, retail trade increased by 36 per cent, and the volume of other than free everyday services by 60 per cent. Marked changes have occurred in the structure of consumption. Families have been spending a greater share of their incomes on services and goods other than foodstuffs; there has also been a shift of emphasis from foods like bread and potatoes to meat, milk products, eggs and vegetables. Housing construction is another major line in the effort to raise the people's living standards. In the ninth five-year period, 544 million square metres of living space was built across the country, and this helped to improve the living conditions of 56 million citizens, that is, 20 per cent of the country's population.

In the ninth five-year period, the transition to universal secondary education for the young was in the main completed. Large outlays were also made on the rest and recreation industry, public health, and the everyday services. These and other measures to raise the people's living standards were a corollary of the country's economic growth.

Over the five years, the national income increased by 28 per cent, and industrial production by 43 per cent; in agriculture, gross annual production increased by an average of 13 per cent, as compared with the eighth five-year period. The share of engineering and the chemical and electric-power industry in total industrial production went up from 29 per cent

in 1970 to 33 per cent in 1975. At the end of the period, the country produced 1,039 billion kwh of electric power, 491 million tons of oil, 289 billion cubic metres of gas, 701 million tons of coal, 141 million tons of steel, and 22 million tons of mineral fertilisers (in terms of 100 per cent nutrients).

The output of consumer goods rapidly increased. In the five years, their total production went up by 37 per cent, and that of consumer durables by 60 per cent. Quality has also improved.

The comprehensive approach in the solution of major intersectoral and regional problems was used on a much larger scale. There was a drive to establish new territorial production complexes, especially one on the basis of West Siberian oil and gas; production associations were set up in industry, a large-scale campaign was launched to boost agriculture in the Non-Chernozem Zone of the RSFSR, the construction of the Baikal-Amur Railway and the Kama Automobile Works was begun, and more was done in irrigation and land improvement.

With the successful fulfilment of nine five-year plans, favourable conditions were created for even more balanced, dynamic and large-scale socio-economic development. By the beginning of the tenth five-year period, in the course of which the USSR will mark its 60th anniversary, the country's fixed production assets topped 800 billion rubles—a 30-fold increase over 1928, the year before the start of the first five-year period. The structure of the labour force has radically changed and improved: in 1975, the economy employed 23

Table 2

INDUSTRIAL PRODUCTION GROWTH
(1913-1975)

	Unit of measurement	1913	1922	1928	1940	1945	1950	1960	1970	1975
Electric power	bln kwh	2.0	0.8	5.0	48.3	43.3	91.5	292.3	741	1,039
Oil	mln tons	10.3	4.7	11.6	31.1	19.4	37.9	147.2	393	491
Natural gas	bln cu m	—	0.03	0.3	3.2	3.3	5.8	127.7	198	289
Coal	mln tons	29.2	11.3	35.5	165.9	149	261	510	624	701
Steel	mln tons	4.3	0.3	4.3	18.3	12.3	27.3	65.3	116	141
Mineral fertilisers (in terms of 100 per cent nutrients)	mln tons	0.02	—	0.03	0.7	0.3	1.2	3.3	13.1	22
Synthetic resins and plastics	thous tons	—	—	0.3	10.9	21.3	67.1	312	1,673	2,842
Cellulose	thous tons	258	13	86	529	276	1,100	2,282	5,110	6,840
Synthetic fibre and thread	thous tons	—	—	0.2	11.1	1.1	24.2	211	623	955
Metal-cutting lathes	thous	1.8	0.3	2.0	58.4	38.4	70.6	156	202	231
Cars	thous	0.1	—	0.84	145.4	74.7	362.9	523.6	916.1	1,964
Tractors	thous	—	—	1.3	31.6	7.7	117	239	459	550
Cement	mln tons	1.8	0.1	1.8	5.7	1.8	10.2	45.5	95.2	122
Fabrics	mln sq m	2,194	550	2,198	3,320	1,353	3,374	6,636	8,852	9,956
Leather footwear	mln pairs	68	6.8	58	212	63	203	419	679	698
Meat (industrial output)	thous tons	1,273	260	678	1,501	663	1,556	4,406	7,144	9,862
Whole-milk products (in terms of milk)	mln tons	—	—	0.1	1.3	0.6	1.1	8.3	19.7	23.6
Radio sets	thous	3.0	—	3.0	178	13.9	1,072	4,165	7,815	8,376
TV sets	thous	—	—	—	0.3	—	11.9	1,726	6,682	6,960
Household refrigerators	thous	—	—	—	3.5	0.3	1.2	529	4,140	5,577

million specialists (40 times more than in 1928) and 1.2 million research workers (66 times more than in 1928). The population's educational, cultural and technical levels have soared. Thus, in 1939, only 123 working persons per 1,000 had a higher or secondary (complete or incomplete) education, and in 1975, the figure was 767.

Over the five-year periods, the Soviet Union has taken a giant stride forward in the development of industry, which now has more than 300 branches (Table 2).

The development of a diversified industry has made it possible to boost agriculture and the other sectors. Since the first five-year period, the Soviet people have built up to a high level a totally new agricultural engineering industry, and also irrigation, land improvement and other farming machinery, a microbiological, mixed-seed and mineral-fertiliser industry. This has done a great deal to intensify agriculture in the Soviet Union, where soil and climatic conditions are not as good as they are in other European countries or the USA. Here are some figures:

	USSR	USA
	(per cent)	
Ploughland with temperatures of up to 5°C	60	10
Ploughland with 700 mm or more of rainfall	1.1	60
Ploughland with 400 mm or less of rainfall	40	11

In the aggregate, soil and climatic conditions here are 58 per cent worse than they are in the USA, so that the Soviet Union has to make greater outlays than the other European countries or the USA on irrigation, farming machinery, mineral fertilisers, and plant protection.

By the beginning of the tenth five-year period, cotton, rice and vegetable growing were virtually no longer dependent on the weather. Cereal production was also much less dependent on the vagaries of the weather, although a great deal still remains to be done. The 1975 crop showed this very well. According to the weather service, the 1975 drought was the worst, the earliest and most sweeping one since 1891. In 1975, there was as little rain as in the very bad year of 1921, and the temperature anomaly was even greater. The major areas of commodity cropping in the USSR had never known such a long spell of scorching weather as in April, May and June 1975. The droughts of 1946, 1963, 1965 and 1972 were not as intensive or widespread. The 1972 drought, which affected the European part of the USSR (except for the western areas), was also very bad (but it really hit the country only in the second half of June, when the plants were almost full-grown). Moreover, in 1972, the weather in Western Siberia and Kazakhstan favoured a good crop. The kind of early, intensive and large-scale drought as the one that hit the country in 1975 tends to occur only about once in a century. The drought had an adverse effect on the productivity and gross yields of cereals, sunflower, sugar beet and feed crops. Thus, in 1973, the farmers gathered

in 222.5 million tons of cereals, and in 1975, only 140 million tons (from the same area). Still, the gross cereal crop in 1975 was 32.5 million tons higher than in 1963 owing to more extensive irrigation and better material and technical facilities.

As the material and technical basis of agriculture grew and the material incentives held out to agricultural enterprises and farmers improved, the country's crop growers and livestock farmers steadily increased their production from one five-year period to another.

Table 3

AVERAGE ANNUAL PRODUCTION IN THE MAIN LINES OF AGRICULTURE

(mln tons)

	1946-1950	1951-1955	1956-1960	1961-1965	1966-1970	1971-1975
Cereals	64.8	88.5	121.5	130.3	167.6	181.6
Cotton	2.32	3.89	4.36	4.99	6.1	7.67
Vegetables	11.4	11.2	15.1	16.9	19.5	23
Sugar beet	13.5	24	45.6	59.2	81.1	76
Meat (dead weight)	3.5	5.7	7.9	9.3	11.6	14
Milk	32.3	37.9	57.2	64.7	80.6	87.4
Eggs (bln pieces)	7.5	15.9	23.6	28.7	35.8	51.4
Wool (thous tons)	147	226	317	362	398	442

In the decade from 1965 to 1975, rice production almost quadrupled from 580,000 tons to 2 million tons. With the establishment of many new large cattle-breeding and poultry farms, the production of meat and especially eggs has gone up steeply. In the ninth five-year period, much was done in irrigation and land improvement, especially in the droughty areas along the Volga. A new industry was established to produce machinery for mechanised cattle-breeding. Many tractor and farming-machinery plants were remodelled, and that helped to lay a good groundwork for an increase in agricultural production.

High and steady growth rates are a major specific feature of Soviet economic development. Both before and since the war, the Soviet economy has developed faster than the US economy (Table 4).

Table 4

USSR-USA: AVERAGE ANNUAL GROWTH OF THE MAIN ECONOMIC INDICATORS FROM 1931 TO 1975

(per cent)

	USSR	USA
National income	8.1	3.2
Industrial production	9.6	3.8
Agricultural production	3.4	1.7
Investments	9.2	2.4
Labour productivity	6.9	2.4
Labour productivity in industry	6.2	3.2

Owing to the Soviet Union's higher growth rates, the balance between the USSR's and the USA's main indicators has substantially changed, with a steadily narrowing gap between their national incomes, industrial production, and other indicators.

The advantages of socialism, which make it possible to develop the economy on the basis of short and long-term economic plans, have helped the Soviet Union to secure solid positions in the world economy. In 1922, its share in world industrial production was only 1 per cent, in 1937, it was about 10 per cent, and now it is 20 per cent. The Soviet Union now leads the world in the production of oil, pig iron, steel, cement, mineral fertilisers, tractors, grain harvesting combines, electric locomotives, leather footwear, cotton and woolen fabrics, and other important products.

With this kind of scientific and production potential, the Soviet Union is well set for further economic advance and an improvement of the people's well-being, both in the tenth five-year period and over the longer term of up to 1990.

CHAPTER TWO

THE MAIN SOCIAL AND ECONOMIC TASKS OF THE TENTH FIVE-YEAR PLAN

The tenth five-year period is a new and important stage in the creation of the material and technical basis of communism, the improvement of social relations, the moulding of a new man, and the development of the socialist way of life. The fundamental propositions of the 24th CPSU Congress on the basic aspects of economic policy in a full-scale socialist society were spelt out by the 25th Congress for the tenth five-year period and well beyond it.

The Congress laid down long-term guidelines for the Party's economic policy, its economic strategy providing for a sustained drive to raise the people's material and cultural level, and create conditions for a high living standard and the free and all-round development of every member of socialist society.

The essence of the Tenth Five-Year Plan, as formulated by the 25th Congress in its main task, is to ensure consistent implementation of the Communist Party's line for raising the people's material and cultural level on the basis of dynamic and proportional development of social production, its greater efficiency, faster scientific and technical pro-

gress, higher labour productivity and all-round improvement in workmanship in every sector of the economy.

The main goal for which the Soviet people intend to work in the tenth five-year period, and the ways and means of its attainment are formulated in the main task of the new five-year period, namely, comprehensive economic development, a considerable extension of the range of problems to be tackled simultaneously. Thus, an all-round effort is to be made to improve the people's well-being, develop the economy, strengthen its material and technical basis, and improve the economic machinery, planning, administration, and management.

The Soviet Union's economic strategy has a solid objective basis: it rests on the foundation of the Marxist-Leninist doctrine about the supreme goal of social production under socialism, that is, the ever fuller satisfaction of man's material and cultural requirements. Full-scale socialism, as will be seen from the outcome of the ninth five-year period, has opened up particularly broad possibilities for the solution of this task. Now that the possibilities of social production have increased, the Tenth Five-Year Plan lays greater emphasis on the social aspects of economic development, on fuller satisfaction of the working people's growing material and cultural requirements and the solution of a broad range of social problems, especially those relating to the quality of the Soviet way of life.

If the main task of the tenth five-year period is to be realised, there will have to be a further buildup of the country's economic potential, an extension and radical renewal of

the production assets, and steady and well-balanced growth of the heavy industry, the economy's foundation.

One of the main ways leading towards this goal is to ensure dynamic development of social production, that is, a high and steady growth rate in order to increase the output of material values, develop the services and create prerequisites for eventual economic reproduction on an ever larger scale and for continued improvement in the people's well-being. The dynamic development of social production is also to be proportional, and this should play the decisive role in the effort to make the economy even more balanced and efficient. The main way to ensure dynamic and proportional development is to enhance the economic efficiency of social production and intensify it all-round. This factor is so important that the tenth five-year period has been described as one of quality and efficiency geared to further steady improvement in the people's well-being. Consequently, the first group of ways and means for attaining the projected goals comprises major aspects of reproduction like rapid growth, progressive proportions, economic balance and greater efficiency of social production.

Under the present objective conditions in the Soviet Union, it has become possible and necessary to switch the economy to largely intensive extended reproduction. With the fulfilment of the first nine five-year plans, the USSR has built up a vast production, scientific and technical potential; the people's educational, cultural and occupational levels have risen, and large raw-material and fuel depos-

its have been developed in the East and North of the country, and vast tracts of virgin and fallow lands have been drawn into economic commerce. At the same time, because of the full employment of labour resources, which have not been growing as fast as before, especially in the final years of the ninth five-year period, it is no longer possible to make as wide use of extensive factors in economic development by recruiting additional manpower for the sphere of material production. That is why more intensive use of the existing potential and the country's labour and material resources has now become the crucial factor in the effort to maintain rapid and steady economic growth and raise the people's living standards.

Faster scientific and technical progress is to play the decisive role in the efficiency drive. Over the past decade, production assets in every sector of the economy have been substantially renewed. In the ninth five-year period, the country's industry started the production of about 17,000 new types of industrial products: highly productive plant, equipment, and machinery for mechanising and automating production processes, and also computer control systems. At the beginning of the tenth five-year period, industry operated 50 per cent more fully mechanised lines than at the beginning of the ninth five-year period, and 70 per cent more automatic lines than at the beginning of the eighth five-year period. The share of large-capacity production units, especially in the electric power, chemical and oil-refining industries, considerably increased. Obsolescent machinery, equipment, instruments

and products, in engineering above all, were taken off the production lines much faster than before, and the share of high-quality goods markedly increased. The country's economy entered the tenth five-year period not only with a larger production potential, but also with more sophisticated machinery, which has created a solid basis for raising the technical level and quality of the machinery, instruments and equipment that are to be produced in the tenth five-year period for every sector of the economy, the consumer industries above all.

Efficient use of the existing and growing economic, scientific and technical potential calls for more sophisticated planning, administration, and economic management. A higher standard of workmanship in every sector of the economy is one of the major instruments in the fulfilment of the main task of the tenth five-year period.

In the ninth five-year period, considerable improvement was achieved in economic administration. Notably, master schemes for running various industries were elaborated, and many new production associations were established. Further headway was made in specialisation, cooperation and combination of production. Scientific methods of labour organisation were vigorously introduced at the enterprises and establishments. There was broader use of automated control systems and electronic computers: at the end of the ninth five-year period, the country had more than 2,700 different-purpose computer control systems and about 2,600 computing centres. A great deal was also done to improve the sys-

tem of economic incentives and encourage enterprises, industrial and office workers, collective farmers and research workers to improve their performance.

In the tenth five-year period, a package of new measures is to be carried out in this area, chiefly aimed to strengthen the combined influence of the plans, economic instruments and incentives on production, to raise its efficiency, ensure higher quality, improve the system of dovetailing economic plans, and use goal-oriented programmes on a broader scale.

The efficiency drive is to go hand in hand with a sharp improvement in quality, because better usually also means more. The problem of quality is to be tackled in every sphere of the economy.

So, the goal of economic development in the tenth five-year period and the means for its attainment are interdependent and constitute a single whole, which reflects the close ties between production and consumption under socialism, and provides a basis for achieving the plan targets. Another important thing is that every target for raising living standards and strengthening the country's economic potential is related with the necessary resources. Every performer (enterprise and organisation) is informed of its targets under the plan for production, construction or other lines of work, and has to attain these targets by the due date. The plan provides both for a system of inducements for the successful attainment of these targets and sanctions for failure to do so.

An important specific feature of the main task of the tenth five-year period is that it is

aimed to enhance the comprehensive, systemic and programme approach to the tasks facing Soviet society. The Tenth Five-Year Plan provides for careful coordination of the effort to raise social production with the effort to boost the people's living standards. On the one hand, economic development offers ever broader opportunities for meeting the working people's material and cultural needs and solving urgent social problems. On the other hand, the ever fuller satisfaction of individual and social requirements and the ever more harmonious and all-round development of the individual tend to enhance the quality of workmanship in every sector of the economy and increase the national income, which is being used in the people's interests.

1. Socio-Economic Development Rates

The economic-development rate and also the proportions and structure of social production derive from the main task of the tenth five-year period, its goal and the ways to achieve that goal. The new plan is a spectacular programme for the further development of the country's economy, all its sectors, the Union and Autonomous Republics. Over the five years, the national income is to increase by 24-28 per cent, and the consumption fund, in particular, by 27-29 per cent; industrial production by 35-39 per cent; and average annual production in agriculture by 14-17 per cent. The absolute increments and the value of every percentage point of growth are to be much bigger than in the ninth five-year period.

Thus, the absolute increment in the national income is to total 87-101 billion rubles, as compared with 79.8 billion rubles in the ninth five-year period, and in the consumption fund 71-78 billion rubles, as compared with the 64 billion rubles in the preceding five-year period.

Industry is to play the leading and growing role in national-income growth. It is to make the decisive contribution not only to the implementation of the projected social and economic targets, but also to the effort to create effective instruments for the country's successful socio-economic development in the 1980s. In view of this, industry's share in the national income is to increase from 55 to 58 per cent, and the absolute industrial increment over the five years is to total 183-203 billion rubles, as compared with the 153 billion rubles in the ninth and the 123 billion rubles in the eighth five-year period.

It is to increase 2.5-fold as compared with the seventh five-year period, and in 1980, industrial production in comparable prices is to total 700-720 billion rubles, with more than 4-fold increase over the 1960 figure of 156 billion rubles. This means that the industrial increment in the tenth five-year period will be 20 per cent up on the 1960 volume of industrial production. Here is another indicative comparison. In the tenth five-year period, industrial production is to increase by almost as much as it did in the decade from 1961 to 1970.

Absolute increments in agriculture are also to go on growing. In the tenth five-year period, average annual growth in the sector is

to exceed 18 billion rubles, as compared with the 13 billion rubles in the preceding period, and the value of every percentage point of growth in all the major economic indicators will increase accordingly.

In relative terms, every percentage point of the absolute increment in the tenth five-year period will carry more weight than in the preceding period: 29 per cent more for the national income, 44 per cent for industrial production (40 per cent for output in Group B) and 10 per cent for agriculture.

In accordance with the main objectives of the new five-year period, consumption is to grow faster and its share in the national income—the chief source of every improvement in the people's well-being—is to increase. Over 80 per cent of the absolute increment in the national income is to go into consumption.

The light industry is also to grow faster. The food industry and the production of household and other everyday goods are to develop at a rapid pace. Real income per head is to go up by 20-22 per cent, and retail trade by 27-29 per cent—an absolute increment of 5 billion rubles (from 55 billion rubles in 1975 to 60 billion rubles in 1980). There is to be a 50 per cent increase in everyday services to the population. The accumulation fund—an important part of the national income going into expanded reproduction and into housing, civic and cultural construction—is to increase by 17-23 per cent. Investments in the economy are to go up by 24-26 per cent, making a total of 630 billion rubles over the five years, that is, more than 40 per cent of all the investments made in the USSR in its first 58 years (1917-

1975). This will help to strengthen the material and technical basis of every sector of the economy.

Realisation of this investments programme will serve to increase the fixed production assets in industry by more than 40 per cent, and in agriculture by about 50 per cent, and also the fixed assets in the nonproduction sector (public utilities, education, culture, the health service, the rest and recreation industry, and so on).

So, the Tenth Five-Year Plan envisages a high and steady rate of economic development, social production on a much larger scale, and a drive for high quality. It shows very well that under full-scale socialism it is possible simultaneously to tackle the task of boosting production and that of raising the people's living standards, to solve an ever wider range of different social problems.

2. Improving the Proportions of Social Production

Proportional development of the economy implies that the proportions of production and its structure correspond to the developing social requirements in any given period. Particular importance attaches to the proportions between accumulation and consumption in the national income, between the development of the means of production and articles of consumption in the social product and industrial production, among the various spheres and sectors of the national economy and within these, and among the country's different areas

and territorial-production complexes. The economic growth rate, the efficiency of social production and the possibilities for accumulating resources in order to raise the people's living standards largely depend on the correct solution of structural problems.

The Tenth Five-Year Plan devotes particular attention to an improvement in the proportions and structure of production in accordance with the long-term potentialities of technical progress, the development of social requirements, the possibilities and advantages of the international division of labour, and the development of economic ties with other countries.

The five-year plan provides for a comprehensive programme of measures in this area, grouped along several lines, in accordance with the main tasks for a longer term. As the Tenth Five-Year Plan was elaborated together with the long-term plan, its targets were carefully tied in with the long-term goals, so that it will help to create conditions for economic development beyond the tenth five-year period. The long-term goals have had a decisive effect on the planning of the proportions and structure of production in the tenth five-year period.

Department I of social production (the production of the means of production), particularly the output of the instruments of labour, is to continue growing more rapidly. At the same time, the share of consumption in the national income is to go to 75 per cent in 1980, which indicates rapid growth of the end results of social production, its greater efficiency, and broader possibilities for carrying

out the standard-of-living tasks written into the five-year plan.

To ensure a renewal of the existing production assets and their further expansion, the five-year plan provides for priority development of Group A in industry, especially branches that are pivotal to technical progress. Heavy industry and engineering, its key branch, are to create the prerequisites for faster mechanisation and automation of production processes, especially labour-intensive manual work in every sector of the economy.

Priority development of the manufacturing industry (together with rapid absolute growth in the fuel, metallurgical, timber and other raw-material industries) is the main channel for improving proportions in industry. As a result, the share of the manufacturing industry in total industrial production will increase. Special emphasis is to be laid on engineering, and the chemical, petrochemical and power industries, which are of especial importance for technical progress and greater efficiency in every sector of the economy. Their share in overall industrial production is to go up from 33.1 to 37.4 per cent, and that of engineering, in particular, is to increase from 24 to 27 per cent, which will indicate important structural changes (in the late 1920s, by way of comparison, engineering accounted for only 5-6 per cent of the country's industrial production).

There will also be some major qualitative changes in the structure of engineering itself, aimed to increase the output of the more progressive and efficient machinery, equipment and instruments for every sector of the economy, particularly high-capacity units, which are the most efficient and reliable.

The most important task facing engineering is to develop complete systems of machinery and instruments for the full mechanisation and automation of the whole technological process, from the initial raw materials to the finished product.

Much is being done to produce equipment for fundamentally new technological processes, and also to mechanise arduous manual and monotonous work.

Priority development of small-batch chemistry, plastics and synthetic fibre and thread is to be the main line of structural changes in the chemical industry. The mineral-fertiliser industry is to go on growing rapidly, and there is to be a considerable increase in the production of plant-protecting chemicals.

Ferrous metals are to continue playing the leading role in the complex of construction materials. There is to be a substantial increase in the output of the more effective types of rolled metal stock, and the product-mix is to be extended. The output of other materials, like aluminium, copper, nickel, synthetic resins and plastics, which are often more effective than ferrous metals, is to grow even faster.

Rational combination of different fuels and energy-bearing materials is to be the main line in the further improvement of the fuel-and-energy balance. Priority here is to be given to oil and gas, and also to atomic and hydroelectric power. The coal industry is also to develop more rapidly, chiefly through opencast mining in Siberia and Kazakhstan. The

output of electric power is to grow about 15 per cent faster than the country's total energy resources, which will help to accelerate technical progress and enhance the efficiency of social production.

The projected development of the branches of heavy industry, as described above, is an important earnest of the fulfilment of the targets set before the consumer industries and the services.

Heavy industry will help to meet these targets, first, by creating the necessary prerequisites for an increase in the production of consumer goods and raw materials for their manufacture, and for development of the services, and second, by producing more household and other everyday goods at its own enterprises.

The proportions in the manufacture of consumer goods are also to be markedly altered. Priority here is to be given to household and other everyday goods. In the food, textile and light industries, the emphasis is to be shifted to the more nutritious food-stuffs and to high-quality and fashionable goods.

Important structural changes are to be carried out in capital construction. First of all, there is to be a marked change in the proportions between investment and national income growth. In the ninth five-year period, the investment-to-national-income growth coeffi cient was 1.45, whereas in the tenth five-year period, the two sections are to grow at the same pace. The improvement in the technological structure of investment will serve to ensure that the national income goes on growing as fast as it did in the ninth five-year period. The share of investment into the making of equipment in the total will increase by 9-10 per cent, and more investment is to go, in the first place, into the technical re-equipment and reconstruction of existing enterprises. These and other measures, aimed to improve design work, reduce construction time, and stop the growth of per-unit costs will help to obtain faster returns on investments. Prerequisites are being created to enhance the influence of the plan on the quality of design work so that new projects reflect more fully the long-term potentialities of technical progress.

Investments in industries and lines of production that serve to accelerate scientific and technical progress and increase the output of consumer goods and raw materials for their manufacture are to grow faster than investments into other industries.

3. Quality and Efficiency Drive

The tenth five-year period is one of quality and efficiency. The only way to fulfil the various economic and social tasks facing the country is to boost labour productivity and enhance the efficiency of the whole of social production. In accordance with the efficiency line, higher labour productivity is to yield about 90 per cent of the industrial increment projected for the tenth five-year period, and the whole of the increment in agriculture and construction. About 85-90 per cent of the projected increase in the national income is to be obtained from this source, as compared with 78 per cent in the ninth five-year period.

Labour productivity growth is particularly important against the background of full employment of the able-bodied population. Now that social production in the Soviet Union has reached a gigantic scale, a one-per cent increase in labour productivity makes it possible to turn out more than 5 billion rubles' worth of industrial products, or to build 600,000 flats, or 6 giant hydroelectric power stations, like the one near Krasnoyarsk. In the five years, labour productivity in material production (industry, agriculture, construction, transport, communications, and so on) is to increase by 25-27 per cent, as compared with 23 per cent in the ninth five-year period. This is equivalent to saving the labour of about 25 million persons, as compared with 20 million persons in the ninth five-year period. Higher labour productivity in material production will make it possible to recruit more personnel into the services: trade, public catering, education, culture, public health, the rest and recreation industry, and other branches working to meet the population's cultural and everyday needs. From 1971 to 1975, employment in material production increased by 6.6 per cent, and in the nonproduction (civic and cultural) sphere by 16.2 per cent, and the tendency is to continue in the tenth five-year period. By 1980, the share of the population employed in the nonproduction sphere is to go up to approximately 25.5 per cent (from 24.6 per cent in 1975), with a corresponding decline in the share of the population employed in material production. In 1928, the figure for the nonproduction sphere was only 7 per cent, and in 1940, 11.7 per cent of the labour force.

Faster scientific and technical progress and a consequent increase in technical facilities per worker are to serve as the material basis for the projected economies in social labour. By 1980, assets per worker in industry are to go up by 34 per cent, and in agriculture by 60 per cent. The complex approach is to be the main line in the mechanisation of production. Industry is to move gradually from the introduction of single machines and technological processes to the development, manufacture and massive installation of highly efficient systems of machinery, equipment, instruments and technological processes with fully mechanised or automated production cycles. With this aim in view, the five-year plan envisages the manufacture of more than 20,000 new types of machinery, instruments and equipment. Special attention is to be devoted to new machinery and technology which help to ensure the highest labour productivity, to reduce material intensiveness and improve the technical and economic characteristics of the products. More equipment is to be produced to mechanise arduous and unhealthy work.

The scientific and technical revolution is not confined to machinery and technology, but also calls for fundamental changes in labour organisation. In view of this, the Tenth Five-Year Plan provides for a system of measures aimed to introduce scientific methods of labour organisation on a large scale, improve the material and moral incentives for higher labour productivity, and raise the working people's skill standards. The training of skilled workers and specialists is to be improved. In the five years, the country's vocational schools are

to turn out about 11 million skilled workers, 2 million more than in the preceding five years, and enrolment at secondary technical schools will more than double.

Apart from that, 9.6 million specialists are to be trained at institutions of higher learning and special secondary colleges. The material and technical facilities of the education network are to be enlarged, with more vigorous use of technical facilities and new teaching methods; student laboratories, study rooms, methodological centres and workshops are to be fitted out with modern equipment, instruments, tools and teaching aids.

The Tenth Five-Year Plan devotes much attention to the social factor in productivity, which also helps to boost its growth. The plans for the enterprises envisage measures to promote the social development of their labour collectives. Thus, socialist emulation, an earnest of greater efficiency and higher productivity, is to be extended. From the outset of the tenth five-year period, whole enterprises and individual workers have pledged themselves to fulfil their plans ahead of time, launching emulation campaigns under the motto, "Let's back up the five-year period of high quality with our workers' guarantee".

Besides aiming to save living labour, the plan also aims to save past labour, the labour materialised in the production assets and material resources (equipment, production buildings, fuel, raw and other materials, and electric power).

To save labour embodied in the fixed production assets, it is intended to increase the time in which equipment is used productively,

which will serve to increase the product-to-assets ratio, that is, to turn out more goods per unit of production assets. Considering the present dimensions of the production assets, a one-per cent increase in the product-to-assets ratio will enable industry to turn out almost 6 billion rubles' worth of additional products, or to save more than 3 billion rubles' worth of investments. That is why there are plans to elaborate and carry out in every sector, at every enterprise and organisation a package of measures aimed to raise the product-to-assets ratio. In engineering, the shift coefficient is to go up on average by 20-30 per cent.

Production capacities are to be increased largely through technical re-equipment of the existing enterprises, installation of modern plant, various organisational and technical measures, and faster replacement of obsolescent machinery.

An effort is to be made to reduce material intensiveness, that is, the inputs of fuel, electric power, and raw and other materials per unit of production, which is an important factor in the efficiency drive.

Under the scientific and technical revolution, the ever greater need for raw materials and their growing extraction costs, it is particularly important to use these economically. The importance of this will be seen from the fact that in 1980, a one-per cent cutback in material inputs in the production sphere will mean a more than 6 billion ruble increase in the national income.

The five-year plan stipulates concrete targets for various material economies. Thus, it is intended to save 14-16 per cent of the rolled

ferrous metals in engineering and metal-processing, and 5-7 per cent in construction; 5-6 per cent of the cement and 12-14 per cent of the timber used in construction; to cut down by 3-4 per cent the input norms for boiler and furnace fuel, 5 per cent for electric and thermal power, and 8 per cent for petrol and diesel fuel in truck freightage.

Industry is also to lower material intensiveness by improving the quality of the initial raw and other materials, making fuller and more complex use of these, manufacturing new-design machinery weighing less per capacity unit, and developing heavy-duty production units.

Material intensiveness is also to be lowered as a result of the use of progressive raw and other materials, better processing, broader use of recycled materials, and economical types of rolled ferrous stock in engineering and construction, and other factors.

A wide range of measures is to be carried out to ensure fuller extraction of minerals, which will also help to enhance the efficiency of production.

Better location of the productive forces across the country—an improvement in territorial proportions—is another major efficiency factor. The Tenth Five-Year Plan formulates this task with a view to the most economical solution of two problems: supplying the economy with energy as the fuel base continues to shift to the areas east of the Urals and using the country's labour resources in accordance with the expected fundamental changes in their growth pattern. Industry is also to be located with a view to the growing role of the

water factor, the changes in the location of the mineral and raw material base, and various social and political problems.

In the Republics of Central Asia, Kazakhstan and Azerbaijan, where natural population growth is fairly high, the emphasis is to be on the development of labour-intensive industries and branches of agriculture, and also on the fuel industry and nonferrous metallurgy on the basis of natural raw material deposits. In the European part of the USSR, where the labour force and fuel and raw material extraction are to grow fairly slowly, and where there is a shortage of water resources, the emphasis in industry is to be on the technical reconstruction and retooling of the existing enterprises.

Territorial-production complexes are to be developed on a larger scale than before.

TPCs are developed under a master plan, and comprise groups of technologically and economically interconnected enterprises, which supplement and service each other. TPCs have a single production and nonproduction infrastructure: transport, construction, public utilities, schools, child-welfare establishments, hospitals, and so on, which makes the TPCs highly efficient.

TPCs make it possible to save natural, material, financial and labour resources, to tie in various sectors of production located in the same area with each other and establish due proportions between these, and also to coordinate the efforts of different sectors and departments in the endeavour to fulfil comprehensive territorial programmes.

The five-year plan provides not only for the further development of the existing TPCs,

whose formation was first begun in the preceding period (West Siberia, Bratsk, Sayan, Kursk Magnetic Anomaly, South Tajikistan, Pavlodar-Ekibastuz, Karatau-Djambul and Mangyshlak), but also for the development of new complexes, like the South Yakut TPC in the zone of the Baikal-Amur Railway, which is now under construction, or the Timan-Pechora complex.

The problem of enhancing the efficiency of social production in the tenth five-year period dovetails with that of improving product quality. The plan envisages a sweeping improvement in quality in every sphere of production and economic activity. This applies to the quality of finished products, machinery and technology being developed and engineered in production, and labour organisation, and also the quality of work at every level of administration, management and planning, which, in turn, implies greater discipline and responsibility on the part of every working person, whatever his job. The complex approach to the problem has been adopted because, in the final count, higher quality means a saving of labour and material resources, and fuller satisfaction of society's requirements.

An all-round improvement in workmanship is crucial to society's further socio-economic progress, to greater efficiency and, consequently, to any large-scale measures aimed to raise the people's living standards.

To raise the technical level and quality of workmanship and ensure that more goods are produced to meet or surpass the highest Soviet and world standards, and that obsolete products are modernised or taken off the production

lines much faster, the Tenth Five-Year Plan provides for more extensive use of quality certificates. In 1980, industry will be turning out 50 per cent more items of goods bearing the state Quality Mark than in 1975. In view of this, considerable importance attaches to improvements in standardisation and quality control. Standards are coming to mean a set of socially necessary demands on the quality of a product, and the task now is to ensure that standards work for the application of the latest scientific and technical achievements and for the manufacture of products with high technical characteristics. Moreover, standards should be introduced in close interconnection with each other. The idea is to raise the level of sectoral and intersectoral standardisation of machinery, instruments and equipment, to improve the quality grading of products, and raise the technical demands on products being awarded the Quality Mark.

4. Improving Economic Management

The dynamic development of the Soviet economy, the growing scale of production, the advancing scientific and technical revolution, and the country's ever broader participation in the international division of labour tend to give rise to the objective need to improve national economic management.

The task here is to ensure that the plan, the economic instruments and incentives, and the whole administrative system should work together ever more efficiently to accelerate scientific and technical progress, improve qual-

y, enhance efficiency, and attain the ultimate targets set for the economy.

The paramount need in this area is to improve planning, raise it to a higher level and harmonise it with the growing scale of the economy and the new social requirements.

Here are the tasks that are to be tackled in this area: drawing up plans to take fuller account of social requirements and the ways to satisfy these through the most efficient use of labour, material and financial resources; balancing out plans on the basis of improvements in the system of material, value, production-capacity and labour resources; improving the system of interconnected plans—long-term, five-year and annual; combining to a greater extent the sectoral and territorial principles of planning; making broader use of programme-and-target planning; elaborating comprehensive programmes for the more important scientific, technical, economic and social problems; improving the system of plan indicators; and increasing the role of user enterprises in the planning of production, with extensive use of orders and economic contracts. The planning bodies are to apply economico-mathematical methods and electronic computers on a wider scale, and the Automated Plan Computation System is to be further developed.

The improvement of the management system is intended to ensure proportional and balanced development, well-adjusted and efficient interaction among the various sectors of the economy, faster scientific and technical progress, and economical use of production resources.

To improve the organisational structure of economic management, steps are to be taken to concentrate, specialise, cooperate and combine production wherever this makes economic sense, to establish large production complexes in every sector of social production, reduce the number of tiers in administration, and do away with parallel decision-making.

In industry, the aim is to complete the establishment of associations in accordance with general management schemes, to continue working to concentrate and specialise production, improve the administrative structure, and reduce the number of tiers. It is planned to establish over 1,700 industrial production associations in the current five-year period. As new industrial production associations are set up, there is to be a further improvement in the structure and functions of the ministerial machinery and the intersectoral organs.

In construction, the target is to simplify the management system, reduce the number of tiers, set up large production associations on the main tier, and elaborate and introduce general management schemes for a switch to a two- and three-tier management system, amalgamation of building outfits on the lower tier, and greater specialisation of production.

In agriculture, there is to be a further effort to develop associations comprising several collective farms or state and collective farms, and also state-cooperative associations and agro-industrial complexes for the production, processing and marketing of farm produce.

Further steps are to be taken to improve management methods and economic incentives, and make more skilful use of economic-cal-

culus [1] methods, profits, prices and bonuses, that is, the system of indicators used to assess the performance of ministries, associations and enterprises, its quality and efficiency above all. These indicators should help to induce associations, enterprises and building outfits to draw up and fulfil tight plans, save resources, cut production costs, get down to the manufacture of new products as soon as possible, and ensure high quality.

Measures are to be taken to improve wholesale prices and rates, accelerate scientific and technical progress, improve quality, renew the product-mix and make rational use of material resources. Wholesale prices for new products are to be set with a view to reducing their level per unit of benefits accruing from the use of the products in the economy.

Individual working people and collectives are to be offered greater material and moral incentives to ensure the best possible fulfilment of the plan and higher quality.

Advanced forms of socialist emulation and ways of enhancing the people's labour and political initiative in communist construction are to gain wider currency, and social organisations are to play a more important role in the efficient development of production on the basis of the working people's broad involvement in the running of social production.

[1] Economic calculus—a method of planned economic management of socialist enterprises based on economic autonomy and commodity-money relations, implies balancing of costs and incomes, compensation for outlays out of current incomes, profitability, material incentives and responsibility of the enterprise and its personnel.

Computer Process Control systems (CPCs) for running technological processes are to be used on a wider scale, and an all-out effort is to be made to mechanise and automate administrative and managerial work and develop automated planning and control systems for every echelon of social production. Over the five years, 2,300 systems of this kind are to be introduced throughout the country, as compared with 600 in the ninth five-year period. The existing and projected CPCs and computing centres will provide the facilities for switching all the computation work to electronic computing.

The final goal here is to develop a State Computer System to collect and process information for accounting, planning and managing the economy (SCS). As an information and computing system, it should cover every managerial level and comprise sectoral, departmental and republican CPCs, and also the CPCs of territorial organisations, associations, enterprises, and research and design outfits.

Electronic computers are to ensure the most rational use of the country's resources, so that priority is to be given to the development of CPCs for industries with a high level of organisation, capital intensiveness and asset-to-product ratio. In the ninth five-year period, more than 80 per cent of the new computing capacities went into heavy industry and engineering, about 60 per cent of these being installed at research and design organisations. Many CPCs were also developed for construction, transport, agriculture and other sectors of the economy.

Efficient use of electronic computers in

planning and management largely depends on how full and exact are the data these have to process, especially the technically grounded norms of raw and other material inputs, the use of technological capacities, labour resources and so on. A further buildup of data arrays at the level of industrial production will make it possible to tackle a wider range of problems, especially in planning and optimisation on a sectoral and intersectoral managerial levels.

The installation of high-performance third generation computers and a ramified network of peripheral facilities will bring about certain changes in computing practices in the country. It will be possible to concentrate computing capacities at the computing centres of production associations, at large building and railway trusts, research institutes, design bureaus, and so on. These centres could then process data for a wide range of users in their own sector.

Wide use of third generation computers, minicomputers above all, is bound to bring about qualitative changes in the CPCs being developed across the country. It will enable the enterprises to operate integrated systems covering the whole complex of organisational, economic and technological problems.

The use of highly productive computers and the extension of the sphere of their use requires the elaboration of a large volume of general and applied mathematical backup. The development and elaboration of mathematical backup will make it possible more effectively to extend the sphere in which computers are used, to reduce inputs and the time it takes

to design CPCs and to improve their quality. The quality of newly designed CPCs and the efficiency with which computers are used depend on the training of specialists engaged in design and those who will act as operators in the new control conditions (executives at every level of administration and management, technologists and designers, economists, and so on). Accordingly, higher schools and public education as a whole have the task not only to increase a number of good specialists but also to improve training standards through the introduction of modern computing hardware and techniques in the practical training of students from the outset.

At the same time, efforts will be continued to improve the training and retraining of executives in accordance with the requirements of scientific and technical progress and the growing efficiency of production. The network of special institutions for raising qualification standards is to be enlarged.

5. Development of External Economic Ties

The development of external economic ties is the result of the rapid development of the socialist economy and the important changes taking place in the world with the success of the policy of peace and detente.

In the five-year period, the volume of foreign trade is to increase by 30-35 per cent, including trade with the socialist countries, by 41 per cent, and with the industrialised

capitalist countries, by more than 31 per cent. Foreign trade has become an important sector of the USSR's economy. In technico-economic and quality standards, Soviet engineering products—ranging over a wide spectrum—are up to the requirements of the modern market and are in ever greater demand. Heavy industry products, including engineering products, now account for nearly 85 per cent of Soviet exports. Let us bear in mind that external economic ties effectively help to fulfil political and economic tasks.

The ever fuller use of the advantages of the international division of labour is to become an important condition for ensuring a high rate of economic growth and greater efficiency of economic activity in the USSR.

Developed on this basis, external economic ties are to promote the growth of the country's productive forces and its national income, accelerate scientific and technical progress, raise the people's well-being, help to fulfil the programme of socialist economic integration and to expand mutually advantageous relations with the developing and industrialised capitalist countries.

In the five-year period, primary attention is to be given to the development and strengthening of economic ties with the socialist countries.

The Soviet Union's economic cooperation with the socialist countries is to be strengthened on the basis of mutual advantage and socialist internationalism. Improvement and deepening of the international socialist division of labour and specialisation and cooperation of production through the fuller and efficient use of resources and production facilities available to the CMEA countries should help to increase the returns from their mutually advantageous economic, scientific and technical cooperation.

Fulfilment of the measures envisaged in the Comprehensive Programme of socialist economic integration and the Agreed Plan of Multilateral Integrated Activities of the CMEA Countries for 1976-1980 is to be of great importance in the utmost extension and deepening of their economic, scientific and technical cooperation. The work done under the Comprehensive Programme has already had the effect of considerably expanding the countries' economic cooperation and making the economies of the countries more mutually complementary—to the visible advantage of each of them.

In the tenth five-year period, the CMEA countries are to continue their joint efforts in the comprehensive fulfilment of the tasks in extending the extraction and production of the key raw and other materials, fuels, engineering products, consumer goods, and the development of transport on the basis of jointly formulated long-term goal-oriented programmes.

There are essentially new features to the coordination of the national economic plans. To begin with, it is tied in directly with the Comprehensive Programme of socialist economic integration, the measures being taken are organically linked with the national plans for 1976-1980, and major problems such as those of raw materials and energy are being tackled comprehensively on a multilateral or bilateral basis.

In accordance with the agreements they have concluded, the CMEA countries are to take part in building a number of enterprises and installations in the Soviet Union, including the Kiyembayevo asbestos mining and concentration combine; the Ust-Ilim cellulose plant; the Dnieper, Mikhailovsky, Stoilensky and Gubkin mining and concentration ferrous metal combines; the Nikopol and Yermak ferroalloys plants; a plant for the production of nutrient yeast; a 750 kv electric transmission line between Vinnitsa in the USSR and Albertirsa in Hungary; the Polotsk-Biržai-Mazheykyay and Unega-Polotsk oil pipelines; development of the oil extracting industry; working of the Orenburg gas condensate deposits, and construction of the main gas pipeline from Orenburg to the USSR's Western border.

This form of cooperation is to help speed up the development of the country's natural resources and to turn out the most important products to meet the requirements both of the USSR and of the other CMEA countries.

Under the agreements on joint building of projects in the USSR, the latter is to supply the other CMEA countries with oil, gas, pellets, asbestos, cellulose and other goods.

The Soviet Union is to help the other socialist countries to build industrial and other installations on their territory to accelerate the development of their economy. This applies above all to ferrous and nonferrous metallurgy, the power industry, oil refining and petrochemistry, the structural materials industry, construction, the light industry and geology.

The USSR and the other CMEA countries are to develop intra- and intersectoral specialisation and cooperation in production, science and technology.

In its scientific and technical cooperation with the other CMEA countries, the Soviet Union is to take part in working on major comprehensive scientific and technical problems specified in the CMEA countries' draft Agreed Plan of Multilateral Integrated Activities for the current five-year period.

Trade with the socialist countries is to grow at a faster pace, and they will account for nearly two-thirds of the USSR's foreign trade. The export of machinery and equipment is to grow at a fast rate. Deliveries of Soviet trucks are to go up by 60 per cent, tractors by 50 per cent, mining equipment by nearly 100 per cent, and freight cars by almost 100 per cent, while the deliveries of many types of power equipment are also to increase.

At the same time, the Soviet Union is to increase its export of oil, oil products and ferrous metals, and considerably to increase its supply of electric power and gas to the CMEA countries. The exports of phosphate fertilisers and synthetic rubber are to go up, while the traditional exports of workable timber, sawn timber and cotton are to be maintained.

From the CMEA countries the Soviet Union is to import sizable quantities of machinery and equipment, chemical products and consumer goods.

As international tensions continue to relax, the Soviet Union is further to develop its trade and mutually advantageous economic, scientific and technical cooperation with the industrialised capitalist countries on a long-term basis and in the light of the principles of

peaceful coexistence with states belonging to different social systems.

Provision is being made for the necessary measures to realise the decisions of the Final Act of the Conference on Security and Co-operation in Europe, which are aimed to extend and deepen international cooperation in the sphere of the economy, science and technology, environmental protection and other spheres.

In addition to the traditional forms of trade, product-payback agreements have become a new form of external economic ties, under which new enterprises owned by the Soviet state are built up in cooperation with foreign companies, which make available credits, equipment and licences to be paid for with deliveries of some of the products turned out at these and other enterprises.

For the time being such agreements have been mainly confined to the raw material and intermediate products sectors, but they are soon expected to be extended to manufacturing as well.

In the tenth five-year period, the USSR is further to extend and strengthen its economic, scientific and technical ties with the developing countries, giving them technical assistance in different sectors of the economy, above all in building up and developing their national industry by fulfilling design and research projects, delivering complete equipment, helping them to assemble equipment and start facilities, sharing advanced production experience, carrying out geological prospecting and irrigation works, setting up agricultural enterprises, building transport facilities and installations in public health, public education, and culture, and training national personnel.

The sectoral structure and concrete projects in the Soviet Union's economic and technical assistance to the developing countries and the volume of credits being made available for these purposes are determined in accordance with intergovernmental agreements which take account of the parties' requirements and potentialities in the light of their economic development plans.

To help the developing countries pay for the costs of economic and technical assistance, a number of agreements have been concluded to build up various industries and lines of production in these countries whose products are to be delivered to the Soviet Union. These include agreements with Afghanistan, Iran, Algeria and India on the development of production and delivery to the USSR of natural gas, ores, and nonferrous metals concentrates, brandy alcohol, wines, rolled ferrous and nonferrous stock, cables and certain other types of engineering products. The developing countries are also to deliver some of their new industrial products alongside their traditional raw material and food commodities.

As in the preceding five-year period, agricultural raw materials and foodstuffs will continue to be the main import items. Some countries which have raised their industrial production to a high level are to increase their export of industrial raw materials and some finished and semifinished products of the heavy and light industries. Some of these deliveries to the USSR are to be in repayment of their credits from the Soviet Union.

In the tenth five-year period, the main items of Soviet exports to the developing countries will continue to be machinery and equipment for power engineering, transport, various lines of industrial production and agriculture, with machinery and equipment making up more than one-half of the total volume. The USSR is also to increase its deliveries of raw materials and manufactured goods to these countries.

CHAPTER THREE

THE SOCIAL PROGRAMME FOR THE FIVE-YEAR PERIOD

The social programme for the tenth five-year period was formulated by the 25th Congress of the CPSU with an eye to the fact that the fulfilment of nine five-year plans had brought about vast qualitative and quantitative changes in the people's living standards and way of life. As socialism developed, strengthened and advanced, it has increasingly revealed its advantages in tackling an ever broader range of social problems. The interconnection between economic development and the growth of the people's well-being in the full-scale socialist society has been especially pronounced. Thus, from 1965 to 1975, the people's cash incomes nearly doubled, while the retail prices of goods and services have been generally stable. The high living standards attained by the start of the tenth five-year period made it possible to devote more attention to the qualitative aspect of the people's life and to do more to meet their spiritual requirements. Accordingly, the decisions of the 25th Congress of the CPSU envisage a further extension of the range of the

tasks being simultaneously tackled to promote the people's well-being. The social programme for the tenth five-year period covers virtually every aspect of human activity, including a further boosting of the Soviet people's well-being, improvement of working and everyday conditions, increasing consumption of various goods and improvement of the structure of consumption, improvement of housing facilities, development of public utilities, communications and public transport, considerable progress in public health, public education and culture, of rest and recreation facilities, and so on. Attainment of these objectives will help more fully to meet the people's material and spiritual requirements and steadily to raise their living standards. More attention than ever before is to be given to the ingredients which characterise the qualitative aspect of the socialist way of life.

Special importance attaches to the tasks and factors serving to promote the individual's all-round development. Greater demands are to be made on the qualitative aspect of life, above all, the sphere of labour, which is the basis of the working people's vital activity, the conditions in which this activity is carried on, the nature, content and degree of intellectual effort required, the attractiveness and satisfaction to be derived from the results of one's work and the opportunities for developing and realising the individual's creative capacities. Furthermore, the qualitative aspect of the socialist way of life poses important problems connected with the use of nonworking hours and especially of leisure time, which implies the creation of conditions helping to reduce to

a minimum the time spent in travelling to and from work, the purchase of foodstuffs and the use of everyday services, the performance of household chores, on the one hand, and broad opportunities for varied cultural pursuits, for the all-round development of the personality, the raising of the individual's cultural and technical standards and broad involvement in social affairs, on the other.

A most important component of the qualitative aspect of the socialist way of life consists of the conditions in which man's health is maintained, his lifespan extended, and his creative activity prolonged. In this connection, ever greater importance attaches to the protection and improvement of the environment, which implies a steady implementation of diverse measures and requires growing outlays from the budget.

1. Growth of People's Incomes and Their Sources

In the USSR, the people's incomes are made up of payments for their work in the social sector, payments and benefits from social consumption funds, and incomes (which are insignificant) from the personal subsidiary farms run on house-and-garden plots by collective farmers and industrial and office workers resident in rural areas.

The system of distribution of the socialist product is an active element of social reproduction and exercises an influence on socialist society's social, economic, scientific and technical development. The distribution of the

values produced by society, on the one hand, serves to secure the highest purpose of socialist production, which is the steady growth of the people's living standards, and on the other, helps to exert an active influence on the development of the productive forces, enhancement of the efficiency of production, which is, for its part, the material foundation for raising the people's well-being.

In the USSR, the payment-for-work fund is used to satisfy the basic requirements of the members of society employed in social production and those of the members of their families, while simultaneously providing the necessary stimulation for the development of production. In the tenth five-year period, a period of high efficiency and quality, the distribution of incomes in accordance with the quantity and quality of the work done is to be further emphasised. This is the most effective way of distributing incomes among the population and helping organically to harmonise the interests of every individual and production collective with the interests of society as a whole. It helps to create genuine concern among the members of society for the results of their labour efforts, inducing them to raise their skill standards and make fuller and more rational use of their working time, so helping to develop the country's productive forces and turn out more goods and services.

Distribution according to work also helps successfully to tackle other socio-economic tasks. The policy in the remuneration of labour, differentiated by category of workers, natural and climatic conditions, working conditions and the nature of operations, and the

economic importance of the given sector, enables society to modify the wage-remuneration structure, actively to influence the development of the people's requirements, and the distribution of manpower resources by the various regions, sectors, and lines of production, and to induce the working people steadily to raise their skill and workmanship standards. Accordingly, and in the light of the envisaged growth of the national income and the consumption funds in the current five-year period, average incomes of industrial and office workers are to be increased by 16-18 per cent. This means that by 1980 they are to go up to at least 170 rubles a month, as compared with the 145.8 rubles in 1975, apart from the payments and benefits coming from the social consumption funds. Collective farmers' incomes from work on the collective farms are to go up by 24-27 per cent.

The intention is to continue the effort consistently to overcome the socio-economic, cultural and everyday distinctions between town and country, above all, by raising labour productivity in agriculture, increasing the growth of the assets, energy and power available per farmer, and also by some redistribution of the national income in order to boost agricultural production and improve the incentives for work in agriculture. In this way, the current incomes of industrial and office workers, on the one hand, and of collective farmers, on the other, are to be evened out as productivity levels and working conditions on the collective and state farms are brought closer together.

In the current five-year period, remuneration for work done is to be the chief source of the

people's income with special emphasis on increasing the minimum wage rates in the first place. This is to be done in two ways. First, by gradually eliminating low-skill and unskilled labour through mechanisation and the training of workers in new trades, a lengthy process calling for investments, faster scientific and technical progress and development of engineering. Accordingly, as wages grow to the extent of rising labour productivity and skill levels, various measures are to be taken to increase minimum wage rates and basic salaries among the middle-bracket categories and to ensure a more correct balance in the remuneration levels between the various regions of the country and in the course of the working day.

Thus, in the current five-year period the introduction of a minimum wage rate of 70 rubles a month is to be completed, with a simultaneous increase in the wage rates and basic salaries of middle-bracket categories. The decisions of the 25th Congress of the CPSU also provide for the start of a new stage in increasing minimum wages, wage rates and basic salaries for industrial and office workers.

In the USSR, wage rates and basic salaries are differentiated in accordance with the complexity of the work done, the working conditions throughout the day, the climate, the arduousness and hazards of the work, and in some areas also in accordance with the length of service at the given enterprise or in the given locality. In order further to enhance the role of wages in the distribution of workers and specialists across the country's territory. long service increments are to be offered for industrial and office workers in various regions of the Far East. The introduction of wage increments for industrial and office workers in the Urals and some parts of Kazakhstan is to be continued, and a number of other measures is to be carried out. In some industries additional payment for night work is to be increased.

Let us note that with retail prices for goods and services remaining stable and tax rates unchanged, the above-mentioned increases in cash wages mean a corresponding growth of their real content.

Under socialism, distribution according to the quantity and quality of work is supplemented with distribution through social consumption funds, which help to meet social requirements like health protection, education and fostering of the rising generation, training of personnel and maintenance of members of society who are unable to work.

The social consumption funds largely consist of a sum of individual cash payments which are not directly linked to a person's labour effort in social production at the given time (pensions, aids, grants, and so on). These payments are in effect remuneration for past labour (pensions, aids) or advance payments for future work for the benefit of society (grants). The size of pensions depends on the quantity and quality of a person's past work, and is fixed with an eye to his wages and service record. Student grants depend on academic progress, future occupation and year of instruction. Social consumption funds are also used to maintain institutions providing

socio-cultural services for the population free of charge or at cut prices.

Every person receives his share of the social consumption funds not as a worker but as a member of society. Whereas distribution according to work applies to those working in the social sector, social consumption funds provide cash payments above all in the form of pensions, aids to large families, and student grants mainly for the purpose of maintaining the living standards of citizens who do not work, so helping to even out income levels among sections of the population differentiated by size of family, among other things. Payments from social consumption funds come to an average of roughly 30 per cent of wages, and the percentage is much higher for the lower-paid categories.

In the current five-year period, payments and benefits from the social consumption funds are to go up by 28-30 per cent, to at

Table 5

	1960	1965	1970	1975
Total, bln rubles	27.3	41.9	63.9	90.1
Per head of population, rubles	127	182	263	354

least 117 billion rubles in 1980. The growth of these payments and benefits over the past few years will be seen from Table 5.

In the current five-year period, the envisaged growth of the social consumption funds

will help to carry out a number of new measures in social security, public education, public health, rest and recreation for the working people and provide larger benefits for women.

Provision has been made for another increase in minimum old-age pensions to industrial and office workers and collective farmers, and for an extension of the contingent of persons entitled to state pensions and aids, and increase of material assistance to families in bringing up their children.

Pensions for persons permanently disabled since childhood are being increased. The social security available to collective farmers and industrial and office workers is to be further approximated. Benefits in the provision of pensions for mothers with many children are to be extended. Women who work are to have a partially paid leave to care for a child until the age of one year.

Large measures are being planned to improve the conditions in which children are fostered and maintained by extending the network of child welfare institutions and all-day schools and groups. The number of children at year-round preschool institutions is to increase by 24 per cent, including those in the rural localities by over 40 per cent. More than 30 per cent of the 1-8-year pupils in general-education schools will be able to attend all-day schools and groups.

A system of measures is also to be put through to create more favourable conditions for raising the people's educational, cultural and technical levels. Together with universal secondary education, young people are to be offered training at vocational schools, which

are to graduate roughly 11 million skilled workers and about 10 million specialists with a higher and specialised secondary education. All of this will give young people broader opportunities for choosing congenial jobs and occupations.

Every sector of the socio-cultural sphere is to be comprehensively developed, with special emphasis on the rest, recreation and tourist-travel industry. The number of places at massive health improvement institutions are to be substantially increased: 10 per cent at sanatoria, 55 per cent at holiday hotels, and 27 per cent at tourist lodges and alpine camps. Much more money than in the previous five-year period is to go into environmental protection.

Social consumption funds outlays on food and medicines, appliances and equipment at medical institutions and civic and cultural centres are to increase. The wages fund available to workers in public education, public health and other services is to increase. The state is to make available larger subsidies for the maintenance of its housing stock and also larger grants for students at institutions of higher learning and specialised secondary schools.

In the past 15 years, the role of incomes from the social sectors of the economy has markedly increased, together with a decline in the importance of personal subsidiary farms as a source of income. This tendency is to be maintained in the current five-year period.

The social programme for the tenth five-year period in effect covers every aspect of the people's life and activity, and is aimed to

enhance the well-being of the whole population. The people's real incomes are a synthetic indicator of their living standards. In this five-year period, real incomes per head are to go up by 20-22 per cent.

2. Material Basis for Realising the Social Programme

The material basis for realising the social programme for the tenth five-year period is provided by the rapid growth of production and improvement of the structure of consumer goods consumption. In this period, the consumption fund is to grow faster than the accumulation fund within the national income. While the national income is to go up by 24-28 per cent, the consumption fund, a key indicator of the final results of social production, its growing efficiency and of the people's well-being, is to increase by 27-29 per cent, or 71-78 billion rubles. As a result, the share of the consumption fund in the national income will grow.

Three-quarters of the national income is to go into consumption, and one-quarter, into accumulation. Since more than 20 per cent of the accumulation fund is to be channelled into social and civic construction, including housing construction, the material values earmarked for the direct satisfaction of the people's personal requirements in the tenth five-year period are to total over 80 per cent of the national income.

Special attention is to be given to fuller satisfaction of the growing consumer demand by

increasing the production of consumer goods, improving their quality and range, and developing the services. The plan provides for priority growth of trade and other-than-free services, as compared with the growth of the people's cash incomes. State and cooperative retail trade is to go up by 27-29 per cent, to 269 billion rubles (in comparable prices), and the volume of everyday services by 50 per cent.

The production of foodstuffs, nonedible goods and everyday and household items is to be considerably expanded. Consumer goods output is to go up by 30-32 per cent, with larger imports of consumer goods as the country expands its exports mainly of heavy industry products.

Important structural changes reflecting the people's growing cash incomes are also to be effected in the consumer goods output and trade. Nonedible goods, especially everyday and household items, are to be produced at a faster rate. Food output is to go up by 23-25 per cent, while light industry output is to increase by 26-28 per cent and that of everyday and household items by 60 per cent.

The manufacture of consumer goods will entail not only larger quantities but also higher quality, and an extension of the product-mix to meet the people's growing demand.

In the food industry, the production of various high-quality children's and dietary foods, food concentrates, ready-to-cook foods and delicatessen, fresh frozen vegetables and fruits, ready-to-serve canned foods, and fruit and vegetable juices is to be developed at a faster pace. Packaging and design of products are to be improved. The making of high-quality

products from ocean fish and other sea foods is to be increased. The output of marketable fish products (including tinned food) is to go up by 30-32 per cent. At the start of the tenth five-year period, the standard of production techniques and the use of continuous processes in the sugar, bread-baking, butter-and-fat and wine-making industries was not only up to the level existing in similar industries in the developed countries, but was also ahead of them in some ways. In this five-year period, economic indicators are to be further improved through the technical re-equipment of enterprises.

In order to increase production and improve the quality of foodstuffs tens of thousands of new highly productive, comprehensively mechanised and automated lines, sectors and units are to be installed in various sectors of the food industry.

Together with imports, this will help markedly to raise the per-head rates of foods consumption (Table 6).

Table 6

CONSUMPTION OF STAPLE FOODS PER HEAD
(kg a year)

	1970	1975	1980
Meat and meat products	48	57	63
Fish and fish products	15.4	16.8	20.9
Milk and milk products	307	315	335
Eggs (pieces)	159	215	225
Vegetable oil	6.8	7.9	9.0
Vegetables and melons	82	87	113
Fruits	35	37	50
Sugar	38	40.8	44

Total output of fabrics in the textile industry is to increase by 12.5-13.1 billion sq m, or 13.5 per cent, with a larger output of high-quality fabrics, like cotton and synthetic-fibre garment fabrics, 450 per cent; cotton and lavsan fabrics, 370 per cent; texturised lavsan silk fabrics, 200 per cent; and topcoat yarn, 600 per cent. In addition, the share of fabrics with better finishing is to be increased. The fabrics in greater demand among the population, like cotton prints, satins, and linen fabrics, are also to be produced in larger quantities. The manufacture of carpet and similar products is to go up by 110 per cent, fabric-type non-woven materials by 240-250 per cent, non-woven padding materials for the garment industry by 220 per cent, and woven-base artificial furs, by 30 per cent.

Special attention is to be given to improving the quality of leather footwear: total output is to go up by 16 per cent, and the output of high-quality footwear, by 30 per cent.

Garment production is to increase by 30 per cent, with the quality being improved through better design and cutting. The technology of mass production of high-quality garments from artificial leather, suede, artificial furs and other new materials is to be introduced. Thus, the manufacture of overcoats and raincoats from high-quality fabrics is to go up 11.5-fold.

All these and other tasks in increasing the quantity and improving the quality of products turned out by the light industry are to be fulfilled through the enlargement of production facilities on a new technical basis and retooling of the existing enterprises. At the new and remodelled enterprises, 3.8 billion spindles, 45,000 looms and facilities for the manufacture of 205 million pieces of knitted and other types of wear are to be installed. Many other measures are envisaged for all the subsectors of the light industry.

The boosting of production will substantially increase the consumption of light-industry products per head (Table 7).

Table 7

Item	Unit	1970	1975	1980
Cotton fabrics	sq m	21.2	22.0	25.5
Woolen fabrics	,,	2.7	2.8	3.4
Silk fabrics	,,	4.7	5.9	7.5
Linen fabrics	,,	1.8	1.8	2.3
Knitted garments	pieces	1.8	2.0	2.8
Knitted linen	,,	3.5	3.9	4.7
Socks and stockings	pairs	6.0	6.1	6.7
Leather footwear	,,	3.0	3.2	3.4

Table 8

	Pieces per 100 families		
	1970	1975	1980
Radio sets and record players	72	79	83
TV sets	51	74	84
Vacuum cleaners	12	20	28
Refrigerators	32	61	85
Washing machines	52	65	68
Clocks and watches	411	455	544

The creation of the necessary premises for boosting consumer goods output and the services will help to increase their consumption by the end of the five-year period (Table 8).

3. Raw Material Base for Consumer Goods Production

To make sure that the output of consumer goods envisaged by the Tenth Five-Year Plan is met, much attention is being given to the development of their raw material supplies, with agriculture well to the fore, considering that directly or indirectly, that is, through the light and food industries, its products account for about 70 per cent of the total volume of the turnover.

The main line of agricultural development in this period is consistent intensification through the provision of larger technical facilities, land improvement and chemicalisation, use of scientific achievements and advanced experience, selection, and deeper specialisation and concentration of production. While the total farmland area is to remain unchanged, the average annual output of cereals is to go up by 18-21 per cent, sunflower by 27 per cent, sugar beet by 25-29 per cent, while the output of vegetables, fruits and animal products is also to be considerably increased.

From 1976 to 1980, the average annual output of agricultural produce is to go up by 14-17 per cent over the preceding five-year period, all of this being achieved through efforts in the social sector. The average annual output of agricultural produce in the current five-year period is to go up as follows (Table 9):

Table 9

	Average annual, mln tons	
	1971-1975	1976-1980
Cereals	181.6	215-220
Raw cotton	7.67	8.5
Sugar beet	76.0	95-98
Sunflower	5.97	7.6

Agro-industrial cooperation and combination of production, and the processing of farm produce at agro-industrial enterprises and associations are to be further developed.

The main line in the development of livestock raising is to be deeper specialisation and concentration of production and enhancement of its efficiency through the introduction of progressive technology and industrial production techniques, extensive development of interfarm cooperation and faster growth of feed production.

The average annual output of animal feed products is to go up (Table 10).

Beef-cattle husbandry is to develop at a faster pace, with specialised farms being set up for the purpose. There is also to be an increase in the weight of dairy cattle. The growing pace in the development of beef-cattle husbandry corresponds to the specific features of the feed stock available in most parts of the country, where there are large areas of natural meadows and pastures.

Table 10

	1966-1970	1971-1975	1976-1980
Meat (slaughter weight, mln tons)	11.6	14.0	15.0-15.6
Milk, total, mln tons	80.6	87.4	94-96
Eggs, total, bln pieces	35.8	51.4	58-61

The yields of the staple feedcrops and haylands are to be considerably boosted (Table 11).

Table 11

	Average annual, centner per hectare	
	1971-1975	1976-1980
Silo crops	120	176
Feed roots, sugar beet and melons	204	264
Perennial hay grasses	18.2	23.4
Annual hay grasses	14.3	19.4

The share of perennial grasses in the overall volume of fodder grasses is to go up to 45 per cent, as compared with the 36 per cent on average for the 1971-1975 period.

The output of mixed feed in 1980 is to be roughly 80 million tons, as compared with the 45 million in 1975. The production of protein and vitamin additives is to increase by 170 per cent.

Land improvement offers great potentialities for boosting and intensifying agricultural production. Large-scale land improvement operations are to be carried out in the Non-Chernozem Zone of the RSFSR, the Volga area, Central Asia and other parts of the country. State investments will help to irrigate 4 million hectares of land, drain 4.7 million hectares, and water 37.6 million hectares of pasturelands in desert, semidesert and mountain areas. Lands in the arid parts of the Volga area, the North Caucasus, the Ukrainian steppe, Kazakhstan and the other parts of the country are to be irrigated in order to speed the buildup of large zones of guaranteed cereal production.

The irrigation of lands on specialised farms and in the area of large cities and industrial centres to provide vegetables for the population is also to be continued.

The land improvement systems are to have a high level of efficiency, with automated and long-distance control facilities, and horizontal and vertical drainage to regulate subsoil waters and prevent resalinisation. Mechanised and automated watering with the use of highly productive sprinklers is to be extensively used. Efforts are to be continued to switch agriculture to industrial production techniques, primarily in the labour-intensive sectors like cattle raising. The investments going into the construction of livestock-raising farms are to be more than double those in the ninth five-year period.

Meat-poultry farms are to be built at a faster rate.

The share of produce turned out on an industrial basis is to increase, involving the use of new production facilities at state, collective-

farm and interfarm livestock-raising complexes and greater efforts to remodel and technically re-equip the existing livestock-raising farms.

Much attention is being given to the use of chemicals in agricultural production: in 1980 agriculture is to be supplied with 115 million tons of mineral fertilisers, as compared with the 73.5 million in 1975, and with up to 5 million tons of chemical feed additives, as compared with the 2 million tons, all of which will enhance the efficiency of staple feeds.

In 1980, agriculture is to receive 628,000 tons (in conventional units) of chemical plant protectors, including 245,000 tons of herbicides.

Deliveries of the chief types of hardware to agriculture in the current period are as follows (Table 12):

Table 12

	(1,000)	
	1971-1975	1976-1980
Grain harvesters	449	538
Tractors	1,700	1,900
Trucks and specialised vehicles	1,102	1,350
Tractor trailers	1,520	1,580
Excavators	86.6	100
Bulldozers	82.7	106.5
Scrapers	42.5	47.75

Soviet industry is to turn out more tractors with higher working speeds and power, equipped with complete sets of farm implements, wide-row harvesters, new multiple-row cultivators for maize, sugar beet and cotton, 4-6-row self-propelled beet and maize harvesters and potato pickers.

The comprehensive mechanisation of cereal, sugar beet and other crop production is to be in the main completed.

The new livestock-raising complexes, and dairy and poultry farms now going up are to be fully equipped with complete sets of machinery and other hardware. The manufacture of complete equipment for industrial farm production is to be considerably increased.

Power facilities in agriculture are to increase by almost 50 per cent.

The larger number of machines, and their better use, will help to raise the level of mechanisation and, most importantly, to shorten the basic agricultural operations.

Agricultural production is to be further electrified, with the result that electric power per farmer is to be nearly doubled.

It is envisaged that there is to be ever more efficient use of land, manpower and material resources, with gross farm output on the collective and state farms going up by 37 per cent per 100 hectares of farmland in 1980, as compared with 1975.

The increase in output is to come entirely from higher labour productivity, which is to go up in the social sector by an average of 27-30 per cent over the five years.

The establishment of interfarm and state-collective farm enterprises and associations through greater concentration and specialisation of production is one of the main lines in agricultural development.

4. Housing and Public Utilities

Here, the system of measures under the social programme for the tenth five-year period boils down to creating the most favourable conditions for the people's work and recreation, to help them raise their educational and technical levels, to ensure health protection, and the fostering of children, and bring about a steady approximation of the well-being and cultural standards among various social groups and between town and country.

Special attention is still to be given to housing construction: from 1976 to 1980, 545-550 million sq m of total dwelling space is to be built, or more than double the housing stock available in the towns of prerevolutionary Russia. In 1913, it came to only 180 million sq m, of which 80 per cent were wooden structures.

In 1975, the USSR's housing stock totalled 2.98 billion sq m, of which 1.63 billion were built from 1966 to 1975. In the past few years, there has been a switch virtually all over the country to the provision of one flat per family. The volume of housing construction planned for this period will help to improve housing conditions for more than 50 million men and women, and this will increase the average housing space per head by roughly 20 per cent.

The quality of housing construction is to be substantially improved under a programme of new standard-type housing designs for the next stage of massive housing construction. It provides for a further increase in the average per-head area of available housing space, larger rooms, kitchens and service areas, and a gradual substitution of one set of standard designs for another, so as to increase the housing stock through the construction of bigger-area flats of the required types.

Let us note that in this period state housing construction is to continue to play its crucial role, accounting for two-thirds of all the new dwelling houses that are to be commissioned. At the same time, there is to be more extensive cooperative-house construction under 10-15-year government credits by specialised state building organisations.

Alongside the vast outlays by the state on housing construction (more than 100 billion rubles from 1976 to 1980), the five-year plan provides for state subsidies for the upkeep of the housing stock. In the USSR, rents have remained unchanged since 1928, despite the fact that the cost of maintenance of the housing stock has gone up considerably, above all because of the higher wages paid to those who run and repair the housing facilities, and also because of the higher level of technical equipment in the dwelling houses, which increases the cost of a square metre of new housing space and requires more highly skilled, which means more highly paid personnel in the house-management offices operating under the local organs of the state power. For that reason, what Soviet citizens pay the state in the form of rent and public-utility charges falls short of covering even one-third of the state outlays for these purposes.

In the past few years, the state has been appropriating almost 5 billion rubles a year for these purposes, and as the state housing stock grows, these outlays have to be increased.

Together with the extension of the scale of

housing construction, there is to be further development of the public utilities in the whole country. In this period, almost 100,000 kilometres of water, sewage, central-heating and gas pipelines are to be laid (16 per cent more than in the previous period). There is to be a renewal of the existing housing facilities. Thus, 11 million flats are to be newly built, while roughly 22 million flats will be equipped with gas ranges and electric cookers.

Particular attention is to be given to housing construction and provision of amenities for the populated localities in the rural areas, where the rate of housing construction will be much higher than the average for the whole country. In addition, master settlement schemes for the development of well-located populated localities in the rural areas are to be elaborated. There, housing construction at the expense of the state and collective farms is to be increased, with a high rate of installation of gas facilities.

In accordance with the tasks of steadily raising the Soviet people's cultural, technical and educational levels and improving the training of skilled workers and specialists the whole system of public education—general-education secondary, vocational, and specialised secondary schools, and higher education—is to be comprehensively developed.

Among the most important tasks in general education is the complete introduction everywhere of universal secondary education, further improvement of the methods used in teaching and upbringing young people, the raising of standards in general-education, labour and polytechnical training, and of the effectiveness

and quality of instruction and upbringing in the general-education schools. For these purposes the network of interschool education and training and job orientation centres is to be enlarged, and classes in driving and car repair, farming techniques, and the fundamentals of agronomy and livestock growing are to be introduced in the general-education schools in the countryside.

A wider range of social-education forms is to be used, including the further extension of the all-day schools and groups, which by 1980 will be attended by nearly 40 per cent more boys and girls.

In order to prepare children for school, up to 85 per cent of six-year olds are to attend nursery schools and kindergarten classes in 1980 (in the USSR, children first go to school at the age of seven).

The network of Young Pioneer clubs, young technicians and naturalists centres, sports and music schools, and other extracurricular institutions helping to foster the rising generation is to be enlarged.

The facilities available to educational institutions are to be further increased. In the five years, new general-education schools are to be built for more than 7 million places, including roughly 4.5 million in the rural localities. New preschool child welfare institutions are to provide nearly 3 million more places.

A system of measures is being put through to improve the conditions for the upbringing of children in boarding schools and children's homes, with higher per-head outlays on food and other purposes to be provided in a number of social and cultural establishments.

The basic task before the higher and specialised secondary schools in this period continues to be enhancement of the effectiveness of education and further considerable improvement in the quality of training and education of future specialists in accordance with the growing demands of science, technology and production and the ever faster economic and cultural development in the country. There is to be a further effort in improving the structure of higher and specialised secondary education, and in organising instruction for and increasing the number of specialists trained in new fields of science and technology. The territorial location of their training in accordance with the economic regions with an eye to the development of the country's productive forces is to be improved.

Culture and art are to be further developed, with the provision of more facilities, especially in the rural areas and in the areas of new industrial construction. Cultural and educational establishments have the task of improving and developing the forms and methods of work and providing more civic services for the population as its spiritual requirements continue to grow.

Cultural establishments are to be more evenly located in the Union Republics, territories and regions, and the level of services provided by establishments in urban and rural areas are to be brought closer together.

The network of cultural establishments in the Non-Chernozem Zone of the RSFSR, where an extensive programme of economic and cultural development is being carried out, is to be enlarged at a faster pace.

The establishment of district cultural centres in all the chief district towns is to be completed in the main in the course of this period, while cultural institutions are to be set up in all the major populated localities.

Steps are to be taken further to develop the film industry and to provide better services for the population. Television and radio broadcasting are to be further developed.

The manufacture of colour TV sets is to be considerably increased, with the figure going up by 1980 to roughly 2.6 million, or an increase of nearly 4.5-fold, as compared with 1975. This will make up about one-third of total output. The production of portable colour TV sets and of flat TV sets is to be started.

The public health service is to be further developed. The USSR now has more doctors than any other country in the world: in 1975 it had 835,000. They work within the framework of the production health service set up in the USSR, which consists of a large number of hospitals, polyclinics and sanatoria that are equipped with modern facilities. There are also medical units at the enterprises, and infirmaries in the shops and offices, which have been doing much in the way of disease prevention.

Increase in the number of doctors and beds at hospitals, sanatoria and health resort establishments, extension of the network of polyclinics, and provision of modern medical facilities and effective medicines through the utmost development of the medical industry and extensive cooperation with other CMEA countries are to be the main line in further developing public health. The USSR has 32.7 doctors per 10,000 population, as compared with

21 in the United States, 17.5 in France, 18.4 in Italy, 15.1 in Japan and 15.7 in Britain.

In the current five-year period, the number of doctors will go up by another 120,000, so that by 1980 the figure per 10,000 of the population will have risen to about 36.

The number of hospital beds is to be increased to about 3.3 million, with the construction of new medical institutions and re-equipment of the existing ones to be carried out in the light of the latest advances in this field.

Together with the increase in the technical facilities available to the public health institutions, there is to be an emphasis on raising the quality of medical services, improvement of labour organisation and broad application of the latest advances in medicine. More and more effort is to go into early identification of disease and its prevention.

In order to help the people improve their health and make better use of their leisure time, the five-year plan provides for an enlargement of the network of sanatoria and health resorts, rest homes, holiday hotels at resort centres, and extension of rest areas in the green belts round large cities and industrial regions.

In the recent period the medical industry has developed into a major producer of medicines and medical appliances and other hardware. In the current period it is to increase its output by 44-46 per cent.

The state's concern for the protection and improvement of the human environment—air and water, flora and fauna—is a major and growing indicator of living standards. Here a system of measures to protect and improve the

human habitat is planned. Experience shows that the planned economy can be developed without damaging the natural environment. Back in the 1930s, the USSR established the world's most stringent limits for the concentration of noxious substances in air and water. In 1973, the USSR Supreme Soviet passed a special nature protection law. In pursuance of it, the USSR Council of Ministers framed and approved a broad range of measures aimed to protect the environment. In accordance with these acts, the Tenth Five-Year Plan contains a special section setting forth targets and measures to prevent the development of industry and other sectors of the economy from having a negative impact on the state of the air and water around us. Investments going into environmental protection are to total 11 billion rubles, to cover the cost of, among other things, a broad range of R & D projects for the fullest extraction of useful components from raw materials and reduction of losses in their extraction, and wider use of technological processes for the recycling of waste.

A broad range of measures to protect air, water, soil and forests has been mapped out.

The main line of effort here in social terms will be a drive against the noxious effects of production facing man in industry and in everyday life. For this purpose, improved dust and gas purification equipment is to be made and installed, and the number of workplaces in high-hazard areas is to be reduced.

In areas of new construction, special attention is to be given to the rational location of residential and production zones, with a sustained removal of toxic lines of production

from residential areas. Consequently, the environmental protection measures are to be a component of the practical efforts to protect the health of the population.

Public transport is to be further developed. The task is to cut down to a minimum the duration of intraurban trips and to make them more comfortable. In the major cities this will be done through the further development of the underground and enlargement of the trolleybus and bus lines and taxi services. But the number of personal cars, especially in the rural areas, the small towns and populated localities, will also be markedly increased. As motorcar output grows, many more will be sold to the population in this five-year period, increasing the number of cars per hundred families by 90 per cent.

Interurban transport will also be further developed. The total passenger traffic is to increase by 23 per cent, including railway passenger traffic by 15 per cent, coach traffic by 28 per cent, and air traffic by 35 per cent. River and marine navigation is also highly important in the carriage of passengers in some parts of the country, especially for tourist travel and holiday trips in summer aboard modern motor-vessels.

Large measures have been mapped out to develop the everyday services, which are to increase by 50 per cent, and in the rural localities by 70 per cent. An effort is also to be made to increase the standards in services rendered and orders fulfilled. The range of the services offered will also be considerably enlarged. For this purpose, more service establishments are to be built and equipped with

modern hardware and technology. Priority is to be given to the development of services like laundering, dry cleaning, repair of household appliances, hiring of things and car servicing. A system of measures has been outlined to improve the provision of services for the population by marketing and public catering establishments, with a considerable enlargement of the network of such establishments using progressive forms for the provision of services. Improvement of everyday services, marketing and public catering, and the sale of ready-to-cook foods and delicatessen and various electric household appliances will help to increase the working people's leisure time which they can use for rest and cultural pursuits.

A broader programme for improving the sphere of labour, the main area of human activity and development of the individual's creative abilities, has been adopted as the key ingredient of the social programme for the tenth five-year period. The social guarantees held out by the socialist state to its citizens in this sphere are to be further consolidated. The scale of production in all the sectors of the material sphere is to be expanded, together with the development and expansion of the services and scientific establishments, so guaranteeing jobs for all active members of society in accordance with their capabilities and growing general-education and professional standards. This will provide broader opportunities for choosing a congenial occupation.

In this period, there is to be not only a relative but also an absolute reduction in the number of workers doing manual labour—by

15-20 per cent—through greater mechanisation and automation of production, especially in freight handling, transportation, storage and other operations in industry.

Wider use is to be made of scientific and technical achievements, and improvements in technology and hardware to provide greater safety and make labour more productive.

Special attention is to be given to raising the occupational and skill standards in agriculture. Personnel in the mass trades and specialists are being trained in well-equipped schools, among them vocational schools, which graduate personnel for agriculture in 75 lines, among them tractor drivers and machine operators, harvester-combine operators, specialists in mechanical milking, personnel for mechanised livestock-raising farms, land improvers, laboratory assistants to carry out chemical and biological tests, and so on. Roughly 800 higher and specialised secondary schools train men and women in 20 basic lines. This has helped to increase the number of machine operators from 3,094,000 in 1965 to more than 4 million in 1975, and specialists in the higher and middle brackets by 200 per cent.

The Tenth Five-Year Plan reflects the specific features of the full-scale socialist society, with its harmony of man's material and spiritual requirements, and of the country's economic development level and the people's well-being.

The whole system of socio-economic measures is designed to overcome the substantial distinctions between mental and manual labour, and between town and country, and to make society socially more homogeneous.

Consequently, the keener social edge of the Tenth Five-Year Plan and the much greater emphasis in the economy on raising the people's living standards, which means giving greater priority to the social goals of Soviet society, show that the advantages of socialism are now being ever more fully brought out. The social measures in effect bear on every aspect of the Soviet people's life and activity, carrying fresh benefits to every member of Soviet society.

The decisions of the 25th Congress of the CPSU say that the people's living standards are to be raised, and the scale and time of this effort depend on the efficiency of social production and improvement of the quality of work everywhere. In his report, L. I. Brezhnev said: "In putting forward a broad social programme the Party acts in the belief that its fulfilment will help to enhance the labour activity of workers, collective farmers and intellectuals, and serve each person as a further incentive to work better. . . . For the growth of production, an increase in output and an improvement of quality are the main and decisive conditions for raising the people's standard of living." [1]

Fulfilment of the social programme of the Tenth Five-Year Plan will help more fully to bring out the advantages of socialism and the superiority of the socialist way of life, which fosters the working people in a spirit of social optimism, confidence in the future and certainty in the inevitable triumph of communist ideals.

[1] *XXVth Congress of the CPSU. Documents and Resolutions.* Moscow, 1976, p. 50.

CHAPTER FOUR

TECHNICAL PROGRESS AND THE DEVELOPMENT OF THE MEANS OF PRODUCTION

The dynamic development of the Soviet economy stems from the constant orientation of all its sectors upon the utmost enhancement of the efficiency of production through the widest use of scientific and technical achievements and improvement of its structure. In the tenth five-year period, some important tasks have to be fulfilled in this area. The most important of these is to bring about the accelerated development of science and technology as the crucial condition for making social production more efficient and improving the quality of the product, as the basis for fulfilling the ultimate task of the social revolution, which is to build a communist society.

Accordingly, there is to be a continued effort to implement an integral state technical policy in every sector of social production, whose efficiency has been confirmed in the previous five-year period, when the rate at which new and progressive industrial products appeared nearly doubled. In this period, the integral technical policy is to be based on the priority application in every sector of the economy of

new machinery, techniques and technology best helping to boost labour productivity, reduce material intensiveness, improve the product-to-assets ratio and improve the quality of the product.

Industry, heavy industry above all, embodying the highest form of socialist property and constituting the basis of the socialist economic organisation, is to play the leading role in fulfilling these tasks. Heavy industry helps to increase the manufacture of the means of production and to raise their technical level, exerting an influence on the whole process of socialist reproduction and the solution of all the socio-economic problems facing Soviet society.

On the successful development of the heavy industry in effect also depend such key lines in the building up of the material and technical basis of communism as electrification of the whole country, comprehensive mechanisation and automation of production, broad use of chemicals in the economy, attainment of the world's highest technical level in production, improvement of working and everyday conditions, and elimination of arduous manual labour and noxious operations. The heavy industry turns out modern highly productive machine tools and equipment, efficient man-made materials whose use makes production more effective, helping to build up the material and technical basis of communism and steadily to develop agriculture and all the industries specialising in the manufacture of consumer goods and of the sectors of the non-production sphere, and so exerting a direct influence on the growth of the people's well-being.

In this period, there is to be priority growth in heavy industry output, with the volume increasing by 35-39 per cent.

The structure of heavy industry is to be further improved, with the highest rate of development in engineering and metal-working, the chemical and petrochemical industry, the microbiological industry, that is, the sectors whose development is most instrumental in accelerating scientific and technical progress and enhancing the efficiency of social production.

The product-mix is to be substantially renewed, including the manufacture of 20,000 new modern types of machinery, apparatus, installations and equipment, whose technical and economic performance indicators will be much higher than those of similar products turned out in this country and abroad in the first half of the 1970s. Higher-capacity units, numerical-control machine tools, electronic computers, comprehensively automated lines, new highly efficient alloys and synthetic materials and other progressive products will make up a large part of its output.

What are the basic tasks facing heavy industry in the tenth five-year period?

The first task is to ensure the growth of the technical level of production in every sector of the national economy.

Scientists everywhere correctly believe that engineering and metal-working are the spearhead of technical progress, because their products embody scientific discoveries and inventions. Their various products—instruments, machine tools, motors, apparatus, installations, machinery and tools—constitute the muscular power of every sector of the economy, whose

buildup immensely multiplies society's productive forces.

Engineering and metal-working are the main artery along which new hardware and technology are channelled, so helping to raise the technical level in industry, agriculture, building, transport, the services and other branches of the economy, and exerting the crucial influence on the development of social production and the boosting of living standards.

That is why the five-year plan devotes particular attention to the all-round development of this leading sector of the economy, which at the start of the period employed 14 million industrial personnel, or nearly one-seventh of the labour force in the economy.

The central task before engineering and metal-working is to provide high-performance hardware and technology to every sector of the economy, as a basis for creating the necessary material and technical conditions for intensifying social production and making it more efficient.

In the five years, output in engineering and metal-working is to increase by 50-60 per cent, that is, faster than the growth of output in heavy industry as a whole.

The boosting of engineering and metal-working output on this scale will help considerably to raise the technical level in every sector of the economy. Thus, the total power of tractors will go up from 41.8 million hp in 1975 to 55 million in 1980, and the value of farming machinery from 3.8 billion rubles to 5 billion, including machinery for livestock raising and feed production, from 1.6 billion to 2.2 billion.

A point to note is that alongside the grow-

ing volume of production and the delivery of hardware, deep-going qualitative changes are to take place in the structure of the product, with ever greater emphasis on modern automated devices, means of automating production processes, high-capacity units and installations, computers, technological and quality control instruments, and so on. These changes are to be based on the broad introduction of the latest scientific and technical achievements, including objective processes taking place in the structure of production under the impact of the current scientific and technical revolution.

A special effort is to be made to develop complete systems of machinery and instruments for the comprehensive mechanisation and automation of the whole technological cycle, from the arrival of the raw materials to the shipment of the finished product, and also to develop and engineer equipment for fundamentally new technological processes, like the range of converters with a capacity of up to 100 tons for processing copper, copper-nickel and nickel mattes, with total automation of main and auxiliary processes. Powerful excavators, dumpcars with a load capacity of up to 170 tons, and high-performance boring machines with a bore diametre of up to 400 mm are to be made for the coal and mining industry.

The machine-tool and tool-making industry is considerably to increase its output of automatic equipment with compact electronic systems for numerical control, and new sets of high-performance computer-controlled metal-working equipment. This is to be used to start a number of large-scale highly automated sec-

tions and shops in industry with small and large batch production.

The successful advance of Soviet science has made it possible to set a number of qualitatively new tasks before Soviet engineering, above all the development of a new industry for the batch production of numerical-control automatic manipulators for mechanising and automating arduous manual and monotonous operations. Equipment is also to be made for automating the assembly of mass-produced items in engineering.

On the whole, the output of instruments and means of automation is to increase by 60-70 per cent, including the manufacture of new instruments involving the extensive use of microelectronics and laser techniques.

Many fundamentally new types of equipment are to be produced for the consumer goods industries. Thus, spindle-spinning machines and shuttle looms are to be replaced by new shuttleless weaving machines helping to reduce labour intensiveness by 50-60 per cent, shuttleless looms reducing labour inputs by 33-50 per cent and simultaneously markedly lowering the level of noise. Automated machine complexes for the food industry are also to be turned out.

The installation of all these new engineering products will help to speed the pace of comprehensive mechanisation and automation of basic and auxiliary operations, so substantially cutting down on manual operations.

Another important task facing engineering is further to increase the per-unit capacity of machine tools, plant and other types of equipment, which is a basic line in worldwide scien-

tific and technical progress today, helping considerably to improve the whole system of technico-economic parameters: higher labour productivity, lower running material inputs and per-unit investments, lower per-unit fuel and electric power inputs, and so on. Thus, the use of high-capacity production units in the chemical industry frequently helps to raise labour productivity to the same extent as the increase in the per-unit capacity of the equipment.

In the ninth five-year period, Soviet engineering, relying on the latest scientific discoveries, produced a range of unique high-capacity units and installations, especially for the electric power, mining and chemical industries. In the new period, these achievements will be consolidated and further advanced.

Electric engineering is to start the batch production of thermal-neutron reactors and turbo-generators for these with a unit capacity of at least 1 million kw for atomic power stations, and also to develop complete equipment for atomic power units operating on thermal neutrons with a capacity of up to 1.5 million kw. Organic-fuel electric power stations are to be supplied with 500,000 and 800,000 kw power units, whose production has been started over the past eight years or so.

A characteristic feature of the current five-year period is considerable extension of the range of industries for which engineering is to produce high-capacity units. Thus, powerful units for the continuous pouring of steel, 400-ton converters, high-performance mills for continuous hot and cold rolling, numerical-control tube-rolling and welding units with continuous automated technological processes

are to be made for ferrous metallurgy. Tip trucks and tip-truck trains with a carrying capacity of 75, 120 and more tons are to be manufactured for the mining industry. Engineering is also to produce automated technological lines for the dry manufacture of cement to turn out 6,000-8,000 tons of clinker a day, and high-capacity equipment with a high unit-capacity for the building, the chemical and petrochemical industry, nonferrous metallurgy and other industries.

Engineering is to do much more to help fulfil a major economic task like improvement of working conditions, elimination of arduous manual labour and enhancement of the creative nature of work. Production of the means to mechanise labour-intensive and arduous operations and to increase safety in various sectors of building, freight handling and storage is to double in the five-year period. More machinery and equipment is to be made for the comprehensive mechanisation of street-cleaning and refuse-collection in cities, lumbering and timber floating, and elimination of manual labour in the basic timbering operations.

Another important task facing engineering is the creation of the necessary premises for substantial qualitative changes in the period ahead in various sectors of the economy through the extensive use of hardware and technology embodying fundamentally new ideas. That is why while tackling the current tasks in raising the technical level in every sector of the economy through the use of existing hardware and technology, engineering is to concentrate on developing fundamentally new techniques and hardware for the future.

Particular importance here attaches to the large science-production and production associations, comprising production enterprises and powerful R & D outfits, whose task is to develop the hardware and technology of the future, and to see that it is worked up to the point at which it can be broadly used at all engineering enterprises.

The concrete lines of their activity in this field have been determined on the basis of scientific and technical prognostications, in-depth analysis of Soviet and world experience, with broad participation in planning of research by institutions of the USSR Academy of Sciences, which specialises in basic research.

The second task is to ensure all-round development and improvement of the fuel and energy complex.

The growth of the energy facilities available per worker in the economy is pivotal to scientific and technical progress. The Soviet Union has been steadily increasing its balanced extraction of fuel and generation of electricity, an area in which it is first in Europe and second in the world.

In this period, the policy of wholesale electrification of the economy is to be carried on. By 1980, electric power generation will reach 1,340-1,380 billion kwh, or an increase of 302-342 billion kwh over 1975. This means that within one five-year period, the USSR will have built up a power industry like that which the FRG or Canada now has. In this period alone, facilities with a capacity of 67-70 million kw are to be installed at the power stations.

This increase in electric power facilities is to be effected primarily through the construction of large thermal-power stations with a capacity of 4-6 million kw, involving the installation of power units with a capacity of 500,000 and 800,000 kw. One such power station will generate almost as much electricity as all the electric power stations in the country generated in 1940.

The development of the power industry in this period will be based on the rational use of the country's natural resources and a buildup of a solid material and technical basis for rapidly increasing the energy per worker in the economy over the long term. It is common knowledge that the generation of electric power throughout the world now tends roughly to double every ten years, and this makes it quite clear that in the very near future there is bound to be a scarcity of natural energy resources used with the traditional techniques.

That is why the development of the power industry, a key factor of scientific and technical progress in the economy as a whole, must as far as possible be based on improvements in the techniques and technology of production and the tapping of new energy sources. The development of atomic energy is a key line here, and in this period facilities with a capacity of 13-15 million kw, or roughly one-fifth of all the new capacities, will be started at atomic power stations.

Soviet atomic energetics has been developing through the establishment of large reactors operating on thermal neutrons. Thus, in this period atomic power stations will be largely

equipped with highly efficient reactors with unit capacities of 1-1.5 million kw.

But there is also to be much faster construction and starting of fast-breeder reactors, which, together with the thermal-neutron reactors, will help to multiply the generation of energy per ton of natural uranium.

In other words, fast-breeder reactors, which the USSR pioneered, will help to make much more efficient use of nuclear fuel and also more prolonged use of low-cost uranium resources.

The power industry also has to limit the use of oil and gas to generate electricity. Considering the availability of energy fuels and their territorial location, the growing role of oil and gas as a valuable raw material for the chemical and petrochemical industry and other factors, the five-year plan lays down that in the immediate future generation of electricity is to be increased without using more liquid fuel for that purpose. Accordingly, there is to be extensive use of low-cost solid fuels alongside the development of the atomic energy industry. Large thermal power stations to operate on Ekibastuz and Kansk-Achinsk coals are to be built.

Efforts are to be continued in shaping the integrated energy system through a linkup of the power grids in Siberia and Central Asia with the European power grid. For this purpose several main transmission lines with a voltage of 500, 750, 1,150 kv are to be built.

A programme to develop the fuel industries is to be of great importance in accelerating scientific and technical progress. The Soviet Union is virtually the world's only large industrial state to base its economic development on its own fuel resources.

Table 13

	Extraction		Increase in the tenth five-year period	
	1975	1980	Absolute	Per cent of 1975
Oil (including gas condensate), mln tons	491	620-640	129-149	26-30
Gas, bln cu m	289	400-435	111-146	38-50
Coal, mln tons	701	790-810	89-109	13-16

Table 13 shows the rapid development of the fuel industries in this period.

Consequently, there is to be further development of all the major branches of the fuel industry: coal, oil and gas. There is also to be broader use of coal, shales, peat and recycled fuels.

Fuel is to be used more efficiently through technological improvements. Thus, at the electric power stations the fuel used to generate one kwh of electricity is to be reduced from 340 grams in 1975 to 325-328 grams in 1980.

There is to be extensive technical re-equipment of the fuel industries. Thus, the comprehensive automation of technological processes and installation of CPCs at oil fields are to be continued. By the end of the five-year period, such fields are to produce at least 85 per cent of all the oil. There is to be research into and development of methods for extracting oil from bituminous rock.

In the gas industry, progressive technical facilities and techniques are to be developed and introduced for the extraction, transportation, refining and storage of gas and gas condensate, notably in the Arctic areas. In the coal industry, wider use is to be made of new mechanised sets of equipment for extracting coal from thin sloping and steep seams. A greater effort is to be made to develop technical facilities for unmanned extraction of coal.

Open-cut mining is to be considerably increased in the Ekibastuz, Kansk-Achinsk, Kuznetsk and South Yakutia coal fields and also in Eastern Siberia and the Primorye Territory, for which purpose large coal pits with an annual capacity of 20-50 million tons are to be built in those areas.

Implementation of all the planned large-scale measures to improve the structure of the energy-fuel balance and make more rational use of every type of fuel and energy should help to save more than 150 million tons of conventional fuel by 1980. Coupled with the growing extraction of fuel, this will help to provide normal electricity supplies throughout the country and create the conditions for stable development of every sector of the economy.

The third task is to boost production and improve the structure of structural materials.

Let us bear in mind that among the structural materials are those turned out by the heavy industry and used to fabricate various metal, wood, plastic, building materials, rubber and other types of components and products. That is why, larger output of structural materials is an important factor in boosting output in every sector of the economy, and, consequently, of the living standards as well. In this period, the structural materials industries are chiefly to extend their range of efficient types of ferrous and nonferrous rolled stock, light nonferrous metals and their alloys, plastics and various composite materials, lightweight industrial building structures and items worked up to a high level of readiness on the shop floor.

Metal, steel in the first place, is the chief structural material. Accordingly, there is to be rapid development of the ferrous and nonferrous metallurgy: steel output is to go up from 141 million tons in 1975 to 160-170 million in 1980, and finished rolled stock from 98.6 million to 115-120 million. In the five years, the output of aluminium, copper and nickel is to go up by 20-30 per cent, and titanium by 40 per cent.

Special attention is to be given to improving the quality and extending the product-mix of the efficient types of metal products as an additional source for meeting the requirements of the economy. Thus, in the current period this will help to save 5-6 million tons of metal, which is equivalent to the annual output of a large model metallurgical mill.

Powder metallurgy, an emerging industry, is one of the most efficient lines in metallurgy. It has been built up over the past ten years and helps to save 1.3 million rubles in the manufacture of 1,000 tons of general engineering products in the substitution of ferrous metals, and 2 million rubles, in the substitution of nonferrous metals, also helping to cut labour inputs by 30-60 per cent. That is why in this period, production with the use of powder-

metallurgy techniques is to go up by 50 per cent.

Manufacture of highly efficient light-weight rolled sections, bimetallic and corrosion-resistant stock, high-precision shaped sections, highly durable thin-walled pipes and extra-pure metals is to be increased.

The enterprises will make much more use of the continuous pouring of steel, which helps to improve the quality of the metal, increase output of finished rolled stock by 8-10 per cent, cut costs by roughly 4.8 rubles per ton, and economise 2.2 rubles' worth of investments per ton of billets.

Measures to improve the treatment of raw materials will also help to enhance the efficiency of production. Thus, a one-per cent increase in the content of iron in commercial ore (dry weight) will help to raise blast-furnace productivity by 2 per cent, reduce coke inputs by 0.5 per cent and additionally produce about 2.5 million tons of pig iron. For the same purpose there is to be larger output of iron-ore concentrates with an iron content of 65 per cent and more, and of metallised iron-ore pellets, whose use helps to raise the quality of metal products, reduce costs by 3-5 per cent and extend product lifespan by 10-15 per cent, as compared with products made from scrap steel.

The establishment of a territorial-production complex on the basis of the mineral resources of the Kursk Magnetic Anomaly, with the construction of an electro-metallurgical combine at Oskol to make steel from metallised pellets by direct reduction, will be of great importance for developing ferrous metallurgy.

In nonferrous metallurgy more metal is to be derived from concentrated ores and through metallurgical treatment. Preliminary concentration of ores with the use of heavy suspension, new gravitation and radio-metric methods and foam separation will help to reduce the concentration costs by 15-20 per cent.

The treatment of ores with the use of sorption technology, oxygen-suspended smelting of sulphide concentrate, more extensive use of continuous combined rolling of copper wire and other advanced and efficient technology will help to make production more efficient and raise the quality of the raw materials.

Measures are to be taken to enlarge the existing and build new enterprises in nonferrous metallurgy. Construction of the world's biggest Bratsk and Krasnoyarsk aluminium mills is to be completed, while the first electrolysis sections of the Sayan aluminium mill, where the most efficient technological equipment has been installed, are to be started.

An important line in improving the structure of structural materials will be an increase in the share of synthetic materials and various prefabricated elements. The output of synthetic resins and plastics is to increase 90-110 per cent, and that of prefabricated steel structural elements by 40-50 per cent, prefabricated ferroconcrete parts and components by 20-30 per cent, and bonded wooden structures, by roughly 500 per cent. The output of synthetic rubber is to go up by 40-60 per cent, with faster production of rubber which is a full-value substitute for natural rubber.

The following example gives an idea of the effectiveness of the planned structural changes

in the structural materials balance. It has been estimated that the use of plastic parts (including plastics reinforced with glass fibre and wood) in machines and mechanisms instead of metal helps to save 170-180 rubles per ton of ferrous metals, 470-500 rubles per ton of nonferrous metals, and 210-385 rubles per ton of aluminium, with the use of one ton of thermoplastic polymer materials in place of the traditional structural materials, like aluminium, pig iron and timber, helping to save about 1,500 rubles.

The thrifty and economic use of the country's rich forest resources will be highly important in this period. In the timber and woodworking industry, chemical techniques will be more extensively used in the production cycle through the enlargement of facilities for the processing of low-grade timber and woodwaste. The manufacture of woodfibre and chip boards, which help to make fuller use of forest raw materials, is to be increased. In the five years, paper and cardboard production is to go up by 15-25 per cent.

Building materials, whose output is to go up by 30 per cent, will continue to be prominent among the structural materials, with faster production of new progressive materials with a higher level of shop-floor prefabrication which helps to raise the level of industrialisation of production. Cement output is to go up from 122 million tons in 1975 to 143-145 million tons in 1980, with emphasis on the higher-grade and special types of cement.

There is to be increased production of efficient building materials, like large-size structural and finishing asbestos-cement units, ruberoid, fibre-glass and other durable types of soft roofing material, and also of heat insulating materials. The manufacture of ceramic tiles, natural-stone materials, porous fillers, cellular concrete items, washed and fractionated non-ore and local building materials will also expand. Wider use is also to be made of spin-off raw materials and waste in industry.

The fourth task is to ensure the development of the production infrastructure (transport).

The steady extension of the geographical location of the USSR's productive forces, the comprehensive economic development of the Union Republics and the specialisation of production have been making growing demands on transport. Its main task in this period will be fuller and more timely satisfaction of the economy's requirements in the carriage of freight, faster delivery of goods through substantial increase in the capacity and quality of operation of the whole transport system, and improvement of transport links between the country's economic regions. For this purpose, all kinds of freight traffic is to be increased by about 30 per cent, including, railway traffic about 22 per cent, marine traffic about 30 per cent, river traffic about 22 per cent, highway traffic about 42 per cent, air traffic about 40 per cent, and oil pipeline flows by nearly 70 per cent.

Oil pipeline flows are to develop at the fastest pace in this period, and this will require the laying of 15,000 kilometres of oil pipelines and at least 3,500 kilometres of oil-product pipelines.

Container carriage is an important factor in

improving freight traffic, cutting transport costs and making production more efficient. Accordingly, the use of containers in every type of transport is to go up by 60 per cent, including large-tonnage international-standard containers, by at least 150 per cent.

The plan provides for more rational transport economic links and development for that purpose of main-line transport communications, the laying of powerful oil and gas pipelines to run from the North-Western part of Siberia and Central Asia to the European part of the USSR, and from the North-Western part of Siberia to the oil refineries in the country's Eastern areas.

All types of transport are to be further developed and technically equipped with the most modern and specialised transport facilities, helping to increase the freight handling capacity of rolling stock and ships.

The railway network is to be improved through the building of new lines, primarily in the newly developed areas, double tracking, electrification and equipment with automatic blocking systems and control centres. In the five-year period, 2,800 kilometres of railway lines with the heaviest traffic are to be double tracked, while 2,500 kilometres of lines will be electrified, and 16,000-17,000 kilometres equipped with automatic blocking systems and centralised control. About 3,000 kilometres of new railway lines will be laid.

Work is in full swing on the Baikal-Amur Railway (BAM), which will help to develop new areas in Eastern Siberia and the Far East, where natural resources abound. By the end of the period, the Tynda-Berkakit line, a continuation of the BAM-Tynda line, is to be started mainly for the purpose of carrying coals from the South Yakutia fields. Work is to be continued on the construction of the Tobolsk-Surgut line towards Urgenoi for the purpose of developing a number of major oil and gas deposits in the north of the Tyumen Region. Eventually, this line will become part of a new main line linking Norilsk with the existing railway network.

The starting of the Tobolsk-Surgut-Nizhnevartovsk line will provide reliable communications between new oil fields in the West Siberian lowlands and other parts of the country.

In order to develop the new industrial area based on sizable oil and gas deposits, a new railway line between Syn and Usinsk, with double tracking of the existing Inta-Rybnitsa line, is being built in the Nenets National Area of the Arkhangelsk Region and in the north of the Komi Autonomous Soviet Socialist Republic.

The Byeloretsk-Karlaman line, which is to ease the heavy traffic along the Chelyabinsk-Ufa line, is to be started in 1977.

In this period, construction is to be started on the Kustanai-Uritskoye line, the final link in the Central Siberian Main Line, one of the East-West lines connecting areas in the Kuzbas, Siberia and the Far East with the Urals and the European part of the USSR.

Heavy-traffic sections of railway lines in the European and Asian parts of the country are also to be double tracked.

New rolling stock with better technico-economic parametres is to be introduced, including all-metal-body cars, large capacity cars on

roller bearings, including 125-ton eight-axle open waggons, and 120-ton oil-tank cars, double-deck platforms for transporting motorcars, and so on.

Greater specialisation of freight cars helps to raise the level of comprehensive mechanisation of freight-handling operations, and improve the safety of transported cargoes.

High-capacity bulk-carriers, tankers and combined vessels with a total tonnage of about 5 million tons deadweight are to be supplied to the merchant navy.

The capacity of sea ports is to be increased chiefly through the building of specialised cargo-handling centres with berths totalling 5.3 kilometres in length and a capacity to handle over 38 million tons of freight a year.

The construction and remodelling of specialised complexes, the use of containers and pallets for freight carriage on ships with horizontal loading and unloading of freight will help to raise the level of the comprehensive mechanisation of cargo-handling operations in marine transport to 92 per cent.

River transport is to be developed primarily in Siberia, the Far East and the Arctic, where this type of transport is the main one used to deliver freight to enterprises in the oil and gas industry and nonferrous metallurgy. This will involve much work in improving navigation conditions along the inland waterways.

For air transport, this period will be one of introduction of new larger and faster aircraft like the Il-76 cargo planes and aircraft for farming operations.

Highway transport is to play the chief role in the carriage of freight along local lines and

between regions, and also in the transportation of perishable and valuable goods over distances of 1,000 and more kilometres.

New heavy-duty trucks are to be made available. By 1980, the production of trucks will have reached 800,000-825,000, including heavy-duty trucks, trailers and semitrailers, tip trucks and tip-truck trains with a capacity of 75 tons, 120 tons, and more for the mining industry.

A wider range of specialised cars and trucks is to be manufactured to meet the demand in agriculture, marketing, public health, industry, building and other sectors, and also various cars and new types of vehicles for use in outlying heavy-terrain areas of the North and North-East, like aerosleighs, motor sledges, over-snow-and-bog vehicles, and hovercraft.

Trucks with high-cross country performance are to be manufactured for the rural localities.

The use of more economical diesel trucks of new makes will help to increase the energy efficiency of engines by an average of 4 per cent, and reduce noxious emissions harming the environment.

With more cars and trucks in the country, the highway network will be further enlarged. By the start of the five-year period, the country had 650,000 kilometres of hard-top highways, and another 65,000 kilometres are now to be built and remodelled, mostly in the rural localities.

Some important measures are to be put through to build up the material and technical facilities in other sectors of the production infrastructure. Industrial transport is to be

further developed and its freight carriage increased by roughly 30 per cent, with the carriage of freight by the more progressive and continuous types of transport (conveyer, pipeline and cable transport, among others) growing 100-150 per cent faster than that of other types of industrial transport.

In order to increase efficiency, industrial railway transport is to be remodelled, and the switching of it to electric and diesel traction is to be in the main completed. In the five years, industrial transport is to be supplied with about 550 electric locomotives, 7,000 diesel locomotives (including locomotives with a power-rating of 1,200 hp and more), 80,000 freight cars, of them about 65-70 per cent of the specialised industrial type, and 250,000 specialised containers.

The material and technical facilities available to wholesale trade and the procurement network are to be substantially increased. Diverse types of production communications are to be rapidly developed, with ever more extensive use of electronic computers and other modern technical facilities.

CHAPTER FIVE

INVESTMENT POLICY IN THE TENTH FIVE-YEAR PERIOD

1. Investments: Growing Volume and Sectoral Structure

Capital construction is a sphere of material production, whose main task is to reproduce and renew the economy's fixed assets. By erecting new production capacities and nonproduction installations, and engineering advanced technology, capital construction serves to ensure expanded socialist reproduction, increase labour productivity, enhance the economic efficiency of social production, and provide fuller satisfaction of the people's requirements.

At every stage of economic development in the Soviet Union, the first step in tackling any economic problem has always been to determine the scale and main lines of capital construction. Steady growth of investments and priority construction of heavy-industry enterprises create the necessary conditions for boosting the economy as a whole. Capital construction has always been an essential component of national-economic plans.

The line of more intensive social production, first launched in the past five-year period, is a specific feature of the present five-year period. In 1976-1980, 630 billion rubles

is to be invested in the economy—about as much as was invested in the Soviet economy in the 48 years from 1918 to 1965. At the same time, the rate of investment growth is to be markedly reduced (Table 14).

Table 14

	Investment, bln. rubles	Growth rate, per cent of preceding five-year period	Absolute increment, bln rubles
1961-1965	247.6	145	77.1
1966-1970	353.8	143	106.2
1971-1975	501	142	147.2
1976-1980 (planned)	630	126	129

These figures show that under the Tenth Five-Year Plan it is not only the growth rate, but also the absolute increment in investment that is to be reduced. But far from playing down the role of capital construction, this serves to enhance its importance: with minimum outlays, it has to bring about progressive structural changes in the economy in accordance with the demands of the scientific and technical revolution, and also to accelerate the mastering of new machinery and technology in order to intensify social production.

So, quality rather than quantity is to play an ever more important role in capital construction. The aim of the state's general investments policy is not to minimise the volume of capital construction, but to maintain a rate of investment adequately backed up in terms

of material and value proportions and increase labour productivity.

The allocation of investment among the various sectors of the economy and industry is geared to the solution of the main task of the tenth five-year period.

Investments into sectors which help to boost the whole economy, namely, ferrous and nonferrous metallurgy, the chemical industry, engineering and the power industry, is to grow more rapidly than investment into other sectors (large funds have also been set aside for industries manufacturing consumer goods and conducive to the solution of social problems).

In every sector of the economy and industry, investments are primarily to go to solve the cardinal tasks of scientific and technical progress in accordance with the comprehensive technical policy.

In power engineering, investments are allocated in order to ensure the further growth of the country's power potential chiefly by means of hydroelectric power, atomic fuel and low-cost coal extracted in open-cut mines. The projected changes in the structure of the new power capacities will take more than five years. In the current five-year period, the emphasis is to be on hydroelectric and atomic power.

Investments in the coal industry are to be mainly channelled into open-cut mining in the country's eastern areas, and are also to be used to reconstruct and modernise the existing mines in the Donetsk, Kuznetsk, Karaganda, Pechora and other areas.

In the oil and gas industry, the main task

of capital construction is to lay a powerful pipeline network fitted out with automatic equipment. Over the five years, it is planned to build about 35,000 kilometres of gas pipelines, 15,000 kilometres of oil pipelines, and no less than 3,500 kilometres of oil product pipelines. A particular effort is to be made to build large underground gas-storage reservoirs for the winter period in the areas around Moscow and Leningrad, in the Ukraine, the Baltic Republics and the Transcaucasus.

In metallurgy, the main idea is to build high-capacity units and shops for end-product conversion to turn out the most economical types of rolled stock. Mining enterprises are to be built much faster to ensure a regular supply of ores for metallurgy, nonferrous metallurgy above all.

In the chemical industry, investment is aimed to accelerate the development of lines of production providing raw products for the light industry and mineral fertilisers for agriculture, and also to balance out the intersectoral proportions.

In engineering, priority treatment is to be given to enterprises and lines of production which supply every sector of the economy with machinery for the comprehensive mechanisation of production processes, notably, for the re-equipment of engineering itself.

Special mention should be made of the plans to reconstruct the existing enterprises in atomic power engineering and build new ones. Thus, a large atomic engineering plant is to be built in Volgodon.

In the tenth five-year period, 2.4 times more investment than in the ninth five-year period

is to go into the building of production capacities for the manufacture of metallurgical equipment. Investment in the electrotechnical industry, instrument-making and the machine-tool industry is also to grow more rapidly.

In the timber, woodworking and pulp-and-paper industry, investments are chiefly to be used to ensure fuller processing of timber, with more rapid building of facilities for the chemical and chemico-mechanical treatment of timber waste, low-quality timber and softwoods.

More than 31 billion rubles' worth of investment, that is, 6 billion rubles more than in the past five-year period, is to be set aside for the light and food industry and the everyday services. In the light and food industry, the investments are to be used to retool and modernise the existing enterprises and introduce new high-performance technological processes and comprehensive mechanisation and automation facilities.

Rapid construction is to be carried on in agriculture. Investments in agriculture (including production, housing, cultural and everyday construction and purchase of machinery) are to total 172 billion rubles, about 41 billion rubles up on 1971-1975. The bulk of this (115.7 billion rubles) is to be contributed by the state, and the rest (56 billion rubles) by the collective farms. These investments will enable the collective and state farms to purchase large quantities of machinery, realise various production projects, and carry on large-scale irrigation, land improvement, housing, cultural and everyday construction.

In the tenth five-year period, about 4 million hectares of land are to be irrigated and

4.7 million hectares drained. It is planned to build large irrigation systems in the areas along the Volga, near Kakhovka and around the Azov Sea, and also the Kulunda, North Crimea and Dnieper-Donbas canals, the Charysh and Kharkov water conduits, and so on. New irrigation and watering systems are to have high technical standards, with automated water distribution and high-performance irrigation facilities.

Large investments are to be channelled into transport, the communications, the material-supplies system, industry, metallurgy above all, and the building of special installations for environmental protection.

Correct allocation of investments is the main factor in the effort to enhance their efficiency and solve the tasks confronting the Soviet economy in the current five-year period.

2. Investment Efficiency

The 25th Congress of the CPSU emphasised that the main task in capital construction was to enhance investment efficiency and ensure further growth and qualitative improvement of the fixed assets and more rapid erection and mastering of new production facilities in all sectors of the economy by improving planning, design work and organisation in construction, compressing time-tables and reducing construction costs.

By increasing the fixed assets per worker, investments set the pace of labour productivity growth, thus helping to boost the national income and ensure fuller satisfaction of the people's material and cultural needs.

Investment efficiency manifests itself both in national income and labour productivity growth, and in greater production, lower production and capital construction costs, and so on. Table 15 shows the balance between the absolute increments of investment and national income in the past two five-year periods.

Table 15

	Billion rubles		
	Investment increment (from first to last year of five-year period)	National income increment going into consumption and accumulation	Investment increment to national income increment
1966-1970	25	95.1	0.26
1971-1975	32	76.5	0.42

The efficiency measures projected for the tenth five-year period, those aimed to enhance investment efficiency in particular, have made it possible to alter the balance between the investment and national income increments in favour of the latter. The investment increment is to total 17-20 billion rubles (for the whole five-year period), and that of the national income, 87-98 billion rubles. In other words, the investment-increment-to-national-income-increment-ratio is to go down to 0.2, that is, below the figure for 1966-1970.

This investment policy has made it possible to project an increase in the share of consump-

tion in the national income and the share of the consumer goods produced in the heavy industry, and, in the final count, a rapid build-up of the country's production potential coupled with an effort to solve major social tasks. Since capital construction involves the expanded reproduction of fixed assets, investment efficiency for the economy as a whole may be derived from a comparison between the growth of fixed production assets and the growth of the national income and the social product.

The line for the all-round intensification of social production, as mapped out by the 25th Congress of the CPSU, has clearly formulated the task of raising the product-to-assets ratio.

Investments are largely channelled into the retooling and reconstruction of existing enterprises. Apart from providing for the construction of new enterprises in areas with newly discovered natural resources, the five-year plan envisages the reconstruction, expansion and re-equipment of existing enterprises through comprehensive mechanisation and automation, which helps to boost production much faster and cut the production costs. In the expansion and reconstruction of existing enterprises, investments per unit of production are much lower than in new construction.

Investment efficiency also depends on the correct planning of capital construction, faster starting of new fixed assets, and the consequent reduction in the number of projects-in-progress. The state devotes much attention to determining the minimum reserve adequate for the normal reproduction of fixed assets. The funds invested in projects-in-progress are excluded from the production process and are only a condition for expanded reproduction. Too many incomplete projects mean frozen assets and tighter material balances.

At the same time, socialist expanded reproduction implies systematic and balanced starting of new fixed assets, and this necessarily requires the existence at the given moment of a definite volume of incomplete construction, a construction reserve. Providing capital construction with an adequate reserve is a major economic task, for the absence of such a reserve at the beginning of a new plan period may upset the planned starting of completed projects.

Over the past few years, the construction-in-progress percentage in annual investments has been stabilised, showing a tendency to decline.

In 1976-1980, investments are to be further concentrated, and the number of enterprises and projects being built at one and the same time is to be reduced in order to have them started earlier, to turn out additional products and reduce the volume of incomplete construction. By 1980, this is to be reduced to 65 per cent of the state's annual investments, which means that faster construction and the concentration of investments at about-to-be started projects will make it possible to produce almost 13 billion rubles' worth of additional fixed assets.

Faster building of large modern highly mechanised plants yields a vast effect in terms of additional production. Thus, starting a big blast furnace one day earlier means 8,000-10,000 tons of additional pig iron, and for a

combined oil-refining installation with a capacity of 6 million tons, this means an additional product of about 500,000 rubles.

Correct planning of investments, doubtless, helps to enhance their efficiency. At the same time, investment efficiency should be determined not only at the planning stage, but also at the stage of industrial design.

Investment efficiency largely depends on the choice of the most economical design projects, the best constructive and technical solutions. Thus, designers have been working to block buildings and structures, and to place technological equipment on open sites, platforms and stacks, or in unheated buildings with light-weight protective and supporting structures, which serve to reduce estimated construction costs by 10-25 per cent.

In the tenth five-year period, estimated construction costs are to be reduced by 3-5 per cent. Together with other measures, this will make it possible to reduce investments per unit of production-growth by no less than 5 per cent, helping to save about 12 billion rubles in the industrial construction sector as a whole.

Choosing the optimal size for enterprises is also very important for higher investment efficiency.

As the Soviet people work to build the material and technical basis of communism, production is to be further amalgamated, for small enterprises make it difficult to use modern machinery, raise labour productivity and cut production costs.

At the same time, small enterprises are sometimes fairly effective, particularly in the

smaller towns. In the tenth five-year period, many small enterprises are to be built in these towns as branches of various large enterprises and associations.

The share of investments going into machinery is a major indicator of investment efficiency. From 1971 to 1974, this went up from 30 per cent to 32 per cent.

Priority investment in the reconstruction and technical re-equipment of operational enterprises, and the reduction of building costs in the tenth five-year period will help substantially to increase the share of investments going into machinery.

3. Construction in the Tenth Five-Year Period

Correct distribution of investments across the country is very important, for it serves to ensure the most rational location of the production forces both with a view to the availability of raw materials and the need to minimise labour losses at every consecutive stage of the production process, from the raw material to the finished product. In order to achieve the greatest economic effect, there are plans to involve in economic circulation the richest and most economic for processing natural resources, especially in the country's eastern areas.

The state's investment policy is now aimed, among other things, to establish large territorial-production complexes, entailing interconnection of enterprises and lines of production, dovetailing of production capacities

and coordination of schedules for putting these into operation.

In the European part of the USSR, a large TPC is being set up on the mineral-rich Kursk Magnetic Anomaly. The Oskol electro-metallurgical combine projected for this area is to make steel from metallised pellets produced by direct reduction without the blast furnace process.

The large industrial complex on the basis of the Orenburg liquid gas deposit is to be further developed, and a gas pipeline is to be laid (with the participation of CMEA member countries) to the Soviet Union's Western borders.

The TPC taking shape on the basis of the Timan-Pechora oil and gas-bearing area is to go on growing, with a rapid increase in gas and oil extraction. Wood-pulp and woodworking enterprises in the North of the European part of the country are to be expanded and retooled.

In the tenth five-year period, priority attention is to be given to the building and expansion of atomic power stations in the European part of the Soviet Union, like the Leningrad, Novovoronezh, Smolensk, Chernobyl, Rovno, South Ukraine, Ingalin and other stations. Thermal and hydraulic power stations are also to be built. Among the engineering enterprises to be built in these areas are the Kama Automobile Works, with a capacity of 150,000 heavy-duty trucks a year, the Volgodon heavy engineering works, and the Novovolynsk engineering plant. Many enterprises are also to be built in the chemical and petrochemical industry, like the Togliatti ammonia and carbamide

plant, the Nizhnekamsk petrochemical complex, the Perm synthetic rubber plant, and large petrochemical and ammonia plants in the Baltic Republics.

Large-scale building programmes are to be carried out in the mineral rich areas of Siberia and the Far East.

Western Siberia is an extremely complexified TPC. Large gas works and oil refineries are to be built in this area for processing local oil and gas. Large petrochemical complexes are now under construction near Tobolsk and Tomsk. The Surgut State Regional electric power station has already been started, and railway lines, oil and gas pipelines, river ports, motorways, airfields, communication lines, dwelling houses and public utility and everyday services enterprises are being built there.

The formation of the Sayan TPC, started in the past five-year period, is to continue. Over the five years, its builders are to complete the first section of the world's largest Sayan-Shushenskaya hydroelectric power station and the first electrolysis sections at the Sayany aluminium works, and are also to work on the Abakan railway car-building plant, the Minusinsk electrotechnical complex, and various nonferrous metals, food and light industry enterprises.

The Bratsk-Ust-Ilim TPC is to be in the main completed. Bratsk already has a hydroelectric power station, a large aluminium works, and a complex comprising a saw-mill and a pulp-and-paper works, and in the tenth five-year period, the Ust-Ilim hydroelectric power station is to start working at full capac-

ity, and a new cellulose plant is to be built with the participation of other CMEA countries.

In the tenth five-year period, construction is to begin on the South Yakutia TPC, which is to become the country's major industrial area. A railway line is to be laid from Tynda to Berkakit to connect Southern Yakutia with the existing Trans-Siberian line and Baikal-Amur line that is now under construction. The tenth five-year plan also envisages reconstruction of a powerful coal pit, a concentration mill and a state regional electric power plant at Neryungra. The rich iron-ore deposits in this area will help to ensure the TPC's rapid development.

As the Baikal-Amur railway line is being built, large-scale construction, geological survey and scientific research are to be carried on in the surrounding area to promote its comprehensive development.

Siberia and the Far East are rich in water resources. Besides the hydroelectric power stations mentioned above, the builders are to begin the construction of the Bureya hydroelectric power station (HEPS), complete the Zeya HEPS and start the first sections of the Kolyma HEPS.

Large-scale construction is to be carried on around the Kansk-Achinsk coal basin, and also in the Pavlodar-Ekibastuz, Karatau-Djambul and Mangyshlak TPCs in Central Asia and Kazakhstan, where work is now in progress on the Ekibastuz state regional electric power plant, the Shulban HEPS, a number of concentration mills for ferrous and nonferrous metallurgy, and a ferro-alloys plant.

In the South Tajik TPC, there are plans to complete the Nurek HEPS, build an aluminium works and the Yavan electrochemical combine, and begin building the Rogun HEPS. In the Transcaucasus, it is planned to build the Ingur and Shamkhor HEPSs, the Armenian atomic power station, the Masis-Nurnus railway line, to reconstruct the Baku oil refineries, etc.

This far from complete list of building programmes indicates the vast scale of the construction projected for the tenth five-year period.

4. The Construction Base of the Tenth Five-Year Period

If the programme for capital construction is to be carried out, it has to be put on an industrial footing and the structural materials industry has to be developed in every way. Industrialisation here implies the use of prefabricated parts and structures, so that builders only have to assemble these parts and structures. Wide use of sectional ferroconcrete provides the backbone for industrialised construction, making it possible to build very fast, save metals and cut building costs. From 1970 to 1974, the output of sectional ferroconcrete parts and structures went up from 84.5 million cu m to 108.5 million cu m.

In the tenth five-year period, construction is to be further industrialised through wider production of effective sectional building structures and high-quality products with a high level of prefabrication. The output of sectional

ferroconcrete is to increase by 20-30 per cent. Over the past decade, the output of prestressed reinforced concrete wall slabs, sleepers and other parts and structures has grown particularly fast.

In the tenth five-year period, more and more buildings are to be assembled from large-size prefabricated units with the use of the mechanised line-production method, and the building industry is to turn out more reinforced concrete structures, especially thin vibration-rolled and cassetted ferroconcrete and asbestos-cement wall slabs, large-size and light-weight wall and partition panels and roofing.

The new building methods have necessitated a sharp increase in the output of handling and transport mechanisms. The builders now use 25-ton pneumatic and railway cranes. In 1974, 98 per cent of all mounting operations were mechanised.

In 1976-1980, further steps are to be taken to srengthen the technical basis of the building industry and complete the comprehensive mechanisation of mass and labour-intensive operations in construction.

Building organisations are to be supplied with large amounts of modern machinery, mechanisms and transport facilities, specialised machinery above all. In the tenth five-year period, industry is to start producing the latest machinery and equipment for express construction of motorways, new and better heading machines for the building of underground lines and tunnels, special highly productive machinery for laying high-quality oil and gas pipelines, and new finishing machinery for construction.

Highly mechanised, industrialised construction calls for new methods of work which would help to speed up construction, lower costs and raise labour productivity. The line-production method meets all these demands, and has been widely used throughout the country in the past few years. In the tenth five-year period, building under contract is to be further improved, and team contracts are to be used on a large scale.

Industrialised construction will help to raise labour productivity and reduce building costs. In the tenth five-year period, labour productivity in construction is to go up by 29-32 per cent, largely owing to mechanisation, better organisation, a higher shift factor, smaller losses of working time and better material and technical supplies.

Labour productivity growth entails a reduction of building costs. Over the past few years, some changes have occurred in the structure of building costs, reflecting the level of industrialisation. Since 1965, for instance, the operational costs of machines and mechanisms as a share of the total building costs have increased.

Present-day construction is carried on by special building organisations working under contract, which employ their own skilled personnel and have at their disposal a large fleet of machinery and adequate auxiliary facilities. Work under contract is the chief method now being used in construction, making it possible further to industrialise construction and use fully or partially prefabricated units and structures. In 1974, 92 per cent of all construction was carried out under contract.

Modern building enterprises have to be highly specialised, as this enables builders to use 10-15 per cent more building machines, and raise the mechanisation level by 10 per cent, substantially reducing their total construction costs. Fifty-six per cent of all construction is now being carried on by specialised organisations, and specialised building ministries have been set up.

In the tenth five-year period, construction is to be further specialised, which will make it possible to meet the plan targets for lowering construction costs.

There are to be more house-building combines manufacturing light-weight building parts and structures, and also specialised regional and inter-regional building enterprises.

Over the next few years, large building organisations are to be established along two main lines: as permanent organisations working under contract (for areas of heavy construction) and mobile outfits (for the outlying areas of the country, especially in the North, in order to develop new territories as fast as possible). In view of the giant scale of capital construction, the building materials industry will have to be developed very rapidly. The state has always devoted much attention to this industry, and it has now become a major branch of heavy industry.

Table 16 shows the growing production of building materials.

A point to note here is that over the past few years the building materials industry has grown faster than construction: from 1970 to 1974, the volume of construction went up by 25 per cent, and the gross output of building

*Table 16**

	1960	1965	1970	1974
Cement, mln tons	45.5	72.4	95.2	115.1
Building brick, bln pieces	35.5	36.6	43.2	46.7
Slate, mln conventional units	2,991	4,162	5,840	7,367
Soft roofing, mln sq m	750	1,083	1,334	1,684
Window glass, mln sq m	147	190	231	258
Linoleum, mln sq m	13.3	31.2	57.4	64.2

* *Narodnoye khozyaistvo SSSR v 1969 godu* (The USSR Economy in 1969), Moscow, 1970, pp. 241, 245, 247; *Narodnoye khozyaistvo SSSR v 1974 godu* (the USSR Economy in 1974), Moscow, 1975, pp. 262, 264-66.

materials by 33 per cent. That is, every percentage point of the former's growth equals 1.3 per cent of the latter's growth. This serves to industrialise construction.

In the new five-year period, the structural materials industry is to go on developing faster than capital construction. From 1975 to 1980, cement output is to increase by 22-24 million tons to 143-146 million tons, chiefly owing to the expansion and reconstruction of existing enterprises, where high-performance automated technological lines for the dry manufacture of cement are to be installed.

Improving the use of equipment is another way to increase the output of cement. Quality is also extremely important, and in the tenth

five-year period, the output of high-quality and special cements is to increase.

The production of other high-quality and economical building materials is to grow rapidly. Light fillers, which help to reduce the weight of buildings and structures, are to be produced on a wide scale, and the range of finishing materials and high-quality plumbing equipment is to be extended.

More and more construction materials, components, and structures are to be manufactured in other industries: supporting structures in metallurgy, finishing materials in the chemical industry, and wood units in the woodworking industry, whose share in the balance of building materials has steadily increased. More structural materials are also to be made from collateral products in other branches (slag, ash and non-ore materials).

The attainment of the targets for construction set by the 25th Congress of the CPSU is to promote the country's technical progress and help to expand social production and accelerate its growth.