

SOCIALIST PLANNED ECONOMY in the U.S.S.R.

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Contents

The Premises, Nature and Forms of Social-Economic Planning. By V. Obolensky-Ossinsky 5

The Crisis of Capitalism and the Proposals to introduce the Principle of Planning in Capitalist Economics. The Futility of these Proposals 5

Social-Economic Planning as a Form of Existence of Socialist Economy 11

The Historical Situation and the Evolution of Planning in the USSR 20

The Content of the Social-Economic Plan of the USSR at the Present Time 27

Forms of Plans 32

The System of Planning Organs 34

The Order and Method of Drawing up a Social-Economic Plan 37

The Plan in Action. By S. L. Ronin 48

Restoration of National Economy 48

Industrialization 51

Tempo of Industrial Action and Reconstruction of National Economy 53

Agriculture 57

Railroad Transport 59

Goods Turnover 61

Finance . 66

The Five-Year Plan and its Fulfilment 72

Summary 76

The Planning and Development of Agriculture in the USSR. By A. Gayster 81

Labour in the Planned Economy of the USSR. By I. A. Kraval 99

PREFACE

The following pages contain the material which was submitted by the Delegation from the U.S.S.R. to the International Planned Economic Congress held in Amsterdam in August 1931. The exact description of the Congress was: "Congress for International Industrial Relations;" according tho the agenda, the theme discussed by the Congress was: "The dependence of satisfactory human relations in industry upon planned adaptation of world-economic possibilities of production to human needs." The main theme was: "Planned World Economy."

The speeches of the Soviet economists at the Congress on the principles and results of planned economy in the U. S. S. R. aroused the greatest attention. This fact alone shows that the starting point of the whole discussion on questions of planned economy is the great successes of socialist planned economy. Soviet economy and socialist planned economy have today become a subject of scientific discussion which official social-economic science can no longer ignore. The members of the delegation of Soviet economists have not only expounded the results of Soviet economy in the different spheres of national economy, but they have also explained the actual nature of socialist planned economy and shown that planned economy is the special form of socialist economy, which alone provides the prerequisites for it, and can in no way be realised under capitalist conditions of economy. In view of the great importance of the expositions given by the Soviet economists and the fact that these expositions have aroused great interest far beyond the circle of the Congress, the publishers feel sure that in publishing this material they are meeting a widespread demand and thereby contributing to throw light on these very important questions.

The Publishers

THE PREMISES, NATURE, AND FORMS OF SOCIAL ECONOMIC PLANNING*

BY V. OBOLENSKY-OSSINSKY

1. THE CRISIS OF CAPITALISM AND THE PROPOSALS TO INTRODUCE THE PRINCIPLE OF PLANNING IN CAPITALIST ECONOMICS. THE FUTILITY OF THESE PROPOSALS

The capitalist world is now passing through the greatest crisis it has ever experienced. It is the greatest as regards depth and acuteness, its world-wide character and duration. So far there are no signs of improvement. The reduction of industrial production in the leading countries by tens per cent, unemployment involving tens of millions of people, an acute agrarian crisis due to the drop in the price of wheat to one third the pre-war price, the fall in the price of cotton to less than half that prevailing in the period of "prosperity", the catastrophic situation in the sugar and rubber markets, etc.; enormous under-consumption and even starvation among the working people in town and country; at the same time efforts being made, typical of capitalist "national" economy to get rid of over-production by the destruction of "surplus" sources of production and goods (the stopping of oil wells, the restriction of sugar growing etc.; the U. S. Farm board proposal to destroy one third of the cotton crop); such are the typical features of this crisis. Quite recently this crisis has manifested itself in the collapse of several important key positions of monopolist capitalism (the failure of the Danat Bank in Germany and of the concerns connected with it). This threatens the collapse of the German economic system and gives rise to the credit crisis that is spreading over Europe as well as to the incipient instability of the currencies. The position is such that it is no longer the opponents of capitalism, but its leaders and advocates who raise doubts about the very existence of the system, and are busy searching for ways out of the crisis and discussing various correctives to the capitalist system.

* The author of this report was assisted in his work by the staff of the Gosplan Institute for Economic Research (Moscow).

Meanwhile, in the only country in the world with a socialist system of economy—the USSR—the rapid growth of production continued not only in 1930 but also in the first half of 1931. The partial difficulties that were experienced were difficulties of growth, and the most characteristic of these difficulties was the shortage in the supply of labour, to use a capitalist term—a phenomenon just the reverse of unemployment. The increase in the area under cultivation for the year 1931 amounting to 9½ million hectares, the doubling of the area under cotton, the rapid development of cattle breeding in Soviet farms and collective farms, which are taking the place of kulak farming, which is disappearing, the increased haul of fish, the expansion of production in the textile industry, etc. are regarded in the USSR, not as an economic calamity but as a basis for increasing the consumption of the workers, for improving their economic conditions. It is not surprising, therefore, that the question of gradually abolishing "rationed distribution" and food cards, of which so much has been written abroad by the enemies of the USSR, should be seriously discussed in the middle of this year. Nor is it surprising that the representatives of the USSR at the world grain conference could under no circumstances agree to the American proposal to reduce the production of grain in order to "balance" supply and demand.

Apart from the totally superficial explanations of the world crisis of capitalism, the champions of capitalism now advance two reasons for the crisis: 1) lack of coordination, anarchy in economic processes and 2) deep divergence between the movement of production and the movement of the purchasing capacity of the masses—who constitute the bulk of the consumers. Contrasted with the living example of the USSR these contradictions of capitalism stand out in a particularly striking fashion. And in so far as the absence of these contradictions in the Soviet Union is obviously due to social economic planning the idea is spreading of borrowing the method of "planning" from the Soviet Union and transplanting it to the environment of capitalist economy; this however, has to be done without replacing the foundations of the capitalist economic system by the socialist foundation on which planning is in fact based, from which it has practically grown and which secured its well known successes.

Anarchy in production, in circulation of commodities, finance, etc., the divergence between productive and purchasing capacity

are not isolated phenomena; they cannot be separately removed while the whole complex of conditions which for the last hundred years has inevitably and constantly given rise to them with increasing force, is preserved. This complex of conditions is the capitalist mode of production, the principal features of which are: private ownership in the means of production, social division of labour and the contrast between town and country that this gives rise to. Relations between economic units are established through the market by the operation of the law of value. At a certain level of development the means of production are concentrated in big enterprises, means of production are transformed into capital—the property of the capitalist class; the masses of immediate producers are converted into a class of proletarian workers, whose only property, their labour power—is a commodity, the price of which is determined by the cost of its reproduction. A considerable intermediate group of small "independent" producers is preserved—mainly in agriculture—which is oppressed by the rule of capital, of landowners living on rent, of commercial "middlemen" and of various parasite groups. Profit and increasing of capital are the basic motive powers of economic-technical development; the capitalist strives on the one hand to reduce the price of the commodity labour power to the minimum, and to get the utmost surplus value out of it, while on the other hand the capitalists compete with each other to sell their goods in the widest market and at the highest profit. In the process of vertical and horizontal concentration of capital, monopolistic combines are formed and industrial and merchant capital gradually become grafted on to bank capital. This, however, does not abolish competition between groups of capitalists and branches of industry, but gives it enormous concentration and force. The struggle for markets, for spheres of investment of capital and for cheap raw material is transferred to the world arena; monopolist groups in control of state power (the imperialist groups) contend with each other for the partition of the world and for the control of as many colonial territories as possible. The competitive struggle, the pressure brought to bear on labour power and on the small producers, etc., is transferred, in a different form, but with greater force, to the arena of world relations. This not only gives rise to world wide economic cataclysms, but also to wars between the imperialist powers, to colonial expeditions and uprisings, to increased national oppression, growth of armaments, etc.

The existence of such an integral and inherently connected complex of relations is a real fact. Its manifestations (including the world war and the "peace" which followed it and, which created a whole system of oppressing and oppressed states and nations; the world crisis of 1920-21, the present world crisis, a series of revolutions, including the first socialist revolution in Russia, and the preparation of the imperialist groups for a new war), are common knowledge. Events during the last fifteen years have clearly demonstrated that material interests in the form of class interests, are the driving force of world history. They have shown that the struggle for these interests has not abated, but on the contrary has assumed hitherto unparallelled concentration, sweep and sharpness, that the imperialist groups who possess all the economic resources, all the instruments of violence of the modern state as well as powerful ideological weapons (science, schools, church, press) are prepared to go to any lengths, including even mass extermination of human beings and the destruction of material and cultural values, in the fight to maintain and extend their rule.

Under such circumstances the attempts isolatedly to remove the two contradictions of the capitalist system and isolatedly to introduce the principle of planning, fail to take into account economic, social and political reality. These two contradictions in any case are based on the existence of private property, classes and bourgeois state power which protects private property. Italy, which has been proclaimed a "corporative state", where employers and workers must join syndicates and trade unions in their respective industries, where a supreme economic council has been set up to regulate production and the market, where the state generally interferes to a considerable extent in economic relations, is in the same state of general overproduction and divergence between production and effective demand—as all the non - "corporative" states.

The "voluntary" introduction of the planning principle in the capitalist system (as proposed in the United States) by removing restrictions on the formation of combines in separate industries, by forming planning and coordinating boards for each industry and a central board to coordinate all industries, will of course fail to achieve the avowed objects. But it will secure one tacit object: namely, the repeal of the anti-trust laws. Generally speaking, this system of branch or inter-branch "planning" conventions (which in fact establish quotas in production) will only

strengthen the position of the big monopolist bodies, and will help to increase the pressure on the interests of the workers and farmers. It will not abolish the competitive struggle of the employers, or under-consumption of the masses, Stock Exchange speculation, "watering of capital", or the imperialist aspirations of big capital (it will only strengthen them), nor, in the last resort, will it avert crises. In Germany, where even before the war the organisation of cartels in separate industries and also between industries was permitted by law, the crisis is raging with particular force.

Still less feasible is the proposal to introduce planning on the basis of an agreement between classes, the partial restriction of the rights of private property, the regulation of prices and profits, the fixing of the standard of living of the workers and the introduction of "annual" wages, of control over capital issues, etc., with the aid of planning bodies consisting of employers, workers and representatives of science and technique, with a right to investigate and control, and in extreme cases, to issue obligatory orders. This is the proposal made by Dr. L. Lorwin (Washington) in a paper he is to read at the World Social Economic Congress on the problem of planning; and the proposals advanced by the European advocates of the theory of "organised capitalism" are similar to this.

The gigantic and complicated mechanism of modern economy can operate effectively only if the hundreds of thousands of capitalists, and their agents, personally and materially interested in their own enterprises and enjoying sufficient freedom to display "private initiative", automatically cooperate with each other; or if a single directing body be set up to exercise all-pervading and complete control over the whole mechanism, or over the decisive part of it in the initial stage. In the latter case, the leaders of this organisation must be socially homogeneous; they must be guided by a common idea, will and aim, which must pursue public and not private interests; the old class type of "employer", must be replaced by an essentially different social type, with a different social education, different interests, habits and ideology. As a rule, only the industrial worker can meet these requirements. And it is not by mere chance that over ninety percent of the managers of the Soviet enterprises are communist workers (the membership of the Communist Party is an extremely important factor in securing unity of social aim, will and action). What is required, moreover is

that the entire mass of workers,—or at first, at least the active majority—shall be absolutely devoted to planned social production and that they regard the industries as their own. Only in this way can the difficult and complex social economic plan be drawn up and carried out successfully.

Instead of either of the above-mentioned alternatives in economics, let us for a moment imagine a situation in which the incentives and the care and initiative formerly displayed in business have broken down, although the former leaders of business have remained the same. We will assume also that the rights of these business leaders have been restricted and that a sort of guardianship is set over them in the shape of a body, of mixed social composition, with different interests and different social psychology, which is a planning and controlling body, but not responsible for the management of the enterprises. Moreover, the environment which fosters bourgeois interests, habits and ideology remains practically unchanged and the masses of the workers have no social incentive to support planned economy because they do not regard it as their own common cause. Such a hypothetical situation could only lead to: 1) Constant friction and conflicts between the class groups represented on the planning bodies, which will hamper the working out of plans and result in bad planning; 2) similar conflicts with individual employers who will try to hinder the drawing up and the carrying out of plans; 3) an enormous bureaucratisation of management, both in form and in substance; 4) in some cases indecision and inertness on the part of business leaders; 5) their insubordination to planning decisions in other cases—in fact in most cases; 6) mass abuses, peculation and graft; 7) the hampering and disruption of the economic processes which will be tantamount to the worst of crises. To this must be added that one of the decisive prerequisites for the planning of national economy is centralised, unified control of the natural resources of the country (land, minerals, water power); failing this, planning will be enormously hampered.

However, all these assumptions are altogether hypothetical; for it is altogether impracticable to imagine that the employers who wield real power and force will allow themselves to be brushed aside in this manner. Still less feasible are such proposals as a means for the r a p i d solution of the acute crisis of the capitalist system. Even if such a proposal were formally "adopted", as the Wilson proposal for a League of Nations was

adopted, within the shell of this scheme a struggle would break out between the monopolist groups, for each would strive to strengthen its own rule. At the same time the resistance of the masses would be weakened, for they would be led to expect great things from the planning system. In reality there is no danger of anything like this happening, because the proposal itself is unfeasible.

Hence, social economic planning is impossible under capitalism. Planning is an inseparable feature of the socialist system of production, in the womb of which it arises, develops and is carried out.

2. SOCIAL-ECONOMIC PLANNING AS A FORM OF EXISTENCE OF SOCIALIST ECONOMY

Socialism is a system of society in which all the means of production belong to society as a whole. This system is engendered in the womb of capitalism by the development of the material prerequisites for the socialisation of industrial processes, by the growth of machine production, of big enterprises, mergers, etc. The socialisation of the means of production naturally signifies the abolition of classes and class distinctions.*

Production is carried on for the purpose of satisfying the needs of separate members of society and of social needs, including above all the upkeep and development of the social apparatus of production.

From this logically follows the necessity for an economic plan. Even under capitalism, large enterprises, with a socialised labour process, must have a plan which must calculate expenditure, anticipate receipts in units of money, and coordinate all the productive processes. Under capitalism, inter-enterprise planning is impossible; but planning within given economic units is possible. Under socialism the whole economy

* Dr. Lorwin advances the following argument against the possibility of the abolition of classes: "Assuming that the class struggle alone is the dynamic factor of society would be fatal for socialism itself, for socialism means the abolition of classes, which would inevitably mean that there would be no further stimulus for further development". This objection is not new and can easily be refuted. The basic "dynamic factor" of social development is the development of productive forces which determines industrial relations and consequently, classes. Classes, class interests, and ideology have repeatedly been radically changed in the course of historical development, e. g. the transition from feudal to bourgeois society. The development of produc-

of the country becomes a huge single enterprise. Under this system the planning of the whole of national economy is not only possible, but absolutely necessary. It can be asserted that social economic planning is an essential form of the existence of socialist economy, just as anarchy of production and competition are the essential forms of existence of capitalist economy; for it is only by means of a plan that unified social management of all the diverse enterprises, branches of industry and spheres of economy can be exercised, and only by means of a plan can contact and coordination be established between these enterprises, branches of industry, etc. The anarchy of economic life has disappeared and its place has been taken by conscious determination of all the processes of production—the plan.

Socialist business basis (hozraschet) is the foundation of the plan and the lever for its accomplishment. It is a great mistake to believe that adherence to the business basis, i. e. aspiring to attain the greatest possible economic results for the least expenditure, is characteristic only of private capitalist economy. Socialist business basis differs essentially from capitalist business basis, but it is a feature of socialist economy as it is of every rational economy.

Unlike capitalist business basis, socialist business basis leads, e. g. to the restriction or prohibition of the production and sale of certain commodities for which there may be a considerable demand, but which public opinion regards as harmful and unnecessary. Remuneration of labour is not based on the minimum market price of labour as a commodity, for all the workers become the collective masters of production, the subject of the economic process, and labour ceases to be a commodity. "Wages" are fixed (allowance being made for difference in skill and the individual productivity of labour during the first period of development) by the simple estimation of requirements, available stocks and resources. Under these circumstances labour saving machinery is not introduced merely to cheapen pro-

tive forces within the womb of capitalist society leads to the actual socialisation of the productive process and simultaneously to the powerful growth of a new class to take the place of the bourgeoisie, i. e. the proletariat. The latter has no property or interests in property. The only class "ideal" it can have is the socialisation of the means of production, which at the same time coincides with the real interests of the overwhelming majority of the population. This socialisation creates a real base for an entirely new (non-class) system of society with new habits, psychology and ideology and also creates new possibilities of and incentives for development, as has already been proved by the experience of the USSR.

duction; the decisive factors may be the duration and arduousness of the work, the possibility of accelerating the tempo and of increasing the scale of production, etc. The essence of socialist business basis is that as a general economic result it must produce a considerable balance and that for each economic unit a certain rate of expenditure and result is assigned which must be balanced in the most efficacious way. The adoption of the business basis by each economic unit (and that is what every workplace and the shift of workers there engaged is now regarded to be) is a lever for carrying out the plan, a real form of verifying its fulfilment.

An essential characteristic feature of socialist planned economy is the "preponderance of demand over supply", to use a private capitalist term. This situation in the USSR is not by any means a result of historical conditions i. e. it is not due to the fact that the standard of living under the old regime was very low and is now rapidly rising, or to the fact that industry was so little developed that it cannot keep pace with "demand" no matter how fast it may grow. The crux of the matter is that in as far as labour has ceased to be a commodity the shackles which prevented the growth of the requirements of the masses have been removed. There are no absolute limits to the growth of human requirements, which constantly change in form. Hence, the transition to socialism creates, in this constant upward movement of the requirements of the entire mass of members of the socialist society, a powerful lever for an exceptionally rapid development of productive forces.

On the other hand, as will be shown presently, socialism also removes the fetters of private economy from the productive forces, from the producing social apparatus, which constitutes the second prerequisite for its rapid growth. Hence the policy of industrialisation in the USSR is also, not merely an expression of historical conditions,—the construction of socialism in a backward country. If socialism had been introduced in a highly industrialised country like the United States, the consequence would have been a further rapid growth of industrialisation—in a new form and in a new sense: the complete automatisation of the industrial processes on the basis of an enormous home market, and of exports to still backward countries; the rapid industrialisation and mechanisation of agriculture, the reconstruction of cities on new principles, and other forms of exceptionally intensive industrial activity. The

simultaneous unfettering of the requirements of the masses and of the productive forces of the country would create a powerful and inexhaustible stimulus to development.

What then, are the concrete premises for the socialist planned economy that has just been described?

The first is the socialisation of all means of production, and distribution, the land, minerals, natural resources (water as source of energy and irrigation), industrial enterprises (at first all the big ones), all the banks, transport enterprises (including all the railways and steamship lines), commercial enterprises (starting with the big ones), etc. All the economic "key positions" are transferred to the socialist state. To this must be added a newly created feature to supplement the other, i. e. the monopoly of foreign trade by which alone connection between the socialist state and unorganised capitalist world economy, can be planned.

The second premise, which is related to the first as the fundamental means for fulfilling the basic initial task (and all subsequent tasks) is that power passes into the hands of the working class, i. e. the working class becomes the ruling class until classes and class distinctions are abolished. This power cannot be the result of a compromise with the former ruling class; nor can the old forms of state organisation be utilised, for the very structure of the latter is such that it secures preponderance of real power for the capitalist elements. This power is the absolute power of the working class, its "dictatorship", although in substance and form it is proletarian democracy. It breaks up the old type of state and sets up a new one—transitional to the time when the state and classes die out.

The third premise, which is a corollary of the first two, is the abolition of classes and the gradual elimination of all traces of class distinctions. This at first applies to the big employers, big landowners and various parasitical groups (e. g. Stock Exchange speculators). This provides the public authorities with huge revenues, which formerly were wasted unproductively and which henceforth are utilised for the purpose of accelerating the development of productive forces and improving the conditions of the workers. The middle bourgeoisie is abolished more gradually. As regards the petty independent producers (especially in agriculture), their transition to the socialisation of industry is effected by means of voluntary co-

operation which, at a definite historical moment reaches the stage of mass collectivisation.

Another essential premise is the immediate improvement in the conditions of the working class by raising wages, the establishment of an adequate minimum wage, the introduction of an eight-hour day (later a seven-hour day, with a shorter working day for dangerous and particularly arduous occupations), improvement in housing conditions (by the class redistribution of the housing fund during the initial period), introduction of social insurance in its various forms, etc. All this expresses the fact that labour has ceased to be a commodity and that the proletariat has become the collective master of production, it helps the proletariat to feel and act as master of production. All this is reinforced by corresponding measures in the realm of general politics, and also in the field of culture and education. All this secures the fundamental basis upon which social and economic planning can be successfully carried out, i. e. the active participation of the entire working class, expressed in socialist competition, shock brigades, the so-called counter-plans, etc.

The next premise is the concentration of leadership, which must go hand in hand with concentration of production, in industry, transport, etc. A system of directing bodies is set up for each sphere of economy, separate industries, groups of enterprises and single enterprises. Cadres of business leaders are created, homogeneous in social composition, social aim, social consciousness, will and action. These cadres are reinforced by a ramified network of special organisations consisting of those who directly take part in the industrial process. The entire system is subordinated to a single directing body—the Supreme Council of National Economy (special bodies are set up to manage transport, trade, credit, etc.). The historical course of events was such, that in the USSR these bodies were set up before the special planning bodies, and originally they performed the functions of planning. The supreme body, which linked up all the others, was the government. But only when the Gosplan (State Planning Commission) was formed did the function of planning receive complete organised and specialised expression. The creation of a single centralised directing system of guidance is the corollary of the principle of concentration and specialisation of industry, which immediately produces considerable material advantages.

A premise of developed social economic planning is the gradual elimination of the contrast between town and country, which is one of the manifestations of the social division of labour—the typical feature of class society. The technical, economic and cultural backwardness of the countryside (which Karl Marx aptly described as the "idiocy of village life"), the scattered character of its economic organisations, have to be overcome by combining industry with agriculture. Big producing units—state farms and collective farms—must be established, based on the greatest possible mechanisation of production and on the above-mentioned combination of industry with agriculture. Progress in this direction will result in agriculture becoming completely permeated with the principle of social economic planning. The gradual elimination of social division of labour (particularly between brain work and physical work) by raising the general standard of technical skill of the workers (witness the great movement among the workers in the Soviet Union for "mastering technique"), by raising the general level of education and culture (the reorganisation of the schools on new lines, making the universities accessible to all, organising university extension courses in all forms, clubs, special societies, greatly developing the publication of books and newspapers), all secure an increasing degree of perfection in the mass participation in the drawing up and fulfilment of plans.

The abolition of colonial exploitation and the placing of the toilers of all nationalities and races on an equal level is the corollary of the two preceding premises and reinforces them. Backward regions and backward strata of the population cease to be factors retarding the development of productive forces and the growth of mass consumption. The artificial concentration of industries in the region where the ruling nation predominates is put an end to. The systematic development of the natural resources of all parts of the former empire is undertaken (i. e. social economic planning is introduced throughout the entire territory) and an opportunity is afforded to all nations and races to display their abilities. All this creates powerful additional resources for socialist planned economy.

In conclusion it is necessary to mention one general premise for social economic planning — that the greatest encouragement and development is given to the work of scientific re-

search, especially in the field of technology and the social sciences, but also in all the other fields of science. The plan, as the manifestation of social consciousness, as the form of society's rational control over its economy, cannot base its methodology of industrial-technical development on anything else but science—the quintessence of social thought and experience. Therefore, science, scientific research, the specialists in science and technique, must enjoy and do enjoy special protection in a socialist state. Socialism calls into being a ramified system of institutions for scientific research, it strives to transform the work of scientific research into mass work, and to attract to it the broadest possible strata of workers. And socialism, which regards science, not as the private concern of individuals, but as a social function of first class importance, advances the idea of planned scientific research (on a voluntary basis). A proposal to that effect has been adopted by the Academy of Science of the USSR.

The above-enumerated premises, if taken in their fully developed form, guarantee social economic planning in its most all embracing and developed form. However, social economic planning, in less perfect forms and on a relatively smaller scale, arises already on the basis of the first two basic and decisive premises, from which all the others begin to develop as their corollary. From a "partial type of planning" (to employ Dr. Lorwin's terms) there inevitably follows the "absolute type".* For the social economic plan of the proletarian state is simultaneously the plan of management, and the plan of socialist construction, of the gradual reconstruction of the entire national economy on socialist principles.

The socialist plan of national economy is a struggle in more than one sense, and in many directions. It is not an academic theory or an impassionate technical-economic calculation. The plan is the expression and the weapon of that last class struggle in human history, which the working class is waging for the destruction of classes and for the building up of socialism. The plan is the object of the struggle. The remnants of the former ruling classes try to influence the framing of this plan; they try to twist it to their liking, to retard its fulfilment. In

* Dr. Lorwin is mistaken, however, in thinking that developed Socialism (Communism) presupposes a general levelling and reglementation. Marx defines the inter-relations between society and its members under Communism by the formula "from each according to his abilities, to each according to his needs." Marx and Lenin were also emphatically of the opinion that the State will die out under Communism.

the course of planning and the execution of the plans a struggle is waged to overcome shortcomings due to mistakes in planning, to inexperience and to the complete novelty of the whole system of planning. New resources for the growth of productive forces and the improvement of the conditions of the workers continuously come to light. The plan is constantly being corrected, and so far the corrections have invariably been on the side of increasing the scale of production, increasing rates of growth and widening the sphere covered by the plan. However, this struggle and dynamics which characterise the framing and fulfilment of plans do not lead to planlessness or anarchy; they express the incessant movement towards the extension of rational control over all economic processes, towards the command of all the productive resources of society.

We will quote a few examples to show what results can be achieved by the transition to socialised ownership in the means of production and constantly expanding social economic planning. In regard to the utilisation of the natural resources of the country it becomes for the first time possible to organise the prospecting for minerals in a scientific and systematic manner on the basis of the data of geophysics. Prospecting for metal ores for example is carried on by special expeditions, employing modern, perfected methods, in all the geophysical regions where it is expected that the particular ore can be discovered, and this work is in no way hampered by private property in land and minerals. The result is an exceptionally rapid discovery of hitherto unknown riches. Similarly, exploration is going on for coal, oil, potassium, phosphates, sulphur, etc. That is why new sources of natural wealth have been constantly discovered in the USSR in the past few years.

In the exploitation of natural wealth a state of things has been reached where wasteful exploitation of natural resources caused by competition has been entirely eliminated. Competition has a pernicious effect on oil production, and this has entirely been eliminated. As a result, the same area can yield a considerably greater amount of oil. The intentional concealment of discovered mineral deposits and the restriction of output (in order to keep up high prices) which hampered the production of oil and non-ferrous metals in Russia, are also put an end to. The socialisation of the sources of water power and their collective exploitation facilitates the production of exceptionally cheap electricity (hence the cheap production of nitrates, aluminium, etc.) and the regular

combination of power stations into "rings" which, according to plan, cover the whole country. The planned construction of the so-called geopraphical combines and also of regional complexes of enterprises becomes possible. As an example of the former we may quote the grand project of the Ural-Kusnetsk Combine, which is now being fulfilled, and which is based on the joint utilisation of the Ural ore and Siberian-Kusnetsk coal. A regional complex of enterprises is arising around the Dnieper hydro-electrical power station connected with the production of nitrates, aluminium, highgrade steel by electrical smelting, the organisation of an irrigation system, etc. Generally speaking all the new big enterprises in the USSR are now built on the principle of planned combination, full advantage being taken of the mutual utilisation of gas, steam (for production purposes and heating), electrical energy, by-products, and "waste", and on the combination of industries and agriculture.

The social control of capital investment funds permits of the construction of only big and therefore technically best-equipped enterprises. For example, the standard metallurgical plant now being constructed in the USSR is one with an output capacity of about 2 million tons per annum, i. e. a size approximately that of the Gary Plant in Indiana; tractor plants are being built with an output capacity of 40 to 50 thousand machines per annum. The Nizhni-Novgorod Auto Works will supply 140,000 automobiles a year, the Rostov Agricultural machinery works is the biggest in the world, etc.

Just as in a socialist state there is no scope for concealing or hampering the utilisation of natural resources, so is there no scope for concealing new inventions or restricting or hampering their application (by buying up patents, restricting their use, deliberately neglecting them). All inventions and improvements can and must be utilised. Invention is not a private matter: hundreds of research institutes are working on inventions according to plan. The creative abilities of the worker inventors are encouraged in every way. This has already produced important technical changes, especially in the coal industry and in the construction of agricultural machines.

The activity of the masses of the workers is the greatest factor contributing to the success of social economic planning. Not only does socialist competition and shock-brigading—manifestations of a new socialist psychology—directly raise the productivity of labour, but the masses of the workers themselves are

mainly instrumental in discovering new industrial possibilities that have so far been unused, and enables them to exceed the plans. This finds expression in the so-called "counter-plan", the idea of which originated a year ago. When the draft plan of production is sent to the works or to a department, it is discussed there by the workers. They find that output can be increased and cost reduced on each unit of production to a greater extent than provided for in the plan; and the plan is amended accordingly, is replaced by a counter-plan.

The few examples quoted above give a general idea as to why a backward country, which suffered enormous losses in the world war and which later experienced the equally ruinous intervention and civil war, which only ten years ago experienced mass famine—was able, not only to restore everything that was ruined, but also to advance forward at a pace unparallelled in history, leave pre-war standards of production far behind and make uninterrupted progress at the height of a world crisis. These achievements have been accompanied by the reduction of the work-day to seven hours and the radical improvement in the conditions of the workers in town and country. Moreover, this progress was achieved without the aid of capital from abroad. All these are the obvious fruits of the reconstruction of the USSR on socialist lines, the results of planned socialist economy.

3. THE HISTORICAL SITUATION AND THE EVOLUTION OF PLANNING IN THE USSR

The social economic plan of the USSR was not born in its present developed form; nor were the premises which enabled it to assume this form developed at one stroke. A long road had to be travelled from the November Revolution, 1917 to the present day. This road has been covered while fighting against the technical, economic and cultural backwardness of the country, intensified by the consequences of the destructive world war, a hostile capitalist environment, which meant blockade, intervention and outside support to the civil war and to the subsequent resistance of the remnants of the capitalist classes.

Briefly, the past period can be divided into the following phases: 1) Conquest of power, break-up and reconstruction of the state apparatus, break-up and initial reconstruction of the economic foundations of the old regime (1917-1918), 2) period of civil

war and so-called "War Communism" (1918-1920), 3) transition to the "New Economic Policy", and 4) beginning of socialist reconstruction and of the development of the "socialist offensive" (from 1927 to the present time). This is a rough and conventional division, but it gives the general background of the development.

In the first of the aforesaid phases it was impossible to develop social economic planning owing to the economic disorganisation inherited by the new power from the old; the new organs of power and the economic administrations were only just being formed; the key positions in national economy had only just been wrested from the former ruling classes. The need for planned economic leadership was fully recognized, but the objective possibility for it was still lacking.

In the second of the aforesaid periods, the situation was not more favourable: the Soviets ruled over a continuously changing territory; for a long period the Donetz coal and metallurgical district was cut off from the leading centre, and so also were the Urals. The Baku oil fields and the cotton growing districts of Central Asia were entirely cut off until the end of the civil war. In 1920, industrial production amounted to only 18 per cent of the 1931 figure, the production of pig iron was only 2.4 per cent, the production of cotton textiles 4.6 per cent. There was a period when all the blast furnaces in the Ukraine were idle. Under such conditions, economic activity consisted mainly in keeping industry—which worked mainly for defence—going as far as possible, and also in maintaining the collection and distribution of the scanty food and raw material resources. Market distribution failed entirely, and in order to secure state collection of agricultural products, and to put a stop to profiteering, the market was almost completely liquidated. The system of "War Communism" was established. This was a form of planned economy, the economy of a besieged fortress, which kept strict account mainly of the stocks of articles of consumption, and distributed them scrupulously according to the class principle. The centres of this narrow and one-sided planning activity were the Peoples' Food Commissariat, the so-called Utilisation Commission, and the planning Department of the Supreme Council of National Economy. Though this epoch was very unfavourable to the development of social economic planning, it should be pointed out that during this period the new ruling class removed its adversaries from all the economic "key-positions", built up a

new state apparatus, including the apparatus of economic administration, and in the struggle against unprecedented difficulties, trained and steeled large cadres of workers—the future leaders of economic activity.

It is extremely characteristic that in the last year of the civil war epoch, on Lenin's initiative, a beginning was made with the working out of a general plan for the reconstruction of national economy, a plan based on the electrification of the country (the so-called State Electrification of Russia Plan). This 15-year plan for the technical and economic reconstruction of Soviet Russia was passed in December 1920, by the Congress of Soviets, and became the starting point of the whole subsequent planning work.

The end of the civil war marked the transition to the new phase. The agricultural production of the small peasants who had become the chief producers after the expulsion of the landowners and the distribution of the socialised land, declined considerably in the period of War Communism. The small peasant producers demanded manufactured goods in exchange for their agricultural produce and raw material, which the disorganised industries could not supply. At the same time, the state of industry and the resources at the disposal of the state did not permit of the organisation of agriculture on the basis of rationalised, mechanised large scale production, for this demanded enormous quantities of agricultural machinery and implements. Moreover, the peasants had first to be given practical proof of the advantages of such a mode of production. The market stimulus had to be restored in order to encourage the restoration of the area of cultivation, stock raising, etc. At the same time the habit acquired in the period of "War Communism" of working without business accounting had to be eradicated and the bureaucratic excrescences which had grown on the state and economic apparatus of administration as a result of this had to be removed. The first stage in the transition to socialist business method was marked by the necessity for s o c i a l i s e d industry to master the principles of m a r k e t commercial accounting. In so far as the new ruling class found it difficult to manage all the numerous small and commercial enterprises scattered through the country which, however, were important for the restoration of the exchange of commodities between town and country, it was expedient to hand them over to private persons for utilisation, (i. e. on a leasehold and not an ownership basis), the more so that

their activity was an inducement to the state enterprises "to learn to do trade" (Lenin). The totality of these measures became known as "NEP". On the one hand, NEP was the expression of a policy appropriate to the first epoch of socialist construction—maintenance of market relations in a modified form. On the other hand it included at first elements of retreat (in order to gather strength for another advance). Already in 1922, Lenin declared this retreat at an end.

The gradual restoration of the productive forces of the country (retarded by the bad harvest and famine in 1921) enabled a beginning to be made with the systematic organization of planning. The State Planning Commission (GOSPLAN) was established as a commission of the Council of Labour and Defence*, in February 1921. It was instructed to draw up a single state economic plan on the basis of the electrification plan, and it was also to make a beginning in drawing up annual economic plans. In accordance with the principle of scientific planning the Commission consisted mostly of specialists—engineers and economists. Krzhizhanovsky, an engineer and a Communist, was appointed chairman of the Commission. In 1921, the Commission was only able to verify some partial yearly plans which had already been drawn up by various economic organs (for instance, the fuel plan, an outline of the plan of activity of the Commissariat for Agriculture), and to draw up an economic plan for 1921-22 which, in view of the circumstance of the time and the nature of the planning materials at the disposal of the Commission, was more in the nature of a food plan. But in 1922-23, it was already possible to lay down the principles of an industrial plan (85-90 per cent of which was carried out); plans of all the economic Commissariats, and the Budget were examined; an export and import plan, plans for the restoration of famine areas were drawn up, and an outline of a Five Year Plan for the development of national economy, with the possible attraction of foreign capital (attraction of such capital on the basis of concessions was contemplated as one of the elements of "NEP") was drawn up for the

* The Council of Defence (formally a committee of the Council of Peoples' Commissars) was formed in November 1918. It was in the nature of a small government commission and was chiefly engaged in mobilising and distributing the economic resources for defence requirements. At the end of the civil war it was reorganised into the Council of Labour and Defence, the Supreme Government Council which coordinates the activity of the Economic Commissariats and Centres. It should not be confused with the Supreme Council of National Economy which is the Commissariat of Industry.

Soviet delegation to the world conference in Genoa. The State Planning Commission became also the central advisory body of the government, to give its opinion on all the important economic and technical measures that were proposed. By a series of decisions, the rights of the State Planning Commission were widened and reinforced; the planning organs of the various government departments were subordinated to its methodological and organisational* guidance. However, the State Planning Commission was never converted into a Commissariat, and its conclusions were never binding on the operative economic centers. The conclusions of the State Planning Commission, and its projects were subject to endorsement by the government; the planning function was separated from the function of leadership, and the latter was not subordinate to the former. Likewise, the planning organs of the various government departments, while subordinate to the methodological and organisational guidance of the State Planning Commission, were directly subordinated in their operative tasks to their respective departments.

A big stride forward was made in 1925 when all the hitherto separate plans were brought into a single system, called the "control figures of 1925-26" (the financial year was then reckoned from October 1st). The control figures were estimates of the volume of production (agriculture and industry), the volume of goods available for the market, the movement of prices, freight turnover, exports and imports, productivity of labour and wages, house building, transport, investment of capital, money circulation and credit, the budget and the processes of socialisation. Thus, it was a highly developed and many sided plan; but it was not yet sufficiently coordinated internally, it was regarded as a "series of figures, but not as a system of figures". The compilors were guided by imperfect methods of induction (planning on the assumption that the statistically established trends and relations of the past will continue in the future), by "expert opinion", by "gradual approximations", but the method of balanced coordination of separate economic elements was applied very little.

The Control Figures of 1926-27 were a great improvement, as also were those of subsequent years. This was due to the completion of the process of restoration of the productive forces of the country (this restoration entailed considerable technical re-

* i. e. with regard to its internal arrangements, its division into subdepartments etc.

construction, and radical social-economic reconstruction), to the growth of planned organization (planning organs sprang up in all the large territorial units of the country), to the improvement in the statistical material etc. The capital investment section began to occupy a prominent place in the Control Figures, a distinct division according to economic "sectors" was introduced: (a) State enterprises; (b) socialized-cooperative and collective; and (c) private enterprises and concessions. District Control Figures began to be compiled. The balancing method was adopted (in 1927 an accurate and exhaustive grain and fodder balance was drawn up); a beginning was made in calculating the total national income, etc. Despite the covert resistance and "sabotage" of the supporters of the bourgeois system in the State Planning Commission which came to light subsequenly, the plans and their execution showed a rapid and continuous growth, and the socialist elements gradually assumed predominance in all spheres of national economy. The steadily developing "socialist offensive" of the working class and poor peasantry, on the basis of the restoration of industry and the expansion of resources, guaranteed the rapid technical re-equipment of industry, the construction of new gigantic, technically perfect works, as well as the technical reequipment of agriculture, which presupposed concentration of production and brought with it the mass entry of peasants into the collective farms, as well as the social isolation and liquidation of the remnants of the rural bourgeoisie—the kulaks. The remnants of the bourgeoisie were also driven out of industry (leasehold enterprises). The resistance of the kulaks to the socialist offensive led to temporary difficulties on the agricultural and raw material market (the kulaks hitherto had supplied a considerable share of this produce to the market). However, by the summer of 1930 these difficulties began to diminish, thanks to the successful application of the new form of agricultural organization. By the summer of 1931 the possibility of entirely overcoming these difficulties were in sight.

The "Five-Year Plan" which has acquired world-wide fame, was drawn up between the period of restoration and the period of reconstruction. It is a plan of economic development to be carried through in five years. In general it is based on a perfected version of the control figures, but gives a clear perspective of and indicates the direction which the struggle for technical reconstruction, development of production and socialist reorganization of economy will take. The first draft of the Five-Year

Plan was begun in the autumn of 1926. It was examined by the Congress of the Planning Organs in the spring of 1927, and was subsequently revised by the introduction of two variants—the "initial" and the "optimum" variant (the latter presupposed very favourable conditions for the realization of the plan, *interalia*, additional resources from abroad). At first, the Five-Year Plan was drawn up for the period 1926-27 to 1931-32. In its final form, published in 1929, it embraced the period from 1928-29 to 1932-33. Owing to the return to the calendar year, the Five Year Plan will be completed in 1933. However, it is common knowledge that the fulfillment of the Five-Year Plan is proceeding so successfully that its completion in 1932 is already fully guaranteed that is to say, the "optimum" variant and not the "initial". Despite the efforts of the advocates of the bourgeois economic system to partially "spoil" the plan and especially to retard the rate of growth decided on, the plan turned out to be a factor of enormous organizing significance. For to take account of and calculate all the national economic resources in terms of t i m e is no less important than doing it in terms of s p a c e. Simultaneously, this gives a concrete aim and a unifying slogan to the whole mass of the working population. In both directions the significance of the Five-Year Plan is enormous. Already on the basis of the Five-Year Plan, we arrived at the "social economic plan of 1931"—a plan which in fact embraces all the national economic processes in their entirety, and includes, especially on the financial side, not the Budget but the State Financial Plan (which embraces also credit, all money expenditure and revenue of economic units etc.) Hence, the change in the name (instead of control figures). The balance method now permeates the plan; grain, fuel, metal, transport, building materials, fundamental equipment of enterprises, labor power, "supply and demand" of the principal commodities, money income and expenditure of the population, are calculated as a balance. The annual plan has become the social economic plan, and it has become what such a plan should be—a plan of socialist management—in form and substance. The social economic plan is the plan, as its authors describe it, for the completion of the foundation of socialist economy.

4. THE CONTENT OF THE SOCIAL-ECONOMIC PLAN OF THE USSR AT THE PRESENT TIME

The USSR has not yet completed the construction of socialist economy and of socialist society. In the resolutions of the leading organs of the ruling party in the USSR—the Communist Party—and in those of the last Congress of Soviets, the present phase is defined as "entry into the period of Socialism", and the task for 1931 is formulated as "the completion of the foundation of Socialist economy". Thus, transition to the Socialist order is not yet completed.

However, already under these conditions, economic planning on a national scale is going on, which means that the plan embraces the process as a whole, which guarantees the progress of society towards Socialism. This means that the plan foresees all the most important elements of the national economic process. In the main, the plan decides the question of the tempo and direction of the whole social economic process.

The plan establishes a general rate of growth of the whole national income, and is calculated on the basis of the inclusion of a largest possible number of the able-bodied population in the process of production, and of raising the productivity of their labor. The plan solves one of the fundamental problems which determine the rate of increase of production, namely, the problem of distributing the whole yearly output between accumulation and consumption.

The detailed plan of production for separate industries, concretely lays down the quantity and specification of means of production and articles of consumption to be produced. By that reason it is simultaneously a plan of distribution, for it determines the main channels along which the commodities produced are to be distributed for accumulation, industrial consumption, personal consumption. A special feature of the social economic plan is that instead of providing for production for an indefinite market, it at once makes provision for a definite consumer. There is no gap between production and distribution. It is eliminated by the character of the social economic plan, which is a teleological plan.

In accord with the task of social and technical reconstruction, the plan also provides for the distribution of all accumulations among the various branches of economy on the basis of the leading ideas of the general recon-

struction plan and on the scientifically determined consecutiveness of the various elements of this reconstruction plan.

The plan provides for the distribution of all the elements of personal consumption among the various classes and groups of the population in accordance with the share each group has taken in the process of production, in accordance with their degree of skill and the tasks they fulfilled in regard to productivity of labor. For this purpose, the plan decides on the amount of commodities of various kinds to be turned out not only by the socialised but also by the private sector.

Finally, the plan lays down what measures shall be taken to guarantee that all the above mentioned elements of the plan are put into operation. The plan lays down prices, wages, taxes and all the other elements of the financial plan which, in the transitional period, when money-commodity relations are retained, serve to distribute and redistribute the monetary resources and thus fulfill the plan for the general distribution and redistribution of all the resources of the country.

The plan determines the sum total of the inter-relations between the economy of the USSR as a whole, and world economy as a whole, and each separate country in particular.

Every year the plan has, to a increasing degree, embraced every element of the national economic process and of the process as a whole.

The following data show to what extent the plan embraces at present the fundamental elements of the national economic process. In 1930, three fourths of the whole national income came from the socialist sector, the private sector being responsible only for about one fourth. If we take into consideration that the private sector's program of production was greatly influenced by the state and cooperative organizations, that by the contract system*, the taxation policy, the policy of prices, and industrial and personal supply, the plan determined and stimulated the production of the necessary crops, we must come to the conclusion that the influence of the plan was felt almost in the whole domain of production. According to the plan of 1931, the share of the private sector in the national income decreased still further, to

* The contract system is a system by which the various state departments enter into an agreement with the independent small producer in which the latter undertakes to sell his future crops to the state; while the state undertakes to provide the producer with credits, seed, materials, implements, etc.

18 per cent, while the influence of the socialised sector on it increased to a still greater extent.

The decisive element in the plan is the plan of capital investments on which depends the direction which the expanded reproduction will take place. In 1930, investments in the private sector represented only 15.5 per cent of the total sums invested in national economy and the plan for 1931 provides only for 7.5 per cent, and even this small share is under the influence of the socialised sector on which the supply of machinery and building materials for this capital expenditure depends. The largest share of capital investments is distributed among the branches of national economy strictly according to plan, and commensurate with the definite aims pursued by the plan (rapid development of the heavy industry, strengthening the technical base of agriculture, etc.), the expenditure being distributed on a territorial basis and on the principal of the scientific division of the country into districts. This element of the national economic process is to a great extent directly subordinate to the plan.

The industrial program from year to year is more and more influenced by the plan. The whole of large scale industry belongs to the state. It is organized in a small number of large "corporations" whose work is regulated and controlled by the state. Until quite recently, planning for agricultural production was a much more complicated matter, and demanded a whole complex of complicated measures in order to attain the necessary volume and structure. Last year's rapid progress of collectivisation, and the growth of the Soviet farm sector provided a sounder foundation for agricultural planning. The indirect planning and regulating of 25 million farms is replaced by a more direct planning of 200,000 large enterprises— collective farms— through the provincial unions and the All Union Collective Farm Centre which unite them. Those farms which are not yet organized into collective farms are given definite tasks. The existence of 1400 machinery and tractor stations* which are at the service of most of the collective farms for their basic agricultural operations, has the same influence.

A very complicated and difficult element in the social economic plan is the planning, distribution and redistribution of labor power. Until recently, before the mass of the

* i.e. Special enterprises having at their disposal a considerable number of tractors, and also various agricultural machinery. These stations are distributed throughout the country according to plan.

unemployed were absorbed into the process of production, when every year the ranks of the unemployed were replenished by new arrivals from the country, the question of replenishing the ranks of manual and mental workers in the growing socialised sector did not create special difficulties.

Last year's rapid growth of collectivisation, the enormous development of agriculture, the growing prosperity of the mass of the poor and middle peasantry, reduced the number of migrants from the country seeking employment in the cities, in industrial enterprises and in the building trades. Simultaneously, the rapid growth of number of students in technical colleges, universities and other schools, soon exhausted all the available labor resources of the cities, and despite the fact that an enormous number of women have been drawn into industry, the demand for labor power exceeds the supply. The plan of the last two years has been greatly complicated by problems of rational redistribution of labor power among the various branches of industry, of rapid training of new cadres—largely skilled cadres—for the new technically perfect and complex enterprises, of mechanising processes which demand a particularly large number of workers, and by a whole series of other problems.

The enormous growth in the productivity of labor in agriculture will certainly release considerable labor resources.

The fact that the predominating mass of the agricultural population is organized in collective farms provides a sound foundation for this new element in the plan. Furthermore, the fact that the most important resources of consumption are in the hands of the state, that they are distributed according to plan, that the state has in its hands a considerable part of the steadily growing housing fund, the wage policy and other levers of the plan, are bound to facilitate in the near future planned distribution and redistribution of labor power in the entire national economy.

Since planned economy has been practiced, a complicated and difficult element in the social economic plan has been the plan for the distribution and redistribution of the consumption and other resources produced by the p r i v a t e s e c t o r. The plans for collecting grain, butter, eggs, meat and to a certain extent technical crops, and a series of other agricultural products, aimed, until recently, at embracing millions of small owners who strove to make as much profit as possible out of their output. Owing to the rapid industrialisation, the growth in the numerical strength of the working class and the growth of its income, the

demand for agricultural produce has increased enormously. The well-to-do peasant farms, and especially the kulaks, tried repeatedly to take advantage of this situation to secure such a redistribution of the national income as would benefit them, by simultaneously refusing to sell the marketable part of their produce to the state. The Soviet Government could not tolerate such a redistribution of resources, for this would have been tantamount to strengthening the capitalist elements of the countryside and diminishing the rate of development as a whole.

A stubborn fight was carried on around the collecting plans which lasted years, but this struggle ended decidedly in favor of the socialised sector.

Strengthened by the fact that the state controls nearly the whole industrial output and transport, that it has the monopoly of foreign trade, the collecting organs are able to control the markets. Simultaneously, the government has set a limit to the exploiting aspirations of the kulak elements of the country by taxes and other measures. Owing to the growth of collectivisation and to the popularisation of the contract system among the whole peasantry, this most difficult sector of the plan has been, in the main, taken under control, and as time goes on, it will interfere less and less with the fulfillment of the social economic plan.

Questions of culture and social life have been given prominent place in the plan. The cultural plan lays down not only the leading ideas (such as polytechnical education, compulsory primary education, training of cadres), but it also lays down the network of schools according to the various types, it caters for the various groups of the population, lays down rules for admission and graduation, for the proportion between the various qualifications, all of which serve as a guarantee against overproduction of one type of workers and underproduction of others. The plan covers the entire network of social and cultural institutions.

The plan now also includes questions of health protection and social life. All forms of medical and sanitary measures are planned out: work in health resorts and sanatoria, development of rest homes for manual and mental workers, of physical culture and tourism, organization of public restaurants, all forms of social welfare. The housing plan was already included in the first Control Figures (1925-26).

Here is a brief enumeration of the various branches of economic and cultural activity according to the 1931 plan: 1) electrification; 2) industry; 3) agriculture; 4) transport; 5) post, telephone and telegraph; 6) consumers' cooperatives; 7) labour; 8) economic cadres; 9) public instruction; 10) scientific research; 11) health protection and social life; 12) housing; 13) the financial plan. All these branches are also taken on a district scale. The plans are mostly divided into the plan of current operations, and the plan of capital construction; they are expressed in monetary units as well as in units in kind, and coordinated with a definite increase in the productivity of labor, of wages, reduction of cost of production and reduction of prices.

Thus, the social economic plan is being gradually converted into a plan for the reconstruction of the social life of the country, insofar as it is based on material and economic premises and insofar as the various forms of social activity exercise a direct influence on economic processes. The plan becomes not only a plan for the construction of the socialist economic system, but also for the construction of socialist society.

5. FORMS OF PLANS

Social economic planning is effected by drawing up various forms of plans which differ from one another according to the tasks set, the period for which they are drawn up, the details they contain and various other matters. The main thing is the division of social economic planning into current and perspective, both forms of planning being permanent and running parallel. The object of the Perspective plan is to give a broad program of social and technical reconstruction for a more or less prolonged period (5-10-15 years). Only the existence of such a broad program can guarantee coordination in the more important measures which are intended to effect a distribution of the productive forces of the country on new lines, to lay the foundation for big building operations, to reconstruct the technical base of whole branches of social economy (agriculture, transport), and to bring about big changes in social relations. The general plan is one of the forms of the perspective plan.

The first general plan was the State Electrification Plan of 1920 (so called GOELRO-plan), the plan for the electrification of Soviet Russia, the plan for the reconstruction of the whole

country on this new technical basis which, under the Soviet government, leads to socialism. Such a general plan, worked out after the conquest of power, must be chiefly a plan for approximately the whole transition period, a plan for the construction of socialist society.

This general plan can be divided into plans of shorter duration, concreteness being their distinguishing feature, plans intended to fulfill certain tasks of the general plan with regard to technical and social reconstruction. The perspective plans for 3 to 5 years have been very popular in the planning work of the USSR. An example of this is the "Industrial Five Year Plan"*, worked out by the Supreme Council of National Economy in 1926. The "Five-Year Plan of social-economic Development of the USSR" adopted in 1929 became known all over the world. At first the bourgeois critics regarded this plan as sheer phantasy, but now the whole world has admitted that it is being carried out and more than carried out. Preparatory work is going on now for the elaboration of a second Five-Year Plan.

Simultaneously with the drafting of perspective plans, systematic work is being done in working out current plans for a year ahead. The object of these plans is—to fufill part of the general, or Five-Year Plan, in the given year. This form of plan has been developed more than any other. Yearly plans for all the most important branches of national economy have been drawn up since the establishment of the State Planning Commission. As already pointed out, the amalgamation of all these branch plans into one national economic plan has taken place every year since 1925-26. Every year this form of plan is concretised, and expanded, it becomes the fundamental operative plan, and at the same time the banner for which millions of workers in factories, works, collective farms, in the transport services, etc. are struggling from day to day.

The growing importance of the role of the single operative social economic plan in the every day work in the whole national economy has made it necessary in the last two years to divide this plan according to quarters. Before the beginning of every quarter, the quarter plan is re-examined, in accordance with seasonal peculiarities and eventual changes resulting from the fulfillment of the plan in the preceding quarter. This shows to what extent the social economic plan has become a concrete

* This must not be confused with the well known Five-Year-Plan.

reality, to what extent it determines all the proportions and the whole trend of economic activity. In some branches of industry, in the "corporations" and trusts, and especially in the enterprises, the method of monthly, and at times, of ten day and even five day plans are being adopted.

All the aforesaid plans have one very important distinguishing feature. All of them are plans of national economy as a whole. They guarantee the uniformity and coordination of all the elements of the plan which serve definite purposes, all of them guarantee the fulfillment of the tasks defined above-industrialisation, socialisation, improving of workers conditions.

6. THE SYSTEM OF PLANNING ORGANS

The central leading organ of state planning and accounting in the USSR is the State Planning Commission of the USSR which is a Commission of the Council of Labour and Defence of the USSR, and has the rights of a Government Commission. All the instructions of the State Planning Commission with regard to the organization and methodology of planning and accounting must be carried out by all the links in the State and social system. In every federal and autonomous Republic of the USSR, in every region and territory, in every administrative district*, in large towns with a population of over 20,000, there are planning commissions of the government of the respective republic or of the executive committee of the Soviets of the respective administrative and territorial units. Every one of these commissions is a central leading planning organ on the territory of their respective republic, region, district, etc.

In every Peoples Commissariat of the USSR and of the Republics, as well as in every government department of the regional executive committee, there is a special planning body which has the rights of the central administration or sector or department**, and which in turn is the planning centre in rela-

* The Union of Soviet Socialist Republics consists of Federal Republics—the Russian, Ukrainian, White Russian, the Trans-Caucasian Federation etc. The Federal Republics include national autonomous republics (the Tartar, Bashkir etc.), and also regions and territories divided according to economic and geographical principles. The lowest administrative and territorial unit is the district which corresponds approximately to the county in the USA.

** i. e. rights of the major subdivisions of the corresponding people's commissariats or government departments.

tion to the planning work of the subordinate economic organizations and enterprises.

These planning organs rest on the planning organs which exist in every economic organization (in corporations, trusts, railway boards, shipping boards, etc.) which, in their turn, rest on the planning organs of the individual enterprises (works, factories, stations, etc.). Lately, this system of planning organs is being amplified by an enormous number of planning brigades in the works, factories, and other enterprises.

Likewise, planning organs exist in all cooperative organisations, central and local.

This whole network of state and economic planning organs, which permeates a l l the links of the economic organism of the USSR, is amalgamated into o n e planning system based on subordination. For instance, the planning organ of a trust controls the planning work of the enterprises subordinated to it, it is at the same time a branch of the planning organ of the corresponding Peoples' Commissariat (the Supreme Council of National Economy), the Peoples' Supply Commissariat, the Commissariat of Transport etc., and abides by its methodological and organizational decisions. In its turn, the planning organ of the Peoples' Commissariat which controls the planning organs of the trusts and other economic organizations subordinated to it, abides by the methodological and organizational decisions of the State Planning Commission. Likewise, the State Planning Commission of any Republic or region which controls the whole planning work on this territory, abides by the methodological and organizational decisions of the State Planning Commission of the Union.

Thus, the principle of subordination of all the links along the branch (economic) and vertical (territorial) line guarantees the general connection and the complete uniformity of the work of all the planning organs.

One of the main principles of the work of the territorial planning organs is—that the economic plan of the given territorial unit shall include all the enterprises functioning on their territories, even those which are subordinated to the Union economic organizations.*

As a result of this, irrespective of the administrative subordination of any enterprise to Union and other bodies, the local

* The enterprises of the USSR are divided into I) enterprises of Union importance and 2) enterprises of local importance. The former are directly responsible to the centre, the latter to the republics, regions, and territories.

Planning Commission is able (or rather is duty bound) to draw up a general complex plan of the whole economy of the given territory, connecting and coordinating in this manner the interests of national and local economy.

As planning is applied to such elements of socialist construction as education, health protection, scientific research, organization of social life, etc., planning organs have been established in the respective Commissariats (education, public health protection, municipalities, etc.), and also in the local departments and organizations which regulate social and cultural construction.

* * *

Statistics and accounting are considered as one of the most important state functions in the USSR. Like the planning organs, the accounting and statistical organs exist in all the links of the Soviet system of administration. The structure of these organs and their inter-relation are analogous to the structure and interrelation of the Planning organs. Insofar as the largest share of the national economic production and distribution now takes place according to plan, the entire registration of the elements of economic production and distribution is, in substance, registration of the progress of the fulfillment of the social economic plan.

Therefore, the entire statistical and accounting work is carried on in the USSR with a view to giving as much help as possible to practical economic, and especially, to planning work. The determination of the Soviet Government closely to link up planning and accounting finds expression in the fact that it has vested the State Planning Commission and the local planning bodies with the functions of a Central Statistical Board. Special sectors which control registration throughout the country, have been formed in the central and local planning bodies.

The gradual execution of the plan is registered and verified by two methods: the first method is the method of "conjunctural observation" of the execution of the plan. The most important indices of the fulfillment of the economic plan are compiled and the results are communicated by the respective enterprises and cooperative societies to the organizations to which they are subordinated every five or ten days (as a rule by wire). By collecting this data from all the enterprises and from all parts of the Soviet Union, the individual economic organizations and

Peoples' Commissariats, and through them also the State Planning Commission, are able very soon to get information as to how the plan is being fulfilled and to make whatever decisions the situation calls for.

The second method consists in receiving complete accounts from all the state enterprises and cooperative societies. These accounts enable the Peoples Commissariats and the whole planning system to analyze thoroughly the results of the fulfillment of the plan, and also the factors and conditions which made these results possible. This places further planning on a sound accounting basis.

7. THE ORDER AND METHOD OF DRAWING UP A SOCIAL ECONOMIC PLAN

Planning in the USSR differs fundamentally from the planning which takes place in the individual undertakings in capitalist countries in that the unity and coordination of planned work as a whole enables the plans of separate economic units to be combined in the single plan of the whole national economy.

The organisational forms of economic administration in the USSR and the organisation of planning itself are immediate premises for this unity.

Centralised management and decentralised fulfilment give a high form of concentration which includes all the features of the economic process of the nation, in a manner which is impossible for any capitalist country. The Supreme Council of National Economy controls 73 industrial Corporations of Union or Republic importance which comprise 4,700 factories, and a further 26 corporations with 2,600 factories are under the control of the Peoples' Commissariat of Supply.* These plants are responsible for the whole output of large-scale industry in the country. Thus, a volume of output amounting to 30 billion roubles (according to 1931 Plan) is concentrated in this comparatively small number of organisations. Almost the whole of small industry has been concentrated. The All-Union Council of Cooperative Producers unites nine Republican Unions with 25,000 organisations having 40,000 workshops, in which 2,850,000 cooperative producers

* Since 1930, light industry, with the exception of the textile industry, has been taken from the control of the Supreme Council of National Economy and handed over to the Commissariat of Supply (late Commissariat of Trade).

are engaged. In 1931, the output will amount to 5.3 billion roubles.

Furthermore, the Commissariat of Ways and Communications operates all the railroads which have a combined length of 81,000 kilometres, with a yearly income of 4.5 billion roubles (according to the plan for 1931), and administers them as a single economic organisation.

In agriculture, a few years ago there were 25,000,000 individual farms. At the present time, about 14,000,000 farms have been organised into about 200,000 collective farms, which are affiliated to 35 to 40 collective farm unions, which in turn is controlled by the Collective Farm Centre of the Soviet Union. The economic activity of the remainder of the individual farms is regulated by a number of organisations by direct and indirect methods. The Tractor Centre, controls the work of 1400 machine and tractor stations. A considerable role is played in agriculture by several thousand big state farms which cover an area of several millions of hectares, and are directed by the Peoples' Commissariat of Agriculture of the USSR.

All the district electric power stations in the Soviet Union are under the control of a single centre which at the same time regulates all the electric power stations of industrial and other associations.

A high degree of concentration has also been reached in the sphere of distribution. Firstly, the whole of the wholesale trade is organised. As for the retail trade, 98 per cent is in the socialised sector, and it should be noted that 75 per cent of the whole turnover is controlled by the consumers' cooperative system organised as a single system in each republic. The remainder of the retail trade falls to the share of the trading departments of the industrial Corporations and other organisations of the socialised sector, and all together are controlled by the Peoples' Commissariat of Supply.

Finally, it should be noted that The State Bank, which has branches in all big centres of the country, and the Commissariat of Finance regulate the financial resources of the whole of the socialised sector—profit and depreciation, expenditure on capital construction, increasing working capital, and various other expenditures. This single financial system distributes and redistributes the financial resources among the various business organisations.

Turning to the work of drafting the single economic plan for the whole country, it should be emphasised once more that all the work of planning is so constructed that it combines the concentrated will and aim of the working class organized as one whole with the local initiative of masses of workers in each lower economic unit.

To obtain such coordination, before commencing to draw up the social economic plan for a lengthy period—5 years or one year—the Party and the government concretely set out their leading aim or social purpose for this period. They set it out in accordance with concrete conditions prevailing in the USSR and abroad and from the starting point of the general aim of constructing socialist society on the basis of the maximum development of productive forces and the systematic improvement of the material conditions of the workers.

The leading aim for each stage takes into account the state of national economy and the class relations within the country, and indicates the ways and means and also the rate at which national economy will be technically and socially reconstructed. The leading aim formulates tasks in the sphere of collectivisation and socialisation, lays down the proportion between the increase of accumulation and the increase of consumption, indicates the chief sections where capital expenditure is required and thus establishes a certain consecutiveness in the plan for the reconstruction of national economy.* Finally, it determines the policy of prices and wages, i. e. the policy in regard to the distribution of resources for consumption between the various groups of the population. The leading aim, however, does not give detailed figures for all these tasks; it does not indicate all the proportions in the development of the various parts of national economy; it does not lay down concrete tasks for individual sections of national economy or for big factories, and therefore it cannot serve as a direct basis on which to start drafting a plan for all districts.

Therefore, the Gosplan (The State Planning Commission), with the close cooperation of all the commissariats, on the basis of the leading aim draws up limits and directions for all the main branches of national economy. In drawing up the limits and directions, the Gosplan first bases itself on a

* e. g. investment in industry in excess of agriculture, in heavy industry in preference to light industry, etc.

fairly complete report on the condition of national economy at the time the work of planning is commenced: the condition and capacity of the productive apparatus, the new units which are expected to come into operation, the resources of consumption available, the products which can be obtained from industry during the period of the plan, the trained labour power available, the sphere of production, etc. Special attention is paid to results of the social reorganisation of individual economic units and an estimate is made of the forms and methods of resistance which the remnants of capitalist groups may put up.

Further, in drawing up the limits and directions, the Gosplan and the government departments take as their basis the results of the scientific research carried on by the numerous institutes and laboratories of the country, the activities of which are organised and subordinated to the tasks of the plan, and also the latest technical achievements in all parts of the world. The limits and directions allow for the introduction of these scientific and technical improvements on a mass scale in work of the economic organisations (mechanisation, rationalisation, standardisation, etc.), in every place where they are applicable and expedient from the point of view of national economy. The limits and directions allow also for further, necessary improvement in the organisation of labour and the rationalisation of the productive process.

Working on these data, the limits then indicate the possible rate of growth of the whole of national economy and of individual important sections. The limits set tasks as to quantity and quality for every branch of national economy, for every group of factories, and accordingly, they indicate the distribution and the redistribution of available and anticipated resources among them. When establishing limits for any group of factories, for any branch of industry, the leading aim is of decisive importance. For example, the leading aim of the collectivisation of agriculture and the reconstruction of agriculture calls for the rapid erection of tractor works, the importation of tractors from abroad and for a change in the orders given to the agricultural machine factories (machines to be adapted to tractors instead of horse-drawn machines, etc.), as was the case this year.

The leading aim for a definite plan for reconstructing transport demands that the limits and directions allow for an extensive program of reorganisation of the work of those factories which supply equipment for transport. The leading aim of making

the USSR independent of foreign countries in a number of lines, determines the tasks given to corresponding factories and requires the construction of new ones etc.

The limits take the form of a plan which is coordinated and connected in its main elements, and though only preliminary and approximate, nevertheless is a unified plan of the whole of national economy which has to be verified, made more precise and amended on the basis of the experience of tens, thousands and millions of participators in the economic process. The method of determining limits on the whole, is the same as the method employed when drawing up the final plan. This method is the method of balance.

All the tasks which are given to the various branches of industry and to various big undertakings, all the tasks in the spheres of production, distribution, and exchange, have to be reduced to a single system, to be mutually coordinated. The principal method by which this coordination is achieved is the method of balance. Limits, i. e. the tasks for individual branches of national economy, are presented in the form of a number of preliminary balances, from simple balances to the most complex, including the combined balance of all the main elements of national economy. First of all, the limits are verified by the method of balances to see whether production corresponds with consumption in the main elements of the plan. The metal balance must coordinate the stocks and output of metal for the period of the plan with the consumption of metal by all the chief industrial and constructional organisations of the country.

If in the course of defining the limits, it is found that there is a divergence in the balance, it is necessary then, to increase production, to import from abroad, or else to reduce the consumption of metal. The actual selection of items to be balanced is made on the basis of the leading aim, and the balance, or separate parts of it, are included in more complex and more general balances, in the form of values (e. g. the balance of prices and cost of production plus profit, the balance of variations in costs of production, the efficiency of labour and wages, etc.).

The peculiar feature of the method of balance is the fact that a series of material balances are examined, not separately, but complexly. When establishing any particular task in the sphere of production or construction, the limits simultaneously take into account the supply of the necessary materials by the competent organisations—fuel, metal, building materials, labour

power, etc. In each of the material balances (metal, fuel, raw materials, building materials), producers and consumers must appear in proportions which will assure them of supplies of their whole complex of materials. The whole system of material balances is united in this way into a single fundamental balance of production and consumption for the period of the plan.

In the plan, contacts with world economy occupy a special place. Almost every deficit in any material element can be balanced by the import of material from abroad, which must correspond to planned exports.

The balance method is employed to establish the general volume of accumulation in the country and the distribution of accumulations between the various branches. The balance method determines all the resources of consumption and their distribution, and also the income and expenditure of various groups of the population. The same method in the form of the single financial plan establishes the distribution and redistribution of money resources between all the economic organs of the Soviet Union through the financial institutions. The balancing of all the chief elements of the national economic process, however, is not limited to All-Union balancing. The enormous distance between the various parts of the Union calls for coordination in time and space as one of the chief questions of the plan. Simultaneously with the plan for the Soviet Union as a whole, a plan for each separate district is drawn up. A number of balances, such as the balance of labour power, the balance of production and consumption of bulky materials (fuel, building materials, grain, etc.), the balance of the income and expenditure of the population and several other balances must be drawn up for the districts. The method of balancing all the chief elements in the limits gives unity and coordination to the tasks both for the Soviet Union as a whole and for the individual republics and provinces.

In conditions where the plan is a dominating feature, when the plan embraces all the chief elements of the process of national economy, where anarchy is overcome and society is being consciously constructed on socialist principles the method of balancing subordinated to the leading aim of the plan is the fundamental method of social-economic planning.

A different and incorrect method was proposed in the USSR by bourgeois economists and the so-called "wreckers". It was a methodology of "planning", based on spontaneous economic

development, on the laws which had operated in the past. This in fact meant the renunciation of the active socialist leading aim, an attempt to preserve bourgeois elements in economy and the tacit adoption of capitalist economy as the leading aim. For example, V. Groman considered that "the methods and forms of changing society are dictated by the objective conditions of society and the objective trends of its development which are inherent in it", and these are taken as empiric laws of the statics and dynamics of national economy*. Hence, the principal method of drawing up a plan of national economy is the method of static and dynamic coefficients, or the method of extrapolation of the events of the past in the future. If to this we add the method Groman proposed of making comparisons with pre-war figures we will clearly see what planning by such methods would have led to. The rates and proportions inherited from the capitalist past, were to serve as a criterion for the socialist future. Pre-war relations of value were to be obligatory in the plans for the future, etc. It would be impossible by such methods to rebuild society, to abolish crises and construct planned economy. Bazarov, while doubting in principle whether the planning of social division of labour is possible** is of the opinion however, that purposeful planning is applicable only in the State sector. In regard to the private sector in agriculture, it is necessary, he thinks, to determine the tendency of development which will serve as the "foundation to which teleologically constructed perspective plans for separate branches of industry should be adopted".

In all analogous theories there is always observed the method of studying the trends and relations of the past, for their authors are seeking for "economic equilibrium", and are seeking it on the basis of the spontaneous laws of capitalist relations.

Such theories, like the "infantile disorders" in the socialist method of planning, are now a thing of the past. Year by year, the work of planning becomes more purposeful, more concrete. At the same time, there is an increase of synthesis, of unity and coordination in the plan. This is assisted by the mass planning work which goes on throughout the country on the basis of the limits and directions.

* Planned Economy. No. 1. 1925, Page 88.

** "The achievements of pre-war relations, in which the conditions for economic equilibrium were expressed, are to a great extent regulative norms in the objective sense of the term for the present economic process."

The limits of the Gosplan of the Soviet Union are passed on to all government departments, the republics and districts and the latter detail them out among the Corporations, trusts and complexes of homogeneous factories.

The limits and directions on the drafting of the plan are merely tentative and provisional and are drawn up several months before the plan comes into operation. They indicate the main idea of the plan for the ensuing period, and are subject to thorough discussion, critical examination, precision and ammendment in accordance with the proposals made by the central, and local planning bodies, public and business organisations, and the millions of workers in each respective district and factory. From year to year the importance of the planning work carried on in these local organisations increase enormously and finds expression in a mighty wave of "counterplans".

Until a few years ago only a relatively small group of workers took part in the work of drawing up the plans for the respective enterprise and corporation, district, region or republic. The planning group, the factory management, the higher technical staff and members of various conferences and congresses,—these represented in the main the permanent participants in the work of planning. During the past year however, the number of those taking part in this work, in the industrial enterprise, collective farm, railroad section, or depot, etc. etc. has enormously increased, and in many cases the whole mass of workers in a given enterprise will take part in discussing the plans submitted by the leading planning organisations of the factory and make suggestions for their alteration.

Counter-plans play an enormous part in accelerating the development of national economy in the USSR. In many cases, the counter-plan, on the basis of the limits of consumption given for raw materials, fuel and other items of industrial consumption, represent a higher program of work and particularly, higher qualitative indices,—a greater increase in productivity of labour, and greater reduction in cost of production. The counter-plans break down the conservativism in certain links of the economic apparatus and bring to light resources which they were not aware of. The counter-plan, by mobilising the masses for a higher plan, discover new resources that were concealed in the respective enterprises; it gives an impetus to enormous creative effort, to invention and to the rationalisation of the whole process of production.

The counter-plans of the respective enterprises are supplemented by the counter-plans of whole corporations, districts and republics. A corporation, government department or district planning organisation, on receiving the counter-plans from the factories, compare them with the limits that had been established for the whole complex of enterprises under its charge. Knowing the task that has been set the particular branch of industry or district, and knowing the place they occupy in the general plan, knowing the conditions and the difficulties in regard to supply on the one hand and the acuteness of the demand of the products of the particular branch of industry on the other, the corporation and district planning organisations, utilise the material collected from the factories, and taking account of the changes made in the original limits by the counter-plans, draw up their general plan for the branch of industry or district as a whole and in it distribute the tasks for the separate factories. The fundamental and decisive criterion for carrying out such a distribution of the general task among the factories is the interests of national economy as a whole, and not the separate interests of any individual worker or group.

The plans of the departments and republics sometimes differ considerably from the original limits. In their concrete and corrected form they are sent to the centre, to the Gosplan of the Soviet Union, which has the task of synthesizing them into the single plan of national economy. In the course of the work of the departments and republics, all the principal disagreements and disputes,—which are in fact only different variants of the balance of various elements of the national economic process, expressed in products, or money—are revealed and examined.

In the final stage of synthesis, the method of balance is again the principal method. It is applied to concentrated and corrected material. In general, the specific work of the planning departments and particularly of the Central Planning Board (a division of Gosplan) is now to compare, coordinate and equalise the relations of the balances. In fact, the basic items of the system of figures are a result of years of work on the Control Figures, have their foundation in the Five-Year Plan, are reinforced by the counter-plans. When preparing the final draft of the plan for the current year, the chief work is now to concretize the items and to balance them.

The mass work which is carried on in connection with the plan gives accurate and up-to-date information regarding the con-

dition of productive forces and productive relations in the country, makes valuable corrections in statistical data, and also supplies a mass of rich material on the basis of which the tasks of economic policy and the particular aims of the plan are made more exact.

The Gosplan draws up its final draft of the plan at meetings of departments and at congresses of the workers in the planning and scientific institutions. The plan is then submitted to the Government for endorsement. After it is endorsed the single plan of national economy is detailed out by the departments and republics among the corporations and districts. The latter carry this matter further to the individual factories and to the departments of the factories, and sometimes the obligations of each machine or working place under the plan are indicated in the form of concrete operating tasks. The plan is divided according to time—into yearly, quarterly, monthly, ten-day and five-day plans.

The single plan of national economy, drawn up with the participation of the masses and expressing the will of tens of millions of workers, is actively carried out by them. The struggle for the fulfilment of the plan takes place on all sectors of the economic front, and the numerous difficulties which arise during the course its fulfilment are overcome. The fulfilment and surpassing of the plan by every sector becomes a matter of honour for the respective groups of workers in these sectors, and becomes an object of competition among them. Every element of the plan, every part of the task in the general plan, rivets the attention of millions of workers, and the press gives daily reports on the position in the various sectors of the social economic plan:—the sowing campaign, the plan of hauling building materials, lumber floating, grain collections, subscriptions for loans, and all the other regular and periodical work necessary for fulfilling the plan.

Under the conditions prevailing in the USSR "conjunctural observation" i. e. observation as to progress in fulfilling the plan—are of extreme importance. Such observation signal all the changes that take place in the fulfilment of the plan, explain the cause of these changes and in this way they are able to assist in the fulfilment of the plan and introduce corrections in it during the course of its fulfilment. As a consequence of the close inter-connection between all the elements of national economy, a breach in the line or a retreat from the plan on one sector

affects a number of other sectors, no matter how well they themselves may be working. Every serious deviation from the plan in one place requires that coordinating measures be taken in another. Hence, the extreme importance for the factory being on a business basis; a departure from this is the signal that the particular factory has retreated from the plan.

The sum total of the tasks, quantitative and qualitative, given to a factory are expressed in its financial plan, which sums up all these tasks in a single common measure. Failure to carry out the financial plan signifies failure to carry out quantitative or qualitative tasks, or both. This means either that insufficient products have been turned out or that too much raw material, fuel, auxiliary products or labour power have been used, and hence, discrepancy in income or expenditure. Departure from business method means that a number of links in the balance are disturbed, and this cannot but effect other sectors. The struggle for keeping the factory on a business basis is the struggle for the plan as a whole, and therefore, every factory which fails to fulfil the plan in a given period of time is duty bound to make up the deficiency on the remaining period covered by the plan. At the same time, the higher bodies who keep vigilent watch on the fulfilment of the plan by each separate factory and all factories together, make the necessary changes and regroupings in the work of the other sections involved. The work of every factory is a link in the general chain of work, and it is the duty of every factory staff and of the workers of the USSR as a whole to see that each factory works properly. This is why every worker in the USSR keeps such strict watch on the fulfilment of the plan on every sector of the economic front. The business basis is a measure of the fulfilment of the plan, and that is why public attention in the USSR is rivetted on the business basis of the factory.

The plan of national economy in the USSR is a plan of the millions. The millions draw it up, carry it out, and closely watch the course of its fulfilment. This is the basis of success of planned economy, this is the fundamental advantage of the Soviet system of economy. This is the source of the unprecedented rate of development in the USSR.

THE PLAN IN ACTION*

BY S. L. RONIN

During the past ten years the development of national economy in the USSR has been determined by factors created by the October revolution—the dictatorship of the proletariat, nationalization of land, heavy industry, the banking system, transportation, the elimination of private property in all the basic means of production and monopoly of foreign trade. Basing itself upon the economic key positions, the proletarian government during all these years, carried on, on the basis of the new economic policy, a systematic struggle for the elimination of capitalist elements and the reconstruction of small peasant economy on the basis of large-scale production. It carried on a struggle for planned economy, for the building of a socialist society. What are the results of this struggle?

The national economy of the USSR suffered a severe decline as a result of the imperialist war and of the civil war, internal counter-revolution and intervention by a number of capitalist countries which followed it.

The output of industry which amounted to 5,6 billion roubles in 1913, declined to one billion pre-war roubles in 1920.

Agriculture also suffered severely. The area sown in 1916 was 114 million hectares. In 1920 there was a drop of 25% from this figure and the gross production of grain decreased 50%.

Railway transportation was completely disorganized. Out of 20,030 locomotives in 1913, there were only 18,757 left in 1920-21. The percentage of locomotives in disrepair increased from 16.3% in 1913 to 62% in 1920.

RESTORATION OF NATIONAL ECONOMY

After the civil war, the Soviet Government abandoned the policy of war communism, which has been necessitated by a state of siege, for the New Economic Policy. The first task it set itself was the rapid restoration of heavy industry on the basis of the revival and restoration of the productive forces in peasant economy.

* The author of this report was assisted in his work by the staff of the Gosplan Institute for Economic Research (Moscow).

The Soviet Government was fully aware that in permitting peasant farmers to sell their surplus products, in order to stimulate the development of productive forces, and by establishing the market form of relationship between industry and peasant agriculture, a certain growth of capitalist elements in the sphere of exchange and production would inevitably be given rise to. This inevitable growth of capitalist relationships was counteracted by the restoration and strengthening of state industry and the establishment of direct economic ties between state industry and peasant economy through the cooperative system. All this, together with the policy of supervising and restricting the capitalist elements was to facilitate the elimination of the private-capitalist elements in agriculture and guarantee the growth of socialist relationship.

Taking heavy industry as the economic basis for socialism, the Soviet Government reckoned that by restorating and strengthening this industry, by the gradual realization of the electrification plan adopted by the 6th congress of Soviets at the end of 1920, and finally by drawing the majority of the peasant farmers into the cooperatives,—it would be preparing the prerequisites for the social-technical reconstruction of the whole national economy, for the development of a powerful socialist industry and the creation of large-scale socialist agriculture.

Such was the plan for socialist construction, outlined generally at the beginning of NEP, under the gifted leadership of Lenin. This plan, taken as a basis for the economic policy of the Soviet Government, determined the character and tempo of development of the national economy of the USSR.

The period of 1921-1926 was devoted to the restoration of national economy: industry, agriculture and transport, commodity exchange and money circulation.

During this period the output of rated industry* increased more than five-fold—from 1,772 million roubles in 1921 to 9,120 million roubles in 1926 (in terms of prices prevailing in 1926/7).

As to agriculture, the area sown in 1927 reached 113 million hectars, as compared to 114 million in 1916. The total of large homed cattle for 1916 was equalled and surpased in 1925.

The rapid tempo in the restoration of industry was closely

* i. e. industrial enterprises employing 16 workers and over and utilising mechanical driving power, or employing 30 workers and over without mechanical driving power.

connected, and at that stage largely depended upon, the tempo of restoration of agriculture. The central factor was the problem of working capital—raw materials, food supplies and money. The Soviet government, which had at its disposal in 1921 an industry with a basic capital of 4,7 billion pre-war roubles, was now confronted with the task of starting the idle factories and of increasing the output of those, that were working far below their capacity. By restoring the productive forces of agriculture the necessary supplies of food and raw materials were obtained. By increasing the output of the factories and by increasing the productivity of labor the task of creating a sound basis for the growth of accumulation in state industry was solved, primarily in those industries producing articles of general use.

The stabilisation of the currency valuta and the development of the credit system solved the problem of money circulation and enabled national economy as a whole and industry in particular to obtain the necessary short-term credits important to industry.

Finally, the strengthening of the state budget permitted the introduction of measures for the revival and development of heavy industry. Capital investment in industry, which in 1921 and 1922 amounted only to a few tens of millions of roubles (sums even insufficient to cover depreciation), by 1925/6 reached 811 million roubles (for the whole of industry).

Notwithstanding the very severe damage caused to the national economy by imperialist wars, counter-revolution and intervention, the USSR was able to restore its economy much more quickly than a number of European countries, which had suffered much less from the war of 1914-1918. The USSR in particular, was one of the first countries to restore its money circulation on a sound basis. And it must also be emphasized that the national economy of the USSR was restored at such a rapid tempo by its own forces and means, without the aid of foreign credits.

The advantage of Soviet economy lies in the fact that private ownership of all principal means of production, including land, has been abolished; all principal resources of the country are concentrated in the hands of a single owner—the proletarian government, the distribution of these resources is planned. These advantages already become apparent in the period of restoration.

Already at the beginning of NEP the question of planned development of the restoration process was sharply put. The

State Planning Committee was assigned the task of listing all of the food and fuel resources of the country, and in accordance with this ascertain which and how many state enterprises could be set operating at full capacity, which enterprises should be leased out and which should be temporarily kept in reserve.

Mention should also be made of the plans drawn up for various branches of industry, as well as of emission and budget plans, the planned character of agricultural credits, etc. etc. However, it should be noted that the growth of market relationships and the falling valuta situation in the early period of NEP were unfavourable for the development of planning in national economy. The calculation of market factors played an important role in drawing up plans—the plan was an effective tool for controlling the anarchy of the market and subordinating it to the control and regulation of the State.

Later, with the stabilisation of the currency, with the strengthening of state industry and the trading and cooperative system, the basis for planning was sufficiently consolidated to permit the transference from branch planning to the drawing up of a single plan for the whole of national economy—and this was first formulated in the so-called Control Figures of national economy for the fiscal year 1925-26. It must be strongly emphasized here that despite the imperfection and incompleteness of the plans in so far as covering all sections of national economy is concerned, nevertheless, its influence on the restoration process was most decisive.

INDUSTRIALIZATION

With the progress of restoration of national economy the policy of industrialization of the USSR acquired greater and greater importance, and its effect was already making itself strongly felt at the end of the restoration period. Thus, while in 1924 the production of means of production increased 24%, the production of means of production increased approximately at the same rate as did the production of means of consumption, i. e., 34 to 35%. In the following years the production of means of production increased at an even greater rate than the production of means of consumption.

This higher rate of growth of production of means of production was facilitated by the policy pursued in capital investments. This is indicated by the figures below.

Distribution of capital investments between Groups A and B
(in millions of roubles)

	1925–26	1926–27	1927–28
Group A*	491.4	737.2	969.0
Group B**	178.6	194.0	268.1
All Industry	670.0	931.2	1 237.1

A very decisive factor in the further development was that the restoration process did not follow pre-war proportions in corresponding branches of economy. The direction of development was determined by the above-mentioned general plan for socialist construction on the basis of the new economic five year plan. Restoration of pre-war production was attained upon the basis of new relationships in production. In 1926-27, 91.3% of rated industry was Soviet State industry, 6% was co-operative industry and only 2.3% private capitalist industry. Railway transportation was completely in the hands of the state. The credit system was also in the hands of the State. In regard to commodity turnover—in 1926-27 over 80% of the total turnover was carried on in cooperatives and government trading institutions. And finally, the central figure in agriculture became the middle peasant, the peasant who does not exploit hired labour. In 1927 he owned 71.6% of the land sown, 80.7% of working horses and 71% of the agricultural produce disposed of on the market. Notwithstanding a somewhat absolute increase in the capitalist strata in city and village, their specific gravity in national economy as a whole steadily declined.

The strongest positions were held by the capitalist strata in agriculture. The predominance at that time in agriculture of the small commodity producing system served to foster, to a certain extent, the growth of capitalist relationship. However, the development of agriculture was in no way isolated from the development of industry. The direction of the development of the small-peasant village was determined by the development of the socialist city, and the capitalist elements in the village were counteracted not only by the toiling masses in the village, but by the whole system of the dictatorship of the proletariat, with its powerful economic key positions (primarily socialist industry), the cooperatives and other levers of planned pressure on agriculture. This, in the last resort, determined the fate of the capitalist elements in agriculture in the USSR.

* Group A branches of industry producing means of production.
** Group B branches of industry producing means of consumption.

TEMPO OF INDUSTRIAL ACTION AND RECONSTRUCTION OF NATIONAL ECONOMY

The transition from the restoration to the reconstruction period occurred at the time when state industry and the other socialist key positions became the decisive factors in national economy, when state and cooperative trading comprised the overwhelming share of the general turnover of the country. The socialised sector played the leading role in national economy, and its expansion determined the general direction of development.

In the transition to the reconstruction period the basic industrial enterprises were engaged to their full capacity. In connection with this, a number of bourgeois economists (it was later learned that they were wreckers), advanced the theory of the "declining curve". They contended that Soviet industry, as a result of the exhaustion of its basic funds, would develop in future at a diminishing rate. Despite this "theory", the State industry of the USSR having entered the period of reconstruction, continued to develop at an unprecedented rate. This may be verified by the following table:

Dynamics in Industrial Production
(In millions of roubles, according to prices prevalent in 1926-27)

	Total Industry	Percentage of previous year	Industries producing means of production	Percentage of previous year	Industries producing means of consumption	Percentage of previous year
1927	10,767.6	118.1	4,865.8	125.2	5,901.6	112.7
1928	13,669.0	126.9	6,152.0	126.4	7,517.0	127.4
1929	17,322.0	126.7	8,001.0	130.9	9,321.0	123.9
1930 (plan)	22,488.0	124.1	11,402.0	142.5	11,086.2	118.9

As can be seen from the two tables, the highest rate of development is shown in heavy industry.

An indication of the industrialisation of the USSR is to be found in the comparative growth of industry and agriculture, and the comparative growth of the industries producing means of production and the industries producing means of consumption.

In 1926 production of means of production represented 42.4% of the total output of heavy industry. In 1930 the percentage was increased to 50.3 and in 1931 (according to the plan) to 58.7%.

The relation of large scale (rated) industry to agriculture is as follows in percentages:

	1926	1928	1929	1930	1931 (plan)
Industry	47.1	51.1	57.9	62.7	67.3
Agriculture	52.9	48.9	42.1	37.3	32.7
Total	100	100	100	100	100

Before the war the total output of industry represented 42.1% of the total output of national economy; in 1927-28 it was equal to 45%, and in 1928-30 over 50%. From an agrarian-industrial country, the USSR is being converted into an industrial-agrarian country, while at the same time agriculture is under-going a fundamental change.

The rapid growth of industry took place first of all in such branches as metallurgy, engineering, electrical industry, etc. The rate of development of these leading branches of industry can be seen from the following:

Branch	Measure	1913	1926	1927	1928	1929	1930
Production of electric energy	mill. kwh	1,945	3,507	4,173	5,003	6,386	8,231
Production of pig iron	thous. tons	4,210.0	2,269.1	3,049.7	3,375.0	4,346.8	5,017.0
Steel		4,250.0	2,900.0	3,574.0	4,272.0	4,907.0	5,676.0
Rolling mills		3,500.0	2,200.0	2,880.0	3,500.0	3,967.0	4,598.0
Agricultural machinery	mill. rbls.	67.0	144.6	181.7	244.1	328.5	486.2
Coal and Anthracite	thous. tons	28,900	26,044.2	32,332.8	35,808.4	41,668.4	47,050.1
Oil		9,300	8,821.3	10,956.5	12,315.9	14,477.0	18,621.8
Electrical industry	mill. rbls.	—	70.6	102.2	138.9	207.1	364.1

In estimating the successes of Soviet industry, one should keep in mind the very important structural changes that have taken place in industry. With exceptional rapidity industry is managing complicated production, and strengthening its independence: steam turbines of 50,000 kwts, very large diesel engines, powerful transformers, bloomings, electrical cars, tractors and combines, high quality steel and various ferro-alloys, etc.

This rapid process of expanded reproduction was obtained by increased capital investment and was accompanied by an increase in the number of workers and a growth in productivity of labour as is shown in the following tables:

	1926	1928	1930	1931 (plan)
Capital investment in basic fund of socialist sector (prices in mil. rbls. in correspond. years).	2,255	4,115	10,288	17,024
In industry only	942	1,703	4,002	6,694
In transport	529	915	1,638	2,884
In regional power stations	72	176	389	850
In agriculture	118	343	2,187	4,317

The major part of the capital invested in industry, as has already been pointed out, was invested in heavy industry. These capital investments were used for the development and re-equipment of factories in operation, as well as for building new plants. The proportion of the capital investments in the particular spheres including electrical construction may be seen from the following table:

	New Construction	Expansions & Re-equip.	Cap. Repairs
1926-27	13.9	73.6	12.5
1927-28	26.9	62.4	10.7
1928-29	35.2	57.1	7.7
1929-30	45.1	48.0	6.9

Every year we have an increase in the number of new constructions.

A consequence of these investments is the large yearly growth in the active basic funds. Thus, in 1931 the industrial basic funds increased approximately by two billion roubles as against 1.45 billion roubles in 1930. During the period of 1927 to 1930, 323 new plants were put into operation. In 1931 518 new plants will be put into operation, among, these being a number of gigantic undertakings such as the Magnitogorsk metallurgical works, Kharkov tractor plant, Nizhninovgorod automobile works and a number of others.

A picture of the general growth of active funds of national economy can be drawn from the following table (in millions of roubles):

Prices quoted are those prevailing in corresponding years.

	Beginning 1928	End 1928	End 1929	End 1930	End 1931
Industry & Electric stations	5,652.1	6,247.7	7,210.1	8,453.4	12,494.2
Industrial Housing fund	983.6	1,113.4	1,264.1	1,559.0	1,965.9
Transport	10,520.8	10,685.3	11,004.9	11,964.4	13,304.4
Trading	425.9	480.5	615.5	948.3	1,432.4
Agriculture	18,221.4	18,735.3	19,688.0	21,846.4	24,483.6

The rate of development of national economy of the USSR on the basis of socialist industrialisation is characterised by the rapid growth in the number of workers and office employees, and particularly workers in heavy industry.

In 1923-24 the number of workers and office employees (excluding agricultural workers) amounted to 5,843,000, in 1926-27 this number reached 8,866,000, and in 1930, 12,429,000, while in 1931 it reached 16,300,000. The tempestuous growth of Socialist planned economy has enabled us completely and irrevocably to liquidate unemployment, the scourge of the capitalist system.

The number of workers in heavy industry increased from 1,535,000 in 1923-24 and 2,439,000 in 1926-27 to 4,229,000 by the first of January 1931.

At the same time the productivity of labour has been greatly intensified.

Production per man per day at a given rate was as follows (in roubles):

1922	1923	1924	1925	1926	1927	1928	1929	1930
6.8	8.6	9.4	11.9	15.1	17.1	19.8	22.4	26.2

The systematic increase in the productivity of labour promoted the fall in the cost of production of industrial goods, which was reckoned at 25% for the period 1924-26-1930; and this in turn brought about a rise in the profits of industry for the same period from 380 million roubles to 1,700 million roubles, with a fall in output prices of 12%.

The increase in the productivity of labour indicated above is one of the most important results of Socialist planned economy and of technical reconstruction, at the basis of which lie several factors—the plan for electrifying the country, the increased mechanisation of labour and the new attitude of the workers themselves towards labour in Socialist undertakings, expressed in Socialist competition and shock-brigade work among the vast masses. It is a result of the "new organisation of labour, which combines the last word in science and technique with the mass amalgamation of conscious workers, creating a large Socialist industry" (Lenin) which has been attained in the USSR.

The enormous increase each year of workers' inventions and of suggestions presented by the workers for rationalising industry is typical of the mass scientific and technical creative power at work in the USSR. The wide range of scientific research, work in all branches of economy, and efforts made on behalf of

standardising the work are also indicative. By way of illustration it might be mentioned that out of 63 thousand suggestions made in 1929-30 throughout a total of 10 industrial enterprises, 45 thousand were made use of, resulting in economies to the extent of 20 million roubles.

The most important factor in the increase of production, and side by side with it the augmentation of the basic wealth of national economy, were the systematic improvements made in the utilisation of this wealth, the increased number of shifts working in the factories, and the wholesale introduction of the non-stop week. The effective manner in which the basic funds have been utilised can be illustrated even by the fact that for every thousand roubles of the basic capital there was wholesale production to the extent of 1365 roubles in 1913; 1578 roubles in 1926-27 and in 1929-30—2355 roubles.

Unlike the capitalist countries (England, France, Germany, USA), which accomplished the process of industrialisation to an enormous extent at the expense of resources from abroad (and on an entirely different social and economic basis), the USSR is solving the problem of industrialisation almost exclusively with the help of home resources; and not only without any considerable help from abroad, but in a hostile and aggressive capitalist environment.

AGRICULTURE*

If the State industry of the USSR has developed at an unprecedented rate, it was quite different with the conditions affecting the development of the small peasant farms, the existence of which has been predominant in the economic situation of the USSR until quite recently. As a result of the October Revolution and war Communism, the abolition of the large landed estates and the levelling that took place in the size of peasant farms, the small and exceedingly small peasant farms became the predominating type in the agriculture of the USSR. The number of peasant farms increased from 21 million in 1916 to 25 million in 1927, i. e. by 19%; whereas the area under cultivation in 1927 was only very little larger than the pre-war area, the number of horses amounted to 84% and of cows to 115% of the pre-war figure; in other words, fragmentation of the farms had taken place.

* The development of agriculture in the USSR is dealt with in greater details in a special paper on this subject prepared for the congress (see page 81).

Having completed the process of restoration, the extremely limited possibilities of developing agriculture on the basis of small, individual, peasant farms became only too obvious, as also did the difficulties in connection with any increase in the commercial advantages to be obtained with the given size and methods of production.

The extreme backwardness of the growth of agriculture as compared with the rate of development of industry could not but serve as the source of difficulties in the sphere of foodstuffs and raw materials, especially in view of the rapid increase in the demand put forward by the towns for foodstuffs and the demand for raw materials on the part of industry.

Rate of Development of Industry and Agriculture

	1927	1928	1929	1930
Wholesale production of industry (in millions of roubles — 1926/27 prices)	10,767.7	13,669.0	17,322.0	21,488.0
In % to previous year	118	126.9	116.7	124.1
Total cultivated area (in mill. hectares)	112.8	119.2	128.0	129.1
In % to previous year	—	105.6	107.4	100.9
Number of large horned cattle	68.3	70.5	67.4	—
In % to previous year	—	103.2	95.2	—

These small commodity producing peasant farms, had already exhausted their last possibility of developing. The growth of the productive forces of agriculture were imperatively demanding the radical social and technical reconstruction of agriculture, by the transfer from small, individual peasant farms, to what would be more effective both for the peasant himself and for national economy as a whole, namely, to large-scale collective production on a new technical basis and, side by side with this, to the launching on a large scale, of powerful State agricultural undertakings and large Soviet farms.

The factors necessary for the solution of this task, hitherto unprecedented in the history of mankind, were present, namely: achievements in the field of Socialist industrialisation; the growth in the production of agricultural machinery, the growth of the cooperatives, especially in connection with the producing, small peasant farms; intensified, planned assistance to agriculture in the form of "contracting" for agricultural produce, the successful development of state and collective farming which proved most convincingly the enormous advantage of large-scale Socialist production in agriculture; the improved organisation of the toiling masses in the villages for the purpose of supporting the steps taken in connection with the planned collectives of grain

and raw materials, which led to the isolation of the capitalist elements in the country side. These factors (together with the absence of private ownership of land) which had been systematically in operation over a period of several years, now determined the nature of the plans for economic construction, and prepared for those radical change in agriculture: the new road taken by many millions of peasants towards the Socialist form of method of farming, which has opened up a new epoch in the development of national economy in the USSR. The process of collectivising the peasant farms, which increased considerably in 1928, was developed with enormous force in 1929 and 1930, took the form of an influx into the collective farms by the middle of 1931 of over 57% of the total number of peasant farms.

The enormous achievements of Soviet agriculture during the last few years, particularly the fine results of the 1931 sowing campaign, are due primarily to the successes achieved in collectivisation. It is important to mention that the trend of development of the 1931 Spring sowing, as also that of the whole of agriculture, goes foward, at the present stage, under the direct influence of the plan. This direct control by plan of the agricultural sphere is one of the characteristic features of the new stage into which Soviet national economy has entered.

This favourable tendency of agricultural production made it possible, already in the second half of 1931, to develop the light industries—textiles, sugar, etc. at an especially rapid rate. It has solved the grain problem once and for all. It is creating the necessary factors for the solution of the livestock breeding problem, which has been so acute during the last two or three years. The successes achieved in the socialist reconstruction of agriculture is gradually eliminating the disparity previously existing between the rate of development of industry and that of agriculture. At the same time the Soviet Government, on the basis of mass collectivisation, is liquidating the kulaks as a class and is thus destroying the last stronghold of capitalism in the country, which means that it is achieving the final victory over the hostile economical systems and classes in the USSR.

RAILROAD TRANSPORT

The steady growth of the national economy of the USSR, with its vast territories extending over one-sixth part of the earth, naturally demanded a corresponding rate of development in the

sphere of transport, especially on the railways as its central link. The state of railroad transport during the first years of the New Economic Policy, as a result of the devastation caused by the world war and intervention, can be judged from the fact that even at the end of 1924, out of 20,300 engines available, less than 13 thousand (63%) were in use, and of these only 9,400 were sound.

Nevertheless the freight turnover on the railways considerably exceeded the pre-war figure by 1926-27. In the course of the years that followed, the turnover increased at a more rapid rate, reaching 238 million tons in 1920 as against 136 million tons in 1928-29. If we compare the freight turnover on the railways in 1930 with that of 1913, taken at 100, then the increase for the USSR amounts to 80%, of Germany and England—16% and of the USA—4%. The railroad transport of the USSR in 1930* occupied the second position after the USA. The relative position of the USSR in the world freight turnover has risen from 4.4%—the position occupied by Russia in 1913—to 7.4%. Passenger transport in 1930 reached a figure 208% above the pre-war level. The USSR during 1930, occupied the second place in the world, for the size of her passenger transport (52 milliard passenger-kilometres).

In order to characterise the freight turnover from the viewpoint of territorial distance covered and the direction taken in the transport of goods, it would be useful to mention a few facts. Transport along the Eastern lines (Siberia—Urals, Kazakstan, etc.) develops considerably more rapidly than throughout the Union.

The rapid rate of development of industrialisation in the Eastern regions is naturally reflected in this extremely characteristic process—the construction of mighty industrial combines (Ural-Kuzbass Inter-Regional Combine). It is also to a very large extent these regions which are responsible for the 12.8 thousand kilometres of railway lines constructed by the Soviet Government. In fact the whole structure of freight turnover reflects very clearly the whole process of Soviet industrialisation. Goods transported from the heavy industries now constitute a relative part in the total freight turnover of the railways which is 3.5 times greater than in 1913; goods from the engineering works, a position 4.5 times greater, fuel industry—

* 133 Billion Ton-Kilometers.

4 times; and light industries and agriculture show an increase of 74—86%.

Capital investments in railroad transport are primarily very closely dependent upon the growth of metallurgical and engineering works, and has acquired very considerable dimensions only in recent years. The railroad transport system was able to cope with the tasks set it by the development of national economy only because of the systematic rationalisation of transport economy, which first and foremost consisted in the practice of planning the movement of goods on the railways and eliminating to the utmost the transport of goods of a similar nature both to and from the same region; in other words, railroad transport could cope with its tasks only thanks to the existing conditions of planned economy. As for qualitative indices concerning the work of the railroad transport, we have the following information: the average daily run of a goods wagon in 1931 was reckoned at 93.4 kilometres against 72 kilometres in 1913. The run of a goods engine was reckoned at 153 as against 119 respectively. The coefficient of exploitation on the railways has fallen during the period 1926/27 to 1930 from 84% to 52%.

The low technical equipment of the railroad transport, the sharp disparity between the extremely enhanced demands of national economy and the materio-technical basis which should cater for these demands, have raised in all its importance the task of radically reconstructing the technical basis of the railroad transport, along the lines which have already been begun.

GOODS TURNOVER

While in the sphere of industry and transport, fairly considerable basic capital was inherited by the Soviet Government from Tsarist Russia, the position was undoubtedly worse as regards trade.

Trade facilities were very undeveloped and unequally distributed throughout the country. In Tsarist Russia about 94% of the commercio-industrial turnover of the country, and over 68% of the total number of commercial and industrial undertakings were concentrated in populated districts which covered only 24.8% of the total population. A total of 6.2% of the commercio-industrial turnover of the country was available for all the rest of European Russia, not to mention the Asiatic part of the Russian

Empire. The supply of goods to the distant regions of European Russia amounted approximately to two copecks a day per capita. The supply of goods to the Asiatic part of Russia was even more insignificant.

In 1926 the goods turnover of the land had already exceeded the pre-war level by 10%. In 1925/26 the commercial goods turnover amounted to about 30 milliard roubles, and in 1929/30 it reached almost 65 milliard roubles. The total turnover of the land in 1930 was over three times that of the pre-war figure. The last three years have doubled the goods turnover per capita of the population, whereas during the 13 pre-war years from 1900 to 1913 there was an increase of only 40-45%.

The retail turnover in 1925/26 was over 12 milliard roubles; in 1926/27—13.5 milliard roubles; in 1927/28—15.0 milliard roubles; in 1928/29—16.7 milliard roubles and in 1929/30—19.3 milliard roubles. During the last 5 years the increase in retail turnover amounted to 2.3 times.

The considerable development of the retail turnover is due both to the fund of goods of universal consumption which increases annually and also to the increased production and augmented reserves of agricultural produce. For instance in the period from 1928 to 1931, the large-scale, industrial output of clothing and toilet articles has increased by 350%, that of leather boots by 340% and sugar (for the last two years) by 80%. The reserve of grain cultures increased by 47% in 1929/30 as against the 1928/29 figure; it is worth while mentioning that "contracting", i. e. the system by which the State organisation and the cooperative societies responsible for gathering in the grain reserve, make contracts with the peasant farms, was one of the most important elements of the planning system in this sphere of the goods turnover. Nevertheless the rapid growth of industrialisation in the country and the considerable capital investments in heavy industry for several years caused disparity between the development of small peasant economy and the rate of development of Socialist industry; and the extraordinarily rapid rate at which the cultural level of the workers in the towns and villages was raised, was responsible for the fact that the country is still experiencing an insufficiency in connection with several articles of universal consumption. The achievements attained in the socio-technical reconstruction of agriculture fully convince us of the fact that the difficulties will be completely eliminated in a very

short space of time. The planned organisation of the goods turnover, in the face of this goods deficit, will make it possible for the Proletarian State so to manoeuvre that the incomes of the basic masses of industrial workers will, in the first place, be covered by the corresponding equivalent of commodities.

In 1931 the retail turnover of the consuming cooperatives, which now embrace 76% of the total retail turnover of the country, shows an increase in the towns of over 50% as compared with 1930, and of 29% in the villages; moreover in districts like North Caucasus, Bashkiria, there is an increase of 40%, in Yakutia 62% and in Kirgisia 114%. The greatest increase in the goods turnover falls, therefore, to those distant regions and to countries of the small nationalities, where in pre-war times there existed almost no goods turnover at all. We see the same thing with the territorial distribution of goods. Here also the processes of industrialisation and collectivisation throughout the land and the national policy of the Soviet Government are most clearly expressed.

All these achievements in the goods turnover were forthcoming on the basis of the rapidly moving processes of socialisation of trade—the growth of cooperative and State commerce—and the elimination of private capital from the sphere of commerce.

The following table speaks most eloquently of the course of struggle between the socialised and private sectors, between the plan and the anarchy of the market, and the consequences of this struggle:

Relative position of socialised and private trade in the USSR

Years	Socialised Trade			Private Trade		
	Wholesale	Retail	Total	Wholesale	Retail	Total
1923/24	82.0	35.5	55.1	18.0	64.5	44.9
1924/25	91.5	52.0	72.0	8.5	48.0	28.0
1925/26	92.6	59.8	78.1	7.4	40.2	21.9
1926/27	95.5	63.7	83.1	4.5	36.3	16.9
1927/28	98.2	74.6	89.8	1.8	25.4	10.2
1928/29	99.6	84.0	94.9	0.4	16.0	5.1
1929/30	100.0	93.5	98.1	—	6.5	1.9

It is worth mentioning that in the beginning of 1931 in the Soviet Union over 67% of the total adult population were members of cooperatives, which fact is characteristic of the development of the Soviet cooperative trading system. By July

1931 the entire adult population over 16 years of a age was organised in the cooperative movement in the towns. The number of shareholders in the cooperatives at the beginning of 1931 was 63 million, as against 12.4 million in 1926. In the course of 5 years, the number has increased more than 5 times.

The struggle for the socialisation of commerce, and to bring this sphere of the nation's economic life under the control of the planning system was one of the most important elements in the work on behalf of the plan, on behalf of Socialism in its war against capitalism. The question was at first one of gaining possession of lines of communication between town and village, between social key positions in our economy and the multitudinous small peasant farms; the "smychka" (link) with whom could be realised, right until the present day, primarily through our trading connections. It was a fight for the increased welfare of the masses, for a systematic drop in prices. On an average, from 1927 to 1930 the fall in the general index of retail prices in the urban consuming cooperatives (which were responsible at that time for 80% of the consuming budget of the workers), was about 8%, and for industrial goods approximately 12%. In the villages the total drop in cooperative prices was about 10% at that time. According to statistics of budget investigations, the supply in 1930 of goods by the private trader to the working population was, for almost all classes of goods, except animal produce, from 0.5% to 2.5%. The development of State and collectivised cattle-breeding will in the near future reduce the role of the private trader to a minimum in this sphere, as has been the case in connection with grain products.

The private market in the USSR at present plays an absolutely insignificant role. Having, as a result of the successes of collectivisation, been deprived of its food resources, it is at present in a state of agony. Eliminated by the sturdy development of the socialising processes, limited to the local markets, the private trader and speculator does not look into the future, but lives from day to day. The slightest changes in the supply and demand are sufficient for a reaction to be felt immediately on the private market, in the form of extremely enhanced prices, which become higher as the sphere of activity of the private trader contracts. Incidentally it is, to say the least of it, extremely naive to imagine that this feverish movement of prices on the private market is due to the state of money circulation.

Many years experience of planned economy in the USSR shows most convincingly that regular, expedient, distribution and construction imperatively demand the corresponding planning organs in the sphere of circulation. The experience of the so-called "selling crisis" in 1928 excellently demonstrates that planned economy (which is still in the early stage of its development) with its centralised, efficient, disposal of the chief resources of national economy, freed from the fetters of private ownership, can simply and painlessly deal with all difficulties arising in the course of the economic life of the country. On the other hand, certain regulation of prices in the sphere of private trade quite clearly indicates how small can be any effective regulation, and even more impossible any planning in connection with privately owned enterprises.

The enormous advantage of the planned organisation of the goods turnover in the sphere of commercial expenditure and the cost of circulating is quite obvious. Soviet commerce wages systematic warfare for smaller expenditure in connection with the circulation of goods, for a cut in costs in the transfer of goods from the producer to the consumer; at the same time great efforts are made to improve the service of commercial units to the toiling masses in towns and villages. This will result in an economy of many millions of roubles which, under the Soviet system, opens up additional resources for increasing the rate of development of national economy. First of all, all transport of goods is planned, having a view to the fewest possible number of journeys; the network of trade and of warehouses, on the basis of the plan for the turnover of goods, is distributed over the whole territory in most most rational manner possible. The planned distribution of production makes the possibility of a curtailment of the distance to be covered between the producer and consumer. Planned organisation of the goods turnover eliminates the enormous waste in national economy, which is brought about by anarchy and the competitive struggle, inherent in capitalism and which lays an additional heavy burden upon the working class and the broad toiling masses. It is enough to mention that the calculated expenditure in the USA on advertising alone, in 1927, amounted to over 1.6 milliard dollars. In fact the total expenditure of the USA on public health and hospitals (by way of so-called uncompensated social services) was 11-12% of the total amount expended on advertisements. It is not surprising after that, that in the retail prices of several articles of consumption, commercial

expenditure amounts to 50% and more. Commercial expenditure in the goods turnover of the USSR is incomparibly lower than the corresponding expenditure in capitalist countries. The total sum of expenditure on the circulation of goods by the consuming cooperatives in the USSR which consists of over 75% of the retail turnover, amounted to 1.5 milliard roubles in 1930, i. e. over twice as little as the calculated expenditure of American commerce on advertising alone. All the expenditure connected with the turnover of the consuming cooperatives is at present about 12% of the total turnover, i. e. the expenditure in connection with the turnover of goods in the USSR occupies a position in the total retail price which is three times lower than that in the USA.

FINANCE

Along with the transition to the new economic policy, there took place, in addition to the rapid expansion of the national economy, a development of the financial system on a tremendous scale.

In the sphere of finance, the work performed during the first few years of the NEP consisted chiefly in the consolidation of financial connections, the creation of a stable currency and the organisation of a budget and the credit system. At that time, the planning of finances (the budget and credit) was far from being systematic. It is sufficient to mention that in 1922-23 and partly in 1923-24, the budget was fulfilled in the midst of a depreciating currency, that contributions in kind to the budget were stopped and a fixed annual budget began to be drawn up.

In 1922-23, the emission of new currency provided the budget with 394.1 million roubles, or 26.9% of the total revenue, but in 1924-25 the budget was balanced without resorting to emission, this being one of the greatest achievements not only for the budget but for the whole of the national economy of the Soviet Union. The cessation of emission and the stabilisation of the reformed money system (the chervonetz was first issued in autumn 1922 and finally replaced paper money in spring 1924) served as the determining factor in financial planning and in the organisation of the finances of economic organs.

The state budget of the USSR grew from 2.4 billion roubles in 1923-24 to 21.8 billion roubles in 1931. In the course of 7 years, it increased to 9 times its former size.

During past years, taxes provided almost half of the income in all the budgets. The significance of the socialised sector as a taxpayer in 1924-25 was expressed by a figure slightly higher than 50%, but in 1931, the share of the government and cooperative undertakings had risen almost to 90%.

When considering the importance of indirect taxation in the USSR, we must not neglect to keep in mind the fact that the social structure of the national income differs completely in principle from that of the capitalist countries, that large fortunes no longer exist, and that the income of the population has, relatively been equalised. This has converted excise from a regressive form of taxation into a form proportional on the whole. Differentiated excise rates, high taxation of articles of luxury and the existence of direct taxes which increase at a sharply rising rate (together with the class differentiation of rent, etc.) has converted indirect taxation into a fairly reliable weapon in the proletarian taxation policy. In addition, excise has proved to be a means for restricting undesirable consumption, primarily of alcohol, since the prohibition of the sale of alcohol in a country with a great peasant population has been found to be ineffective. A high tax on alcohol (at the present time it is 93% of the price) has made it possible to limit the consumption of spirits to 60% of the pre-war level for the same population.

In speaking of the taxation system of the USSR, it should be borne in mind that it has one particular characteristic feature—the utilisation of the taxation instrument in a planned way for the redistribution of capital within the socialised economy, both among individual branches and within the framework of each branch of economy.

The taxation reform of 1930 was of considerable importance for the improvement of financial planning and for the simplification and cheapening of tax collecting. Under this reform, 55% of the separate tax payments from the socialised sector were unified into a single tax on turnover which was collected at the centre as a single tax.

When considering the burden of taxation and also when analysing accumulation in the socialised economy, it must not be forgotten that taxation in the USSR carries out a special function as one of the sources of the financing of the national economic plan, while under capitalism the greater part of the income from taxes goes for the upkeep of the apparatus of the government and the army. For example, an analysis of the income and

expenditure in the State Budget for 1931 shows that out of a total sum of taxation of 10.8 billion roubles, 6.3 billion roubles were expended for the financing of the national economy and 2.5 billion roubles were used for cultural purposes. But even if we leave out of account the fact that Soviet taxes contain a considerable fraction of non-taxation elements (land, mining, forest rent, part of profits, etc.), if we ignore the completely different distribution of the burden of taxation between the possessing and non-possessing classes, if we forget the glaring difference between the USSR and capitalist countries in the matter of the utilisation of the income from taxation and make a purely formal analysis of the extent of taxation, it is impossible to speak of the over-taxation of the population.

In the USSR, government and local taxes (not including the non-taxation elements which are included in the tax on turnover) comprise 18.5% of the national income, as compared with 19.8% in Great Britain, 19.6% in France and 25% in Italy.

One of the characteristic items on the income side of the budget consists of the government loans which have been considerably developed during the last few years. Government loans are an absolutely normal part of the budget of the USSR, since the funds obtained by State credit operations are used productively for economic purposes. Even from a private trader's point of view, it is sound business to invest the income from loans in industry, for the profits of industry are higher than the interest and the sinking fund on the national debt. The credit obtained by the Soviet Government from the population in the form of mass loans increased from 51.9 million roubles on October 1st, 1923 to 1.594.6 million roubles on January 1st, 1931. The program of government loans increases from year to year. The brilliant success of the second issue of the Five-Year Plan loan, 1931, in particular, which was fully subscribed in the towns in the course of 25 days and which exceeded 1.6 billion roubles in the course of two months—was higher than provided for in the plans and shows how wide is the social basis of the Soviet Government and how energetic is the support given by the workers to the policy of industrialisation and collectivisation.

An analysis of the expenditure in the government budget shows that more than half of the resources of the budget are now expended on the financing of the national economy. The amounts voted for cultural purposes during the past seven years have increased eight fold. Less than 7% of the budget of the USSR

is expended on defence, while France, for example, uses 50% (including war pensions, etc.).

In the USSR, 2% of the national income is spent on defence while in France, even according to official figures, 4.5% is thus expended.

The expense of government administration and of the army in the USSR comprise 3% of the national income compared with 9.3% in pre-war Russia and 5.5% in Great Britain.

The single budget of the USSR is a combined budget consisting of the Union Budget and seven Republican budgets, and, further, funds are transmitted year after year to the backward Republics. The growth of the budgets of the Middle Asian Republics, the Caucasian Federation and the White Russian Republic is the best illustration of the national policy of the USSR.

The local budgets, which receive year by year an increasing volume of support from the State budget, has increased from 650 million roubles in 1923-24 to 3.8 billion roubles in 1931. Most of the expenditure in the local budgets goes for cultural and economic purposes (in 1931, from 3.8 billion roubles—1.8 and 1.2 billion roubles). The centralisation of planning and the decentralisation of administration is the fundamental principle of Soviet economic organisation, and this is clearly expressed in the development of local initiative in the sphere of local finances.

In the organisation and the planning of Soviet finances, one of the most important places, apart from the budget, is taken by the credit system, headed by the State Bank—the central emission institution of the country. The credit system in the USSR is one of the greatest weapons for planning and regulating the national economy. It concentrates all the financial resources mobilised under the plan and brings about a redistribution of them along the lines provided for by the plan. It is the focus of economic connections, the central clearing house and the organised, centralised cash reserve of the socialised economy. It is a sensitive barometer of economic life, and signalises the extent of the fulfilment of the plan in each separate section of the national economy and the necessity of any particular manoeuvres in the plan for the purpose of guaranteeing the uninterrupted economic process.

In addition to the fundamental task—to assist the development of the national economy by means of credit,—the Soviet credit system has been faced ever since its first foundation in 1921-22 with an equally vital task—the inculcation of the elements of

sound finance in the sphere of the economic relations of all undertakings of the socialised sector. The credit system has played an extremely beneficent role in the matter of bringing order into the economic life of Soviet institutions, of enforcing proper methods of calculation, bookkeeping and accounting. This organisational role of the credit system still continues to be important at the present stage of development, when the task of accurate accounting—under new circumstances and in new forms—is a vital question in all spheres of the national economy.

The rapid growth of all branches of the national economy was accompanied by a rapid development of the credit system. The resources of the credit system from October 1st, 1923 to October 1st, 1927 increased from 838 million roubles to 6.3 billion roubles, reaching 9.5 billion roubles on October 1st, 1930. The capital funds of the credit system increased from 156 million roubles in 1923 to 1.4 billion roubles in 1930, short term discount and loan operations increased from 410 million roubles to 6,350 million roubles on the October 1st, 1930. Long-term credits increased from 132 million roubles to 4.3 billion roubles.

The distribution of these enormous resources in a planned way among the decisive sections of the national economy, primarily in industry, is one of the most important factors in the development of Soviet economy.

The planning of credit commenced much later than the planning of other branches of the national economy. Nevertheless, even the first steps which were taken in this direction were quite successful. For example, the fulfilment of the quarterly credit plans in 1924-25 comprised 99.2% to 108.4% of the plan and in 1925-26 from 95.6% to 99.6%. As socialised economy grew and became consolidated and as the methods of planning themselves were perfected, this extremely important sphere of economic relations was also put on a planned footing. The abolition of commercial credit and the transition to direct bank credit as the result of the credit reform of 1930-31 raised financial planning to a new and higher level.

Credit reform, which was made possible by the rapid development of the socialist elements in the national economy and by the level of planning which had been reached, in turn assisted to inculcate and deepen the principle of planning in Soviet economy. It greatly simplified both the relations between economic organisations and the credit system, and also the relations of the various economic organisations among themselves.

The decisive factor which will ensure the proper functioning of the new relations created by credit reform is the introduction of a firm self-supporting system—one of the most important tasks with which the Soviet economy is faced.

With the introduction of credit reform and the concentration of all short-term credit in the State Bank, the latter was converted into a single clearing house for the whole of the national economy of the USSR, concentrating and regulating all the financial relations of economic organs, of financial institutions and of the special banks, which at the present time give only long-term credits and finance capital construction in industry, agriculture, the cooperative societies and the public services.

The planning and regulating of the circulation of money is one of the most important items in the planning of national economy. Planning of the whole of the economic process creates the necessary conditions for controlling and directing the circulation of money according to plan.

To get an idea of the condition of money circulation in the USSR, the variations in the currency in circulation must be considered in conjunction with the changes taking place in the fundamental factors of the national economy. In 1931, the total volume of money in circulation was almost 3.3 times that of 1925-26, the increase being about the same as the growth of industrial production, the turnover of commodities and the traffic of the railroads. The amount of money in the USSR at the present time is less than 78% in excess of the prewar amount, while industrial production in 1931 is almost 3 times the pre-war production, the freight carried on the railroads is more than twice as high and the turnover of commodities had already trebled in 1930. In particular it should be pointed out that the extensive emission of new money which took place in the second half of 1929-30, which was connected to a certain extent with incompleteness of the credit reform and which gave rise to statements in those bourgeois papers which were hostile to the USSR that Soviet money was unstable, was clearly of an anticipatory character. This was well demonstrated in the "special quarter" (October to December 1930), when the enormous seasonal grain buying operations of more than 2 billion roubles were carried through, in distinction to all previous years, without resorting to the inflation of the currency. The opinion of the population regarding Soviet money is eloquently shown by the fact that personal accounts in the savings banks in 1929-30 amounted to

130 million roubles, and in the first six months of 1931, to 121 million roubles.

The credit system, like the budget, is only one element, though an important element, in the Soviet financial system. The completed synthetic expression of the planning of Soviet finances is to be found in the single financial plan.

The single financial plan includes and coordinates the separate financial plans—the budget, the credit plan, the finances of industry, of transport, of the socialised sector of agriculture, etc.

Fundamentally, the single financial plan is the plan for the organisation of accumulation and for the financing of all economic and cultural construction.

The single financial plan completely reflects all these sources of funds for all the branches of socialised economy and of the financial institution as well as the channels along which these funds are directed. The work of all the financial institutions of the country is coordinated and this enables mutually coordinated sectional plans to be drawn up, which makes financial planning a complete and effective operation.

Unlike the State budget, the single financial plan takes into consideration those resources which remain at the disposal of individual institutions and economic organisations, and plans the channels along which they are to be directed. In proportion as the national economy becomes more completely socialised, the single financial plan enlarges its sphere of action and takes in every financial relation in the country. The main resources at the disposal of the single financial plan consist of the accumulation provided by the socialised economy which, together with depreciation, comprised over 38% of the single financial plan of 32 billions in 1931.

THE FIVE-YEAR PLAN AND ITS FULFILMENT

The programme of the social and technical and reconstruction of the national economy of the USSR is shown in the Five-Year Plan, which includes the period from 1928-29 to 1923-33.

In the Five-Year Plan, the investment of capital in the whole of the national economy is put at 64.6 billion roubles compared with 26.5 billion roubles which had been invested in the previous five years. This included 16.4 billion roubles for industry, 23.3 billions for agriculture, 10 billions for transport and 3.1 bil-

lions for electrical construction. As the result of these investments, the total capital fund of the country should rise from 70 billion roubles in 1927-28 to 128 billions in 1932-33, i. e. 82%, (including the capital funds for industry as a whole—from 9.2 billions to 22.1 billions, electric power stations from 1 billion roubles to 5 billions, railroad transport from 10 billions to 17 billions and agriculture from 28.7 billions to 38.9 billions). Under the Five-Year Plan, industrial production should increase from 18.3 billion roubles in 1927-28 to 43.2 billion roubles in 1932-33, agricultural production should grow from 16.6 billion roubles to 25.8 billion roubles, and the carrying traffic of the railroads should rise from 88 billion to 163 billion ton-kilometres. The net production of the whole of the national economy (the national income) should increase from 24.4 billion roubles in 1927-28 to 49.7 billions in 1932-33.

The plan proposed to direct 78% of the industrial capital investments primarily into those branches of industry which produce the means of production. This should increase the output of these branches of industry by 3.3 times, as compared with an increase of 2.8 times in industrial production as a whole.

With regard to electrical engeneering, it is proposed to construct 42 central electric stations (the Dnieper hydro-electric station, the Svir hydro-electric station, the Bobriky station working on Moscow coal, the Zuevsky station in the Don Basin, etc.), and the output of electric energy should reach 22 billion kilowatt-hours, as compared with 5 billion kilowatt-hours in 1927-28. With regard to iron and steel, new powerful metallurgical works are to be built, increasing the production of pig iron from 3.5 million tons to 10 million tons in 1932-33. The plan proposes to reconstruct the old works and to build a number of new plants for machine construction (automobile works, tractor works at Stalingrad and in the Urals, the Sverdlov heavy machine construction works, the Rostov agricultural machine works, etc.).

As a result of the measures set out in the Five-Year Plan, the share of the socialist sector in the gross output of the country should increase as follows:

	1927–28	1932–33
Industry	from 80%	to 92%
Agriculture	2%	15%
Retail trade	„ 75%	„ 91%

The first two years of the Five-Year Plan have not only completely demonstrated its practicability, have not only proved

that the plan is a factor for directing the development of the whole of the national economy, but they have shown that the high rate of development indicated in the Five-Year Plan are being surpassed.

The following table shows the extent of the fulfilment of the Five-Year Plan for its first two years.

Fulfilment of the Five-Year Plan for two years 1928—29 and 1929—30

Item.	Unit	Absolute figures		Percent of plan fulfilled in 2 years
		According to 5-Yr. plan	Fulfilled in 2 years	
1	2	3	4	5
1. Capital investments in the socialist sector (in prices of the corresponding year)	mill. rbls.	12,653	13,762	108.8
This includes:				
Planned industry		3,990	4,605	115.4
Agriculture		1,719	2,397	133.0
Transport		2,504	2,688	107.3
2. Gross production of planned industry (including food) in prices of 1926-27		29,337	30,456	103.8
This includes:				
Group "A"		12,476	13,764	110.3
Group "B"	"	16,861	16,692	99.0
3. Total sown* area	mill. hect.	239.0	245.8	102.8
This includes:				
Grain*		196.3	198.0	100.9
Cotton*		2.1	2.6	123.8
Sugar-beet	"	1.7	1.8	105.9
4. Surplus grain	mill. 1000 Klgr.	173.4	185.3	107.0
5. Freight traffic on railroads	mill. ton	350.9	409.2	116.6

* The sown area for two years

A striking feature of this table is the extent to which the plan was surpassed in heavy industry, and also the exceeding of the plan in agriculture, especially with regard to industrial raw materials and surplus grain.

The exceeding of the Five-Year Plan in all branches of national economy found expression in the variations and the structure of the national income. During the 10 years from 1921 to 1931, the national income of the USSR was almost trebled. In 1921 it

was 40%) of the 1913 income and in 1926-27, at the end of the restoration period, it had already reached 102% of the 1913 level. Finally, in 1930 the national income was 156.3% of the 1913 income.

The following figures show the rate of growth of the national income during the reconstruction period: 1929—8.4%, 1930—20.8%, 1931 (Plan)—39%. The national income of pre-revolutionary Russia increased from 1900 to 1913 by 40%—slightly over 3% per year. The rate of growth of the national income in the USA was 4-5% per year, and only in one five-year period was it 9% per year.

In spite of the rapid increase of the population (3.5 millions a year), the income per head is rapidly increasing. Thus, the income per head in 1913 was 100.4 roubles, in 1927-28—101.1 (in 1913 prices), in 1928-29—111.9, in 1929-30—126.5 and in 1931 it was 137.5. Thus, the income per head in 1930 exceeded the income per head in 1913 by 37%.

If we remember that the class structure of this income is quite different from 1913 (the landlord class, the big bourgeoisie, have disappeared, etc.), it becomes obvious that as far as concerns the proletariat and the mass of the peasants, the difference in income per head compared with the pre-revolutionary period will be still greater. The social structure of the national income in the USSR is strikingly indicated by the fact that already in 1926-27 the income of the urban and rural bourgeoisie represented only 3.5% of the total national income. For the purpose of comparison it should be observed that in the advanced capitalist countries unearned incomes comprise, at a modest estimate, from 40% to 50% of the national income whereas the numerical proportion of the capitalist class to the total working population ranges from 2.6% (Great Britain) to 8.5% (Germany).

The estimates of the Five-Year Plan with regard to the national income have plainly been exceeded. In 1928-29, the national income according to the Five-Year Plan should have been 120.8% of 1913, whereas it was actually 123.8%. In 1929-30 it should have reached 139.8% but it actually was 143%.

A very noteworthy feature is the rapidly growing portion of the national income of the USSR falling to the share of the socialised sector of national economy—the government and cooperative undertakings. This leaves the estimates of the Five-Year Plan far behind.

The proportional share of various sectors in the national income in 1926-27 prices is:

	1928	1929	1930	1931
Government institutions	43.9	48.2	52.4	56.2
Cooperative	9.8	14.1	21.3	25.5
Total for socialised sector	53.7	62.3	73.7	81.7
Private sector	46.3	37.7	26.3	18.3
Total:	100	100	100	100

Socialist forms of economy are developing at a rate which is considerably in excess of the estimates of the Five-Year Plan. In 1930, the socialist sector had already achieved a firm and absolute superiority in the national economy. The Land of the Soviets had entered the period of socialism. In 1931 the socialist sector became the dominating factor in agriculture, the sphere where the capitalist elements had been most strongly entrenched. Thus, in 1931 will be completed the construction of the foundations of the socialist economy. The victorious march of socialisation is plainly shown by the following figures (per cent).

Socialist sector

	1928	1929	1930	1931
Basic capital	52.5	56.2	62.7	71.3
Gross output of industry (including small industry)	84.4	89.5	94.3	97.6
Surplus production of agriculture	4.4	8.2	29.7	55.0
Retail trading	78.0	88.6	94.4	97.7

These radical changes in the relationships of class forces made it possible for the VI Congress of Soviets in 1931 to state that "in our country, there is no longer an issue as to the victory of socialism The victory of socialism in the USSR is completely assured".

SUMMARY

Such is the actual summary of the first 10 years of planned socialist economy in the USSR. The Soviet Union is rapidly carrying out its slogan of "overtaking and passing the foremost capitalist countries in the shortest historical period", a slogan made concrete by the VI Congress of Soviets of the USSR when it resolved to "carry out in a period not exceeding the present 10 years the slogan of overtaking and passing the foremost countries in economic and technical matters".

It is indisputable at the present time that the USSR has overtaken the capitalist countries in the matter of the rate of economic development. Even before the crisis of 1929-30 in capitalist countries, it was plain in the post-war years that they were "marking time" or else the rate of growth of production was relatively very small and was growing smaller. Even in the best years of its development, capitalist economy has never experienced such speed as can be found at the present time in the USSR.

The rate of growth (+) or decline (—) of the general index of the physical volume of production for the chief countries during the last three years make a very interesting picture:

	1928	1929	1930
1. USSR	+ 26.7	+ 24.8	+ 35.8
2. USA	+ 4.7	+ 6.3	+ 18.3
3. Great Britain	— 5.2	+ 7.9	— 10.8
4. Germany	— 0.1	+ 1.8	— 17.2
5. France	+ 16.6	+ 9.8	+ 0.6

The USSR has overtaken the "foremost" capitalist countries with regard to the level of industrial production compared with pre-war production. In Germany and Great Britain, the index of the volume of industrial production in 1930 was lower than the pre-war level, but in the USSR the index of production was more than double the 1913 level, considerably exceeding the French Index figure and leaving the USA far behind.

General Indices of the physical volume of Industrial production for the Chief countries

	USSR	USA	Great Britain	Germany	France
1913	100	100	100	100	100
1930	238.3	188.5	82.2	91.1	140.4

In 1931, the USSR will have over 3 times the volume of pre-war production.

Owing to the impetuous progress of Soviet economy, the output of a number of the main branches of industry in the USSR now exceeds the production of the chief European countries, as can be seen from the example of iron and coal.

If the output of pig iron which is planned for 1931 is compared with the corresponding figures for capitalist countries for 1930—(in 1931 in capitalist countries there is a further sharp fall in production), then it will be seen that the Soviet output of pig

iron is larger than the output of Great Britain and is equal to 82.5% of the German output.

In 1931, the Soviet Union gets ahead of France—the country which developed "American" speed after the war—in the consumption of iron and steel, in the production of coal, in the output of electrical energy and in machine construction. The USSR is already more highly electrified than Great Britain.

As for agriculture, at the present time the USSR is the country with the largest agricultural production in the world. The socialised sown area alone in 1931 was more than 3 times larger than the sown area of Canada and is equal to more than half of the sown area of the USA. The total power of mechanical traction in agriculture in the USSR puts it ahead of all European countries.

After the carrying out of the Five-Year Plan, (and it will be fulfilled in four years, as is proved by the experience of the first two years, and has actually been completed in some important branches of industry in a still shorter period), the USSR will contest with Germany for the place as the second industrial country in the world.

During the next three or four years, the Soviet Union will occupy the first place in Europe regarding the volume of industrial production and in particular regarding the production and consumption of textiles, the level of the electrification of industry, the provision of mechanical power for labour and the efficiency of labour in industry.

The last circumstance is of decisive importance.

"In the long run, the efficiency of labour is most important for the victory of the new social order. Capitalism created an efficiency of labour which was unknown to serfdom. Capitalism can and will be finally defeated by the fact that socialism will create a new and much higher efficiency of labour". (Lenin.)

What is the secret of all these successes? What is the source of these tremendous speeds, unknown in the history of mankind, in the economic, social and cultural progress of this country, and moreover, in a country whose level of development lagged behind the level, of the foremost capitalist countries by many decades? All this is the result of planned socialist economy, the result of the new social order. "None of the old classes, neither the feudal aristocracy or the bourgeoisie, could solve the task of liquidating the backwardness of our country. These classes were not only

incapable of solving this task, but they could not even raise the question in anything like a satisfactory manner." (Stalin.)

The conversion of the working class into the absolute owner of all the means of production and consequently the owner of the socialised product has set free the tremendous creative forces and the productive energy of millions of workers. Hence, the conversion of labour from the form of hired slavery which it actually is for the overwhelming majority of the population in modern capitalist society, from toil for the sake of a mere subsistance (while millions of people cannot find ways of applying their labour and are doomed to poverty and starvation)—into a matter of honour, a matter of heroism—the new socialist attitude to labour. Hence, arises the labour enthusiasm of the masses, which has been remarked by all unbiassed observers of Soviet life—socialist competitions, shock brigades, the torrent of workers' rationalisation proposals and inventions. The equality of men and women which has actually been brought about in all spheres has led to a great increase in the number of actual builders of economic and cultural life. Owing to the absolute abolition of national inequality, tens of millions of people who were previously in the situation of colonial pariahs, denied all economic and cultural improvement by the ruling class of the dominating nation, have become an active factor for development, while their own development has resulted in the development of the natural riches of enormous districts. The removal of the capitalist principle of economic activity, which subordinated the development of social production to the interest of private profits, and its replacement by socialist principles based on the maximum development of the productive forces of society in the interests of a systematic improval in the prosperity of the masses,—this has liberated social productive forces from the fetters of private property. This made it possible to distribute productive forces effectively and rationally: economic districts, cooperation, the grouping of allied industries, the maximum size of undertakings, etc. The abolition of private property in land was of decisive importance in this matter, as also in the matter of the rational organisation of agricultural production. The creation of large scale agriculture on the collective principle, capable of applying the most rational methods of cultivation, has also made it possible to develop this branch of industry and to improve the material and cultural level of the agricultural population, a matter which was absolutely beyond the powers of capitalist agriculture, bound

down by rent and the relations of bondage and usury. The socialist planned organisation of economic life has released the national economy from that tremendous waste in the sphere of production, circulation and distribution which is inherent in the capitalist system, has liberated it from parasitism, speculation and fraud. With the destruction of the anarchy of capitalist production and the under-consumption which is indissolubly bound up with it, the socialist planned economy has got rid of crises of over-production, and is thus not affected by this great destructive force of modern society. Soviet economy has none of those market crises which are inevitable under capitalism. While developing productive forces for the purpose of increasing the prosperity of the masses, it creates at the same time an unlimited demand which in turn stimulates production still further and opens out a wide horizon for the growth of productive forces. Planned economy which consciously directs social production, creates a new and mighty productive force.

The planned socialist economy of the USSR has only passed through the first but the most complex stage. It has met and still meets with resistance in its path, with difficulties and hindrances. There have been many great difficulties which have not yet been completely removed up to the present day, both in the sphere of the immediate and complete satisfaction of the demands of the masses whose standard of culture is rising with fabulous speed and whose requirements grow from year to year, and also in the sphere of knowledge of the most modern technical methods and rational organisation,—the shortage of skilled and fully reliable specialists, etc. But all these difficulties, which mostly arise from the economic and cultural heritage which the Soviet government received from Tsarist Russia, complicated by the resistance of the capitalist elements in the country and the aggressive hostility of the capitalist world, are successfully being overcome by the victorious march of socialist construction which is liquidating the cultural and technical backwardness of the country at unprecedented speed, and cutting the ground from under the feet of the hostile classes which have lived beyond their time. All these difficulties cannot be described otherwise than as the difficulties of growth. The completion of the Five-Year Plan will create a basis for the national economy of the USSR which will make it possible to move forward at a still higher speed and to write a new and still more brilliant socialist page in the history of human society.

THE PLANNING AND DEVELOPMENT OF AGRICULTURE IN THE USSR

BY A. GAYSTER

I.

In contrast to the course of development of agriculture in other countries, agriculture in the Soviet Union has in recent years entered a period of rapid growth. This growth is characterised by the tens of millions of hectares of new land that have been put to the plough, and the rapid increase in the number of tractors, machines, implements and in the quality of chemical fertilisers employed in agriculture, as well as a considerable increase in the marketable output and of income.

Since the first years of the October Revolution, agriculture in the USSR has been under the central guidance and the planning influence of the Soviet government. Its development has been in the direction of strengthening socialist production, while the chaotic development of millions of small farms has been determinedly overcome.

The development of collectivisation, to the point of complete collectivisation in a number of regions, together with the enormous growth of the system of state farms, has firmly established the method of planning as the basis for the direct guidance of agricultural undertakings and their rational distribution throughout the country has created ideal conditions for the application of science to agriculture, and in this way the hitherto most backward branch of national economy has been raised to the level of the requirements of modern science. The remarkable forecast made by Engels that "agriculture, which is now unable to adopt the tested improvements and scientific methods owing to the restrictions of private property and the small areas of the farms, will also enter a period of prosperity and will provide society with sufficient products", has been verified.

The USSR was a country of extremely small peasant farms. In 1927, there were 24,800,000 farms in the USSR having an average area under cultivation of 4.4 hectares. In 1931, 226 collective farms sowed 88,900,000 hectares. The average for each of these big socialist farms was 394 hectares. This means that the area of socialist agriculture in the USSR is three or four times as large as the sown area of such countries as Canada, France and

Germany, and forms more than half of the total cultivated area of the USA.

In order to appreciate the significance of the process of voluntary organisation into big collective farms and the growth of the state farms, it should be borne in mind that in the USA, during the twenty five years from 1900 to 1925, the proportion of farms with an area of over 500 acres increased from 2.6% to 3.2%, while the area of land of the farms increased from 31.7% to 34.8% of the total area of cultivated land. In Germany, the proportion of farms with over 200 hectares declined on the period from 1907 to 1925 from 16.5 to 15.6%.

Planned socialist development of agriculture has given rise to a new type of socialist agricultural production and to the development of large socialist farms with a speed hitherto unknown. This development is not based on the ruin and expropriation of the small peasant farms but on the improvement of their standard of life and economic activity, on a considerable growth of the productive forces of agriculture and its radical social and technical reconstruction.

During the four years from 1927 to 1931, the cultivated area of the USSR increased by 23,000,000 hectares. During the same period, the cultivated area of the USA declined by 4,200,000 hectares. The sown area of the whole world (without USSR) decreased during these four years from 360,200,000 hectares in 1927-28 to 334,600,000 hectares in 1930/31. The development of world agriculture during the last five years has been based entirely on the development of agriculture in the USSR.

In order to appreciate the significance of the growth of the cultivated area in the USSR, it should be recalled that during the twenty five years from 1900 to 1925, the sown area of the USA increased by 22,000,000 hectares, or in other words, the sown area of the USA increased in 25 years by the amount that the sown area of the USSR increased in five years.

The rate of development of the cultivation of raw material for industry in the USSR is still more striking. The area under cotton in 1913 was 701,000 hectares, and in 1921 it had fallen to 120,000 hectares. In 1927, the pre-war level was reached and surpassed with 751,000 hectares. In 1931, this area was trebled, and reached 2,357,000 hectares. The area under sugar beet in 1913 was 664,000 hectares, and, in 1921, as the result of war and intervention it fell to less than half—218,000 hectares. In 1927, the area under sugar beet reached pre-war figures—665,000 hectares. In 1931, the

sowings of sugar beet were more than double this amount and reached 3,370,000 hectares. The principal oil plant—sunflowers—in 1913 occupied an area of 910,000 hectares, and in 1931 the area was 4,594,000 hectares.

To this should be added the rapid growth of the area under new types of crops in the Soviet Union—soya beans, kendir, kenafa—and the enormous increase of the area under maize, rice, etc. Only in a country with planned socialist construction is it possible to raise the sowings of soya beans in a single year from 71,500 to 450,000 hectares, and to plant kenafa and kendir on an area of 106,000 hectares.

Industrialization assures both the technical re-equipment of agriculture of the Soviet Union and a considerable increase in the quantity of the modern means of production employed in it. On October 1st, 1924, there were 2,560 tractors in use in agriculture in the USSR, with a total capacity of 35,600 horse power.

At the commencement of spring work in 1931 in the USSR, there were already 110,000 tractors, and the USSR is now second to the USA in regard the number of tractors employed in agriculture.

On January 1st, 1933, the total power of the tractors will be 3,057,000 H.P. At the end of 1927, the value of agricultural implements in use amounted to 2,679 million roubles, and at the end of 1930 the value was 3,397 million roubles. Thus, the increase in the value of agricultural implements for three years was 718,000,000 roubles, or 27%. In 1931, the investments in implements and buildings equalled 1,330 million roubles; deterioration for the year amounted to 606 million roubles. Thus the increase in value for this year is equal to the total increase for the previous three years.

The value of machines and tractors in use in agriculture for the three years from 1927 to 1930 increased by 46%, and at the end of 1930 was equal to 1,610 million roubles. The value of the tractors, machines and implements to be put into operation in agriculture this year is 855,000,000 roubles, i. e. more than half the value of the tractors, machines and implements in agriculture at the beginning of the year. The total value of the tractors, machines, and the electrical equipment in repair shops and agricultural industrial plants provided for agriculture in 1931 will be in excess of 1,200,000,000 roubles. This is roughly equal to the value of the engines, motors, lathes, etc., received by industry in 1930.

The amount of fertiliser employed increased from 665,000 tons in 1930 to 2,427,000 tons in 1931. In 1931, agriculture will receive 220,000 tons of alkali fertiliser from the Solikamsky alkali industry.

The industrial assistance given to agriculture has made a great change in the type of traction power. In 1927, 98.9% of the productive work in agriculture was performed by animals. In 1931, the proportion of animal power was reduced to 74.4%, while the work done by tractors had risen to 21.9% and automobiles to 3.7%.

The actual development of agriculture during the three years of the Five-Year Plan show that almost all the main figures of the Five-Year Plan have been fulfilled in three years or less. According to the Five-Year Plan, the sown area in 1932-33 in the collective farms should have been 20,600,000 hectares, and 20% of the peasant farms should have been organised in collective farms. In the spring of 1931 the sown area of the collective farms reached 78.5 mil. hectares and 57.1% of all the peasant farms in the country were organised in collective farms.

The Five-Year Plan provided for 4,400,000 hectares of sowing in the state farms in 1932-33, but in spring, 1931, 10,500,000 hectares were sown. The successes of industrialisation and the surpassing of the Five-Year Plan in industry assured the supply of a larger number of tractors, agricultural machines and implements than was expected under the plan. The Five-Year Plan provided for a total of 1,307,000 H.P. for tractors in 1932-33, but already in the spring of 1931 a total of 1,619,000 H.P. was in use. The Five-Year Plan provided for 1000 machine and tractor stations by the end of 1933; but already in 1931 the number reached 1,400 with a total of 700,000 H.P.

Owing to the fact that the plan of collectivisation and the construction of state farms the supply of tractors and machines has been considerably surpassed, the plan of development of certain branches of agriculture has been exceeded.

In the current year, the area under cotton is 60% greater than that provided for in the whole Five-Year Plan, the area under flax is 22% greater, and the area under sugar beet is 25% greater.

There only remains to be mentioned the Five-Year Plan for the development of cattle rearing. The struggle of the kulaks against the rapidly spreading collectivisation movement and the fact that socialist cattle rearing on a large scale was still undeveloped, led last year to a considerable reduction in the number of cattle. This must be compensated for during the next few

years by increasing the yield of milk and the weight of meat per animal in the state farms and the collective farms.

Such are the first results of planned socialist development of agricultural production, the results of overcoming the tendencies to sporadic development which were dragging the national economy of the USSR on to the capitalist path of development; these are the results of the widespread development of state farms, of mass collectivisation linked up with the liquidation of the remnants of the capitalist classes in the Soviet Union. In order properly to appraise the planned nature of the direction of agriculture in the Soviet Union, we will deal with the direction of the development of agriculture before and after the October Revolution.

II.

Agriculture in pre-revolutionary Russia was characterised by the concentration of considerable parts of the land in the hands of big landlords, and the prevalence of extremely small farms among the peasants, and in connection with this, the semi-serf dependence of the mass of peasants on the landlords. If we divide the farms of pre-revolutionary Russia according to their size into four groups, we find the following proportions between them in 1905, the date when a census was taken:

	No. of farms (Millions)	Area of land (million dessiatines *)	Average per farm Dessiatines
1. Ruined peasants, crushed by serf-like exploitation	10.5	75.0	7.0
2. Middle peasants	1.0	15.0	15.0
3. Bourgeois peasant and capitalist farms	1.5	70.0	46.7
4. Feudal Latifundia	0.03	72.0	1,333.0
	13.03	232.0	17.6

The overwhelming majority of the peasant farms of that period consisted of the ruined peasants, who were crushed by the exploitation of the landlords and did not have sufficient means even to support themselves physically. Hence arose the ceaseless ruin and the underfeeding of the small farmers of Russia which was shown by such things as physical degeneration and the increasing number of rejections from the army on grounds of unfitness. Thus, according to official figures for 50 Gubernias of European Russia, the percentage of rejections and examptions from military service increased from year to year as follows:

* Dessiatine = 1.1 hectare.

1874—78	11.2%
1879—83	14.9%
1884—88	16.9%
1889—93	17.9%
1894—98	17.6%
1899—02	22.1%

Thus, the transition of agriculture in pre-revolutionary Russia from natural self-sufficing form of economy to commodity farming, i. e. farming for the market was a process accompanied by the pauperisation of the masses of the rural population, their impoverishment and expulsion from agricultural production.

III.

The inherent contradiction between the ruin of the masses of the peasants, the capitalist development of agriculture and the domination of the landlords over the principal means of agricultural production, was the main cause of the revolution of 1905, and at the same time was one of the most important reasons for the revolutionary explosion of 1917. Although the 1905 revolution was crushed by the punitive expeditions of the Tsarist troops and by his hangmen, the Tsarist government was nevertheless compelled, by means of the so-called Stolypin laws, to drive agriculture along the path of capitalist and commodity development at a much greater pace. But as the power and the income from agriculture in the main still remained in the hands of the ruling class of landlords, these attempts were unable to provide favourable conditions for the liquidation of the contradictions between the landlords and the peasants. These contradictions were merely made more acute by the Stolypin reform in spite of the fact that the Tsarist government tried to win the support of the upper strata of the villages, by enabling them to acquire additional land, by plundering the common lands. The outburst of the revolution, rendered still more acute by the war, led to the overthrow of the Tsarist power, and foiled the attempts of the capitalist classes in Russia to retain power after the February revolution.

IV.

The victory of the October Revolution brought about the liquidation of the large landowners and the nationalisation of the land. It limited the holdings of the upper strata of the villages and gave considerable amounts of land both to the poor and

middle peasants. As an example, we will examine the results of the agrarian revolution in the Ukraine.

Landholdings in the Ukraine as the result of the agrarian revolution (in millions of dessiatines).

	Before Revol.	Confiscated	After revolution	Increase or decrease	%
Poor and middle farms	20.0	—	34.5	14.5	72.5
Kulak (peasant and bourgeois)	8.6	6.8	1.8	6.8	79.0
Estates and church land	12.1	12.1	0.0	12.1	100.0
City land	0.6	0.3	0.3	0.3	50.0
State and public land	—	—	4.7	4.7	100.0
Total:	41.3	19.2	41.3	—	—

Before the revolution, the poor and middle peasants in the Ukraine owned less than half the land, the kulaks owned 20% and the big landlords owned 30% of all the land. The revolution brought about a sharp change in these relations; it completely liquidated the large landlord estates, it left the kulaks only about 5% of the land and handed over 83% of the total area of land to the poor and middle peasants.

The victory of the October revolution signified the real liberation of the poor and middle peasants from the exploitation of the landlords and from relations of bondage, and considerably increased their landholdings, while sharply reducing the burden of taxation by means of which the landlords' government additionally exploited these sections of the rural population. The middle peasant became the central figure in post-revolutionary agriculture.

V.

Even in the first few years of the revolution, it was quite obvious that if small production in agriculture was continued for a lengthy period it would be impossible to reconstruct this most backward branch of national economy or greatly improve the conditions of life on the small peasant farms. Lenin considered that it is necessary to "give every support to the small peasants who wished to pass to the basis of large scale social production", so that "agriculture, the most backward branch of production may advance along new lines, be reformed and converted from an occupation carried on by the routine of the past into an industry based on science and technique".

Such a change called for the development of industry so as to supply agriculture with tractors, modern machines and electrical equipment.

The guiding principle of Marxist-Leninist planning was to direct agriculture along a path which would guarantee the development of social production (state farms and collective farms) and would restrict and squeeze out kulak production and at the same time to raise the standard of living of the poor and middle peasants and in this way help the peasants to appreciate the advantages of passing on to socialist lines. The plan provided for a series of measures to be applied from year to year for the purpose of organising and facilitating this transition, i. e. it proposed to bring organised influence to bear on the spontaneous processes connected with the small scale agricultural production which predominated at that time in the USSR. In contrast to this Leninist plan for the socialist reconstruction of the countryside, certain economists (Professor Kondratiev, Oganovsky) put forward their plan for the development of agriculture. This was based on their disbelief in the possibility of the victory of socialism in agriculture and provided for measures which would encourage the capitalist development of agriculture. Instead of organised planned influence on the development of agriculture in the direction of socialism this plan proposed to allow the anarchic development of small peasant economy to take its course, i. e. they proposed to submit to instead of guiding the development of small peasant farming.

These two lines inevitably had to come into sharp conflict both theoretically and practically*.

The victory of the Leninist plan of socialist development of agriculture enables us to obtain a sufficiently clear estimate of the policy of the Soviet government during the so-called restoration period, when the development of commodity relations in the villages caused some economists to speak of the restoration of capitalism in the villages.

VI.

The restoration period is characterised by the predominance of small peasant farms in the agriculture of the USSR. The fact that the Soviet system of government created the necessary conditions for the improvement of small peasant farms and not for

* It is now known that the authors of the plan for the bourgeois restoration of agriculture passed on to active struggle against the plan of socialist reconstruction during that period when the masses in the villages had become convinced of the advantages of collective farming and were joining the collective farms in millions. These authors joined the ranks of a counter-revolutionary organisation of wreckers.

their mass ruination led to a fairly rapid restoration of agriculture and stock raising which had been destroyed by war, blockade and famine.

It should be noted that the authors of the plan for the bourgeois restoration of agriculture in the USSR were unable to estimate properly the extent to which the small farms had been affected by the revolution, even in the period of their development as individual farms. Their plan assumed that the total cultivated area in 1928 would be 106 million hectares. But it reached this figure in 1926, and in 1928 it reached 109.6 million hectares. According to this plan, we were expected to have 74 million head of cattle in 1928, but in reality the number had passed this level in 1926, reaching 75 million head, and in 1928 it was more than 79 millions.

The rapid tempo of the restoration of agriculture in the USSR was accompanied by a simultaneous improvement in the conditions of life of the agricultural population.

According to the data of the Central Statistical Board, the consumption of meat by the village population in 1925 exceeded the pre-war consumption of the villages by one-third. During the following years, the consumption of meat continually increased, as can be seen from the following table:

Years	Consumption of meat and fat per person in kilograms	% of 1924-25
1924—25	16.05	100.0
1925—26	16.54	103.1
1926—27	18.29	114.0
1927—28	18.71	116.6
1928—29	22.41	139.6

The great improvement in the life of the rural population led to a great reduction in the death rate among them after the revolution and especially a reduction of the death rate among infants. The number of deaths per thousand of population in 1911-13 was 28.6, in 1926 it was 21.7, in 1927 it was 21.8 and in 1928 it was 18.7.

In 1911-13, 266 infants up to the age of 1 year died out of every thousand born. In 1926 the number was 174 and in 1928 it was 156.

VII.

The development of commodity production by small producers inevitably leads to class differentiations among them and the

growth of capitalist groups. The singular feature of Soviet economics during the period when small production in agriculture predominated was the fact that the growth of the kulaks was accompanied by a much more intensive economic growth of the poor peasants, their passage into the ranks of the independent producers, and the strengthening of the middle peasants. This peculiar feature of the class differentiation of the Soviet village is the reverse of what takes place under capitalist conditions, in which the growth of commodity production leads to the enrichments of the higher groups and the ruin of the lower groups.

But this period also clearly exposed the limited productive possibilities of small farms. More or less complex implements were possessed only by a small group of farms. In 1927 the number of farms in the USSR possessing their own seed sorting machines represented 11.6% of the total, the number having seed drills represented 3.7%, those with harvesters 6.2% and with threshing machines 4.3%.

The mass of peasantry were compelled either to limit themselves to the most primitive implements or hire the means of production in order to be able to cultivate the land and the few implements which they possessed.

The extensive development of the cooperative movement (in 1929, 80% of the rural population belonged to the general cooperative societies and 45% of the total number of households belonged to the agricultural cooperatives), caused the masses in the villages to realise the considerable increase in the efficiency of labour which resulted from collective production and the use of modern machine methods. The financial assistance in the form of credit which was given to all cooperative societies, and especially to the collective farms, by the Soviet Government made the transition much easier.

All these causes, combined with the increased solidarity and organisation of the poor and middle peasants in the villages, who carried on a determined struggle against the attempts of the kulaks to arrange a "grain strike", led to an increased and energetic development of collective farm construction.

On June 1, 1927 0.8% of the farms were organised in collective farms (195,000). On June 1, 1928 1.7% of the farms were organised in collective farms (417,000). On June 1st, 1929 3.9% of the farms were organised in collective farms (1 million). On July 1, 1930, 24.6% of the farms were organised in collective

farms (6 millions). On July 20, 1931, 57.1% of the farms were organised in collective farms (13.7 millions).

On June 1st, 1927, the sown area of the collective farms equalled 749,000 hectares, on June 1st, 1928 it was 1,367,000 hectares, on June 1st, 1929 it was 4,132,000 hectares, on June 1st, 1930 it was 38,300,000 hectares and on June 1st, 1931 it was 78,500,000 hectares.

VIII.

The fundamental cause of this tremendous growth in the collectivisation of poor and middle farms in the USSR was the advantage of large scale collective farming, which was demonstrated during the first few years when large collective farms were organised. Collectivisation led to the abolition of the open field strip system and to the formation of large land areas, which enabled the peasants to make better use of their means of production and to apply machine methods more advantageously.

The nationalisation of the land assured the possibility of transforming the millions of small strips of land of the peasant farms which joined the collective farms into large land areas, suitable to the local topography, the properties of the soil and the technical methods used.

The uniting of small peasant farms into big collective farms led to the great increase in the efficiency of labour. The area of land for every able-bodied member of a collective farm was one hectare more than the area cultivated in small farms before joining the collective farms. In the Ukraine the increase was 31.6%, in the Middle Volga 73.1%, in the Central Black Earth Region 23.9%, in the lower Volga 78% and in the North Caucasus 50%.

Draught cattle, which in the small peasant farms were not fully employed, were utilised to a fuller extent in the collective farms.

In the Ukraine, the effective employment of draught cattle increased by 24.1%, in the Middle Volga by 30%, in the Lower Volga by 25.2% and in the North Caucasus by 34.6%.

This great improvement in the productive possibilities of the farms which were united in collective farms was also observed in the rate of growth of the collective farms themselves and in the great improvement in the welfare of their members.

The increase in consumption in kilograms per person among the collective farms can be seen from the following table:

	District	Poor farmers	Middle farmers	Kulaks	Members of Artels	Collective farm Communes
Meat Fat	North Caucasus	12.2	16.5	20.3	20.9	32.1
	Volga	5.4	13.4	24.4	15.6	27.9
Milk	South West Siberia	11.6	25.0	26.1	28.9	22.4
Butter in milk units	North Caucasus	69.1	142.9	225.9	235.0	178.6
	Volga	159.7	182.5	206.9	204.0	269.0
Grain Prod.	N. Caucasus	199.4	227.8	245.1	238.3	222.0
	Volga	203.8	228.3	229.9	220.5	208.2

IX.

The greatest role in demonstrating the advantages of large scale socialist production was played by the Soviet Government farms—the so-called Soviet farms. The Soviet government has boldly transferred its experience of large scale industrial production to agriculture. The Zernotrest Grain Trust has 176 farms occupying an area of 14,400,000 hectares and during the current year it has sown over 5 million hectares. The Scotovod Cattle Trust has 200 farms covering an area of 31 million hectares and has 2,800,000 head of cattle. The Svinovod Pig Breeding Trust has 520 farms and 1,900,000 hogs. Ovtsevod Sheep Rearing Trust has 130 farms covering an area of 14,600,000 hectares and a flock of 4,400,000 sheep. The Milk and Butter Trust has 50 farms with 110,000 cows. The Cotton Trust has 44 farms with a sown area of 320,000 hectares. Such is the size of the principal agricultural trusts and Soviet farms.

The line of development of the farms is: the greatest possible specialisation, production on the largest possible scale and utmost mechanisation. The grain farms are developing on the basis of complete mechanisation, and this is the task for all the other Soviet farms according to the plans.

X.

One of the most important forms of the developing collective farm movement was the creation of machine and tractor stations, which commenced their experiment in the Shevchenko state farm in the Ukraine. This experiment was successful and the system widely adopted with the support of the Soviet Government. Machine and tractor stations, which combine the centralised

mechanical traction and technical equipment necessary for the efficient cultivation of the collective farms with their horse traction power, are the basic form in which the working class gives industrial assistance to the collective farms.

The collective farms on the territory served by a machine and tractor station enter into contracts with the latter regarding the conditions under which the machine and tractor station will work the fields of the collective farms. The agronomical service given by the machine and tractor stations, the combination of tractor and horse power and the utilisation of the peasants' means of production to the utmost greatly increased the efficiency of labour in the collective farms served by these stations. During the current year, machine and tractor stations having 700,000 h.p. on tractors and 870,000 collectivised horses first fulfilled the sowing plan of 18 million hectares and then surpassed it, raising the figure to 20 millions. The output of grain of the collective farms connected with machine and tractor stations represents 27% of the total grain output of all collective farms.

Machine and tractor stations produce an increased amount owing to the improved working of the soil and to the agronomical service they give to the farms. This, as well as the increase in the sown area, greatly increases the income of the collective farms.

The socialisation of livestock breeding in collective farms has brought to the front a new form of collective commodity livestock breeding, namely—cattle breeding collective farms. This form guarantees the development of large-scale socialised cattle breeding on the basis of rational feeding and proper care of cattle and will produce a considerable quantity of animal products for the market.

At the present time collective dairy farms have a total of one million cows. According to the plan, this number is to be increased to 1,500,000.

The pig breeding collective farms on July 1st had a total of 635,000 pigs. In addition to those main branches of livestock farms, the collective farms are also organising poultry, sheep, rabbit and other farms.

XI.

One of the characteristic features of Soviet economics during the present period is the liquidation of unemployment. This important fact and factor in the economics of the USSR is closely connected with the social changes which have taken place in the

Soviet villages. Under capitalist conditions, the formation of a reserve army of labour takes place to a considerable extent owing to ruination in the villages which converts peasant owners into workers selling their labour power. The fact that, until very recently, the elements of capitalism existed side by side with the development of socialist elements in Soviet rural districts, owing to the prevalence of small production, also created a superfluity of labour power in the village which sought an outlet in the towns.

This was especially due to the fact that the Soviet Union inherited from Tsarist Russia an enormous number of poor farms which did not possess even the minimum quantity of the necessary implements of production. The revolution gave the peasants land and created favourable conditions for improving their standard of life, it relieved a considerable proportion of the village population (35%) from the burden of taxation and established special funds for providing credit and productive assistance to these sections of the rural population. As a result of these measures, the proportion of poor farmers who with their families represented half the rural population before the revolution, fell to 26% in 1924-25 and 22% in 1926-27. But the most radical means of liquidating the propertyless condition of this section was collectivisation. The poor farmers were the most active in collective farm construction, and the main cadres of the collective farms at the first period were recruited from among the poor farmers.

The great improvement in the conditions of the poor farmers arising from the construction of collective farms and the fact that the mass of the rural population—the middle farmers—had entered the path of mass collectivisation, isolated the capitalist class in the villages—the kulaks,—and led to the liquidation of their economic strength.

The collective farm movement encountered the furious resistance of the kulaks and they tried to disrupt the movement from within and from without. The liquidation of the economic base of kulak exploitation and the measures taken to combat their attempts to weaken the collective farm movement led to the liquidation of the economic significance of the kulaks in the district of mass collectivisation. This brought about a radical change in social relations in the villages.

Before the development of mass collectivisation, the central figure in the Soviet village was the middle peasant. Now it is

the collective farmer. In 1928 the population of the poor and middle farms was 105,000,000. In 1931 the individual poor and middle farmers numbered about 50,000,000, while the population of the collective farms has grown from 1,800,000 in 1928 to 60,000,000 this year. During these years, the kulak population declined from 5,400,000 to 1,600,000.

This change in the relationship of classes, which reflects the social change which has taken place in the villages, is accompanied by a great increase in the incomes of the collective farmers, and the agricultural proletariat (the Soviet farms and the machine and tractor stations).

Income of the agricultural population of the USSR.

					% of 1928			
	1928	1929	1930	1931	1928	1929	1930	1931
Total income in billion rbs.	15.5	15.0	19.6	22.1	100	96.8	126.5	142.6
	Income per head (in roubles)							
Agri. proletariat	122	140	175	234	100	114.8	143.4	191.8
Collective Farmers	145	153	210	234	100	105.5	144.8	161.4
Individual Farmers	131	124	161	161	100	94.7	122.9	122.9
Kulaks	259	270	181	181	100	104.2	69.9	69.9

In this table, we note first of all the steady increase in the income of the agricultural population, and chiefly the increase in the income of the agricultural proletariat. In place of the farm labourers, the most neglected section of the villages, who were mercilessly exploited by the kulaks, there has arisen on the basis of the tremendous growth of the mechanisation of agriculture in the Soviet Union and the development of socialist agriculture and stock rearing a new rural stratum—the agricultural proletariat of socialist farms. Its standard of life is in sharp contrast to that of the farm labourers. The working day has been cut down to the level of the industrial workers, there is an enormous increase in literacy and technical skill among them, their wages have risen considerably and their economic conditions have materially improved. These are the achievements of the proletariat of socialist agriculture.

The income of the collective farmers is also increasing. New technical equipment, and the efforts made for the better organisation of labour in the collective farms, all create conditions for an improvement in the efficiency of labour on the collective farms and an increase in the income of the collective farmers.

The kulaks were the only section to lose part of their income, owing to the determined attack which has been made on them in those districts where complete collectivisation had not brought about the absolute destruction of their economic importance.

XII.

The construction of collective farms and state farms has converted the Soviet Union into a country of large scale agriculture. This considerably increases the importance of planning in agriculture. From the first day of its existence, every collective farm and every Soviet farm is faced with the task of working according to a plan if it is to utilise all its main implements rationally and combine them in an efficient manner, so as to bring about an increase in the efficiency of labour and a considerable reduction in the costs of production.

In the past, the rational cultivation of individual farms was controlled by the fluctuations of market prices. During the last few years, fluctuations of market prices have been greatly limited by the system of the contracting of crops. The contracts lay down the quantity of products to be handed over to the government, and indicate the quality and price. In place of the control of the market, control is now exerted in the Socialist sector by the fulfilment of the plan of production and the calculation of expenses and costs of production in a businesslike manner. This rational control by society over the success of production and the labour of the producers makes it possible for them to produce without waiting for the impetus of price changes which may swallow up their whole income and ruin them. In addition, such a system of social control and regulation of production, based on the socialist contests of the toilers and on their personal interest in the efficiency of their labour, gives great possibilities for increasing the efficiency of collective labour. The recently published summary of a registration which was made in the collective farms of the Middle Volga this spring shows that in this province 35% of the collective farms had competitions in progress between their working parties during the spring sowing campaign, that 38.5% of the collective farms had shock brigaders in their ranks, i. e. workers who were able to realise that "labour which was previously compulsory has now become a matter of honour, a matter of heroism" (Stalin). As the result of the development of these new

forms of labour, the province of the Middle Volga was the first to complete its sowing plan this year.

The plan has become a means of concrete guidance for the development of agriculture. According to the same statistics, the sowing plan adopted by the district administrations was 4,175,760 hectares. When the collective farms considered the plans as applied to their farms, they adopted the district plans without alteration, in 77.3% of all the collective farms, increased the task for themselves in 15.6% and reduced the task in 7.1% of the collective farms. As a result the tasks under the plans were raised by the counter plan of the collective farms to 4,279,573 hectares, an increase of 2.7%.

In addition, the plan is a weapon in the struggle for lowering costs of production and reducing expenses. The construction of collective farms and Soviet farms means a considerable reduction in the cost of agricultural production. Investigations into the budgets of a number of districts confirm this. The cost of production of winter wheat in the North Caucasus in 1926-27 was 4.6 roubles per centner in peasant farms and 2.9 roubles per centner in the collective farms. In the Steppe district of the Ukraine, the cost of a centner of winter wheat in peasant farms was 2.9 roubles. The cost of production of one centner of rye in peasant farms was 4.3 roubles and in big collective farms it was 2,0 roubles. We get the same picture of reduced costs if we compare Soviet farms with the peasant farms.

The planning of agriculture on a national scale is the basis for its rational geographical distribution and for the specialisation of crops. The distribution of agriculture which grew up in the USSR in the course of history had no rational basis. Land which was fully suitable for high priced industrial crops in view of climatic conditions was used for grain production. The plan for the specialisation of agricultural production has in view the distribution of crops on a scientific basis so that the most profitable crops and the most valuable branches of agriculture from the point of view of the national economy will be rationally introduced. The distribution and specialisation of state farms and machine and tractor stations is subordinate primarily to the plan of the distribution of agriculture.

The plan for the socialist development of the USSR and of the agriculture of the country is being put into force with the greatest

of energy in the country of the Soviets. The enthusiasm and determination of the toilers is giving effect to the creative guidance of the proletariat, and from day to day is emphasising the enormous advantages of the socialist system. Nowhere are these advantages so plain as in agriculture. Millions of toiling peasants have broken away from tradition and from the limitations of small peasant production. In place of small farms there has arisen large scale production, and in place of individual farms there are now collective, socialist farms. Reliance on the vagaries of the market have been replaced by planned scientific direction.

This is a tremendous lever for the uplifting of agriculture, for the liquidation of the contradictions between town and village, and for the creation of united, highly efficient, technically and socially uniform production in industry and agriculture. This is the historical significance of the experiment of the planned socialist development of agriculture in the USSR.

LABOUR IN THE PLANNED ECONOMY OF THE USSR

BY I. A. KRAVAL

In submitting this paper on labour conditions and the character of labour relations in the Union of Soviet Republics I consider it unnecessary to deal with those historic events which led to the victory of the working class over so vast an area of the earth's surface and which are leading the Soviet Union to play an increasingly important part in the general scheme of world economy, nor does it come within my domain to outline the historic tasks with which the proletariat of the USSR is confronted at the present time, particularly as a result of the general economic and financial crisis, in which capitalist countries are increasingly involved.

I intend to confine myself to an exposition of those features that are most characteristic of the social system taking shape in the Soviet Union and to analyse these features in a concrete fashion. A peculiarity of our Soviet type of economy is its high tempo of development. Once our industry was restored to its former level, our working class was confronted in all seriousness with the question of the rates of development to be maintained, of how it was to increase the national income and swell the army of producers by placing our entire economic system on a solid up-to-date technical basis.

Our Soviet economic system is developing at a tempo utterly beyond the reach of the capitalist system because its development is free of the anarchical features of the capitalist system and does not contain within itself those antagonisms peculiar to capitalism. We find it possible, steadly and progressively, to accelerate the speed at which we are moving forward and to carry out our program of catching up with and out-stripping the foremost capitalist countries, in order to produce the conditions for bettering the lives of the toilers. Once we have taken the road of rationalisation based on the advance of modern technique, it becomes our sole and basic task to effect further rationalisation,—and we need have no fear that the labour power set free as the result cannot be used elsewhere for productive labour. This is because simultaneously, the work of new construction that is proceeding

on such a big scale is drawing fresh armies of producers into the process of social labour, because we can effect a considerable reduction in the working day, and utilize the surplus product obtained as the result of rationalisation in order to extend production and steadily increase the consuming power of the masses of the population.

The essential problems of planning in the field of labour are contained approximately in the following circle of questions; the meeting of all the requirements of agriculture as regards various forms of skilled labour now necessary as the result of industrialisation of agriculture; ways and means of keeping track of all surplus labour power in agriculture which has been set free as a result of mechanisation, and its distribution between the various branches, trades and districts of industry; the preparation of cadres of skilled workers and engineers; the regular promotion of workers to more highly skilled work; the specialisation of workers according to the equipment they have to handle and the work they have to perform; the regulation of wages for different grades of labour; the increase of labour productivity, coupled with improved technique with the aim of improving the general welfare of the workers; the elaboration and realisation of a program of hygienic and safety measures for labour.

We would however entirely fail to understand the essence of labour relations if we were to consider Soviet economy merely as a planned economy. The decisive factor conditioning the rapid tempo of our growth is the powerful development of socialist forms for labour organisation, on the basis of the fact that the working masses are conscious that they work only for themselves and that they are not only producers but also organisers of production. In a relatively short space of time we have passed through several stages in this field—from individual social competition to shock brigades, to productive collectives and interdepartmental brigades, which in the process of their development create ever new forms and are bringing about "a radical change in man's attitude to labour, since it transforming labour from the shameful and heavy burden it was once considered to be into a matter of honour, a matter of heroism, of glory and valour." (Stalin.)

The most important problem in the movement of socialist competition has been to get the industrial and financial plan individualised for every department and single machine or worker in the factory. It was only when we reached that state of things

when not only was the working class as a whole directing industry, but when every individual worker understood his part in the total scheme of production and the connection between work he is doing and the work his neighbours in production are doing, that we have been able to achieve results whereby the workers, utilising to the full all internal possibilities and resources of the plant, can play a decisive part in the drafting and fulfilment of the production plan.

Since that movement, the system of so called workers' counterplans, began to develop and grow it has already furnished us with enormous practical results and assisted us to wipe out the industry-wrecking activities of counter-revolutionary groupings within the country. In all cases the adoption and discussion of such counterplans has been accompanied by numerous inventions and suggestions for rationalisation, aiming at and effecting improvements in the process of production and increasing the productivity of labour.

It would be senseless to hide the difficulties which the working class encountered and still encounters in this work. Big difficulties are being met because of the very considerable labour turnover arising out of the exceptional ease with which jobs may be obtained in the most varied branches of industry, the remarkable mobility of labour which is fostered by large-scale production and the tremendous amount of new constructive work going on everywhere.

In passing, I may add that this alone forms a weighty and convincing reply to those who seek to find elements of compulsion in our system of labour. Is it not a very peculiar kind of forced labour indeed which allows any worker to pass freely from one branch of industry to another—a state of things which makes for an enormous fluctuation of labour? The fight against this fluctuation is not easy and is effected in the form of self-obligation of the workers. Most of the workers pledge themselves before their fellow workers not to leave their posts until the main problems confronting our industry are solved, to stay in their particular plant until the conclusion of the Five-Year Plan. In this fashion the more progressive workers rally around themselves their more backward fellow workers and help to raise them to a full consciousness of the general interests of their class.

In the American authors on the questions of psychophysiology and psychotechnic (Scott, Tead and Metcalf) we find a proof of the significance of the "attraction of work" and "actively inter-

esting" the worker in his work. The American employers understand how to awaken personal ambition through different means, in that they draw the worker into participation in the profit and so call forth a competition between the different categories of workers, threaten them with unemployment and so attempt in their own interest to create the activity of the worker masses.

But when all is said and done these things are circumscribed in their effects, by the extent to which the bourgeoisie is able to blunt the class-consciousness of the workers and to mislead them as to the true nature of labour under the conditions that go with capitalism. Consequently, opportunities in this direction are extremely limited in capitalist countries. The reverse is the case where a socialist economy exists. There the entire system of free labour on a co-operative basis coupled with the enthusiasm for their work revealed by the masses provides truly unlimited possibilities.

The advanced section of the proletariat influences the less advanced section of the proletariat by convincing example and direct support and only exceptionally applies against single unworthy workers, measures of social compulsion in the form of social isolation, comradely trials etc. All of these means for the maintenance of workers discipline arise from the fact, that in the USSR the workers themselves are the organisers of production.

As the result of this labour enthusiasm we have been able to secure such tempos of development for the whole of our national economy as have wiped out unemployment in a very short space of time, made it possible to employ ever-increasing numbers of workers in all the main fields of industrial endeavour, while at the same time steadily improving the material well-being of the labouring people. The growth of the number of workers employed is indicated by the accompanying eleven-column table (See opposite page).

The figures show that the largest number of workers have been absorbed into the building trades, which in the period from 1923-24 to 1931 increased the number of workers employed 10.3 times; on the State farms where the amount of labour employed has increased four times in the last three years; in industrial plants using a definite amount of mechanical power, the number of workers employed grew 2.67 times whilst the number of workers in the handicraft and domestic industries remained stable.

Number of Workers and Clerical Employees
(in thousands)

Branches of Labour	1923/24	1924/25	1925/26	1926/27	1927/28	1928/29	1929	1930	1931	1931: percentage to 1923/24
1	2	3	4	5	6	7	8	9	10	11
I. Industrial	2.148.8	2.498.3	3.105.0	3.261.4	3.441.5	3.677.7	3.761.0	4.636.0	5.159.0	240.0
plants within the meaning of the Factory Acts	1.794.9	2.108.7	2.678.5	2.838.6	3.033.3	3.269.5	3.353.0	4.235.0	4.798.0	267.3
plants not within the meaning of the Factory Acts (i. a. handicraft industry)	353.9	389.6	427.0	422.8	408.2	408.2	408.0	401.0	361.0	102.0
II. Building	193.6	286.9	427.1	546.8	683.3	821.8	923.0	1.598.0	2.010.0	1.038.0
III. Transport and Communications	1.076.0	1.101.7	1.284.7	1.352.2	1.350.2	1.355.9	1.422.0	1.668.0	1.870.0	173.8
IV. Distribution and Supplies	279.8	420.0	532.2	583.1	588.1	688.3	704.0	848.0	938.0	335.8
V. Credit	47.8	66.1	82.4	85.9	90.6	99.9	114.0	122.0	122.0	255.2
VI. Clerical institutions	1.674.6	1.826.1	2.053.4	2.244.7	2.330.6	2.409.4	2.499.0	2.609.0	2.766.0	165.2
VII. Other branches of labour	57.1	63.8	73.6	86.7	95.3	102.0	103.0	109.0	114.0	199.6
Total (I—VII)	5.477.7	6.262.9	7.558.4	8.160.8	8.580.1	9.135.2	9.626.0	11.590.0	2.979.0	236.9
VIII. Migratory and seasonal labour	233.1	279.6	351.6	388.1	421.4	464.1	475.0	428.0	364.0	156.1
Total in non-agricultural pursuits	5.843.0	6.735.3	8.152.7	8.856.1	9.369.9	9.998.0	10.405.0	12.429.0	13.713.0	234.7
XI. Agriculture	1.300.0	1.820.3	2.045.1	2.124.0	2.086.0	2.138.0	1.989.0	2.158.0	2.587.0	1.990.0
State farms	—	—	—	—	—	317.0	399.0	694.0	1.289.0	—
Total workers and clerical employees (I—IX)	7.143.0	8.555.6	10.207.8	10.990.1	11.455.9	12.136.0	12.394.0	14.537.0	16.300.0	228.2

Whilst drawing ever new strata of workers into the process of social production we have no such thing as blind-alley trades or workers doomed to work at unskilled labour.

The steady advance in the skill of the huge army of workers building up our industries is most clearly seen in the extraordinary development of all sorts of measures to ensure that the workers can learn any special trade and obtain any technical training and knowledge they may seek. The figures in the following table give some indication of this work.

Figures showing Increase in the Numbers of Pupils in the Educational Institutions of the USSR

(In thousands as at the end of each year)

Type of Institution	1914	1923	1924	1925	1926	1927
Kindergartens and creches	—	59.1	60.2	72.7	86.5	103.8
Children's playgrounds	—	—	—	—	—	204.0
Elementary schools (Study Groups I—IV)	7.235.988	7.093.8	8.307.3	9.197.4	9.498.3	9.942.0
Middle schools (V—IX years' Study)	564.613	734.7	832.6	996.5	1.203.2	1.430.8

Type of Institution	1928	1929	1930	1931	1931 percentage of 1923
Kindergartens and creches	128.4	173.2	318.2	620.7	1.050.3
Children's playgrounds	323.6	581.2	1.753.5	4.222.8	—
Elementary schools (Study Groups I—IV)	10.375.0	10.452.2	11.775.5	17.342.3	344.5
Middle schools V—IX years' Study)	1.436.0	1.444.9	1.899.2	1.980.2	269.5

From 7.8 million pupils in 1914 in the lower and middle schools the total number of school children had risen to 11.9 million in 1929. The year 1931 has witnessed a tremendous development of the country's network of schools with the end in view of carrying through the plans for providing a general elementary education to all.

In recent years the development of the network of institutions providing a trade and technical training has advanced at even a more rapid rate than that of the ordinary schools.

Recently a number of government measures have been adopted aiming at rapidly extending the training of cadres for the national

economy. The following table shows how intensively this work has been developed during the last few years:

Growth in Numbers of Pupils attending Trade and Vocationa Institutions in the USSR

(In thousands as at the end of the school year)

Type of Institution	1924	1928	1929	1930	1931	1932 as per original Five-year Plan	1931 percentatage to 1928
Higher Educational Institutions, total	109.9	191.5	218.2	291.4	358.2	209.0	187.1
of these industrial and agricultural	—	113.9	141.2	210.2	255.5	133.0	224.3
Technicums, total	—	183.1	316.3	578.7	609.8	327.0	333.1
of these industrial and agricultural	266.9	101.9	184.7	578.9	444.4	148.0	456.1
Factory Training schools	—	153.8	153.3	568.9	1,197.8	430.0	781.3
Workers' Faculties	—	56.6	68.2	347.5	231.7	72.0	587.1

It is worth noting that whilst the Five-Year Plan in the majority of branches of the national economy is being fulfilled in four and in some cases even in three years, it is being carried through at an even more rapid pace as regards the training of cadres for industry. Thus as early as 1931 the quotas of the Five-Year Plan set for 1932 have been exceeded by 70% as regards the higher educational institutions, by 85% for the technicums, and were almost three times as great in the factory apprenticeship and training schools, and 4.5 times as great for the Workers' Faculties as originally planned. Whereas in 1914 the number of pupils in the higher educational institutions stood at 109,900, in 1931 the number has risen to 358,000 i. e. it has more than trebled. The number of pupils in the lower and middle trade and technical institutions amounted altogether to 267,000 in 1914, whereas in 1931 in the technicums and factory schools alone (not including the vocational schools, vocational workshops, and the like), the number being trained was 1,808,000, or practically seven times more than pre-war. In addition, several million workers, clerical employees, and collective farmers are studying at the present time in various courses, evening schools, correspondence courses, etc., and are so obtaining an extension of their education.

The budget assignment in the USSR for workers education in the year 1931, rose in comparison with the year 1914 seven and a half times. The limiting of means for universities, laboratories, the publication of scientific works, scientific research institutions, stipends is at present, as well in the conquered Germany as in

the conquering countries—England, France, and even in the United States—a general fact.

Professor Matschoss, the leader of the German Society of Engineers, gives, in the organ of the society the following characteristic demonstration of the effect of the crisis in this field.

In the "technical universities and technical schools about forty thousand young people study of whom nearly eight thousand finish their studies. These graduates are unemployed to a frightful degree; on the average about 20% find a position, 10% continue to study, 20% accept any kind of activity outside of their profession, the rest, about 50%, remain without any income. Graduated engineers, who have the use of a bed only from ten o'clock in the evening, who do not know any more what warm food is, who consider themselves lucky when with any kind of work, as dishwasher, as cigarette-clerk, as dance-host, they are able to earn a few marks, are not rare." Matschoss shows further, how the different organisations seek to come to the help of the young engineers. "Only one thing they cannot do; to provide these graduates with work in the same manner as others. For a while he leaves the street, and is freed from the tortures of the consciousness that he is compelled under sacrifices to let his gained mental equipment lie fallow. He can create the wished for 'continuous' course of life, and on the question, 'what have you done since your examination?' he needs no more to answer: 'looked for a position.'" Matschoss brings up the following figures: "To day the number of unemployed academicians is estimated at thirty thousand, for 1934 they are figured at 130 thousand. (Professor Dr. Matschoss—"Unemployed graduates" V.D.I. Nachrichten, Mitteilungen des Vereines Deutscher Ingenieure und des Deutschen Verbandes Technisch-wissenschaftlicher Vereine, Berlin—11 March 1931, No. 10.)

Such a situation we find not only in Germany but also in the victorious countries. For example, leading American technical journals produce shattering letters from qualified engineers who completely despair of their efforts to find work. Other sections of the intelligentia find themselves in the same position. For the direct scientific worker it is not any better but still worse.

During the past two years, which have been marked by an especially intensive development of the network of such educational facilities, in the USSR, this difference in the speeds at which contingents of specialists are being trained in the USSR and in Germany (as also in most other capitalist countries),

has become more noticeable than ever. At the present moment we are setting to work to organise the general technical training of the workers, a problem that must and undoubtedly will, be solved within the next three years.

While we are still dealing with vocational and technical training it is essential to state that in addition to its extension, there are certain aspects which are worth emphasising, since they differentiate it vitally from the system of narrow craft training which is so typical of vocational education in capitalist countries.

The following table shows how the working class has been extending its hold in recent years over the middle and higher vocational and technical schools.

Social Status of Students: Movement of same
(in percentage ratios)

Branch of National Economy	Year	Higher Schools (including Technical Schools)			Technicums		
		Worker	Peasant	Others	Worker	Peasants	Others
Industrial:	1927	38.2	14.6	47.1	—	—	—
	1928	42.4	13.7	43.9	—	—	—
	1929	46.4	12.8	40.8	58.5	14.0	27.5
	1930	56.4	12.5	31.1	67.6	14.0	18.4
	1931	63.7	13.3	23.0	73.2	13.4	13.4

What may be called the conquest of the higher school by the working class has now proceded furthest in those educational institutions training students for industrial specialities. Almost two thirds of the total number of students in the high technical educational institutions and three fourths of the students in the technicums are composed of workers and the children of workers. This makes it certain that in training specialists on a mass scale, we can draw on persons belonging to the working class, who are thoroughly devoted to the great work of socialist construction.

To an increasing extent the cause of public education and the training of industrial cadres in the USSR is becoming a mass movement of the workers themselves, is becoming an organised struggle by the working class and the labouring peasantry who follow its leadership to achieve the conquest of culture, science and technique.

The planned system of socialist construction, coupled with the introduction of large numbers into productive labour and with the steady rise in their skill as workers, is leading to a

resultant steady rise in the material well-being, cultural status and general living conditions of the workers,—which in the conditions of the USSR, can in no a way be identified with the amount of industrial wages.

The category of wages, as representing the value of labour power, is entirely inapplicable to the socialist sector of our economy inasmuch as the worker does not appear in the capacity of a seller of his labour power, the latter losing its commodity aspect under the conditions that go with our socialist system of production. Whilst in capitalist society the living standard of the proletariat is determined by the wages each worker obtains individually in exchange for his labour power, in the USSR, in addition to the fact that the worker is paid "wages" in accordance with the amount and quality of his individual labour, there exists quite a number of additional forms of distribution in which the collective nature of labour comes to the fore (e. g. the workers' welfare funds, social insurance, funds for the training of industrial workers, housing construction, public services, and other socialised forms of wages).

During the period from 1924 to the first quarter of 1931 the average monthly wage of the workers in socialist industry rose as follows:

	1924	1925	1926	1927	1928	1929	1930	first of 1931 quarter
All industry	39.48	47.81	57.02	64.64	70.94	77.65	83.30	20.70
Coal mining	38.29	42.86	53.87	59.34	63.27	68.81	76.47	83.97
Iron and steel	34.27	46.13	58.42	68.79	75.61	83.82	88.30	90.05
Machine construction	44.92	57.79	69.78	82.37	92.94	103.29	108.36	118.00

The following figures indicate the improvements effected in the material position of wage earners in the USSR:

Wage funds	1927/28	1928/29	1929/30	1931	1931 ratio to 1927/28
Individual wages fund	7,801.0	9,640.0	12,508.0	15,368.0	197.0
ratio to 1927/28	100.0	123.0	160.3	197.0	—
Socialised wages Funds					
1. Social insurance	980.1	1,176.0	1,514.0	2,173.0	218.1
2. Industrial workers welfare *	60.0	88.0	125.0	285.0	475.0

* The figures covered by this item include only workers engaged in industry and do not include transport, communications, etc., for 1927/28, for 1928/29, and for 1929/30. For in all these branches of national economy there is not included the additional expenditure on the provision of free municipal services, on the development of cultural amenities and expenditure on the upkeep of factory committees.

3. Additional expenditure by industry (free municipal services, promotion of cultureal progress etc.).	395.8	440.2	574.6	679.6	191.0
4. Housing conctruction	419.7	510.9	595.0	1,117.0	266.1
5. Educational fund	994.0	1,448.0	700.0	4,088.0	411.3
6. Health services	552.0	670.0	997.5	1,271.0	230.2
7. Public catering services	10.0	25.0	65.0	120.0	1,200.0
Total:	3,871.6	4,858.1	6,571.1	9,733.6	—
ratio to 1927/28	100.0	129.3	194.7	287.6	—
ratio to individual wages fund	43.2	45.2	52.5	63.1	—

For the period from 1924 to the first quarter of 1931 workers wages increased on the average 2.3 times for industry as a whole and 2.7 times for the metallurgical and machine construction industries.

In analysing wages in the USSR bourgeois economists and certain economists from the camp of the Social-Democratic Party and the trade unions affiliated to the Amsterdam International are inclined to declare that if one were to exclude from the total income of the Soviet proletariat that part of the revenues of the socialised industries which is used for socialist accumulation then, what remains as the part going for individual distribution, will be no greater then the share in the national income obtained by the proletariat in capitalist countries. It need hardly be said that such a viewpoint is totally unsound; since this share thus falling to the proletariat in the USSR really constitutes only one part of its actual income. Under our conditions, to say nothing of the fact that, owing to the structure of our national income, "wages", represent a purely relative conception,—even this share of the national income represents only part of the means going for the reproduction of labour power. The rest of it is in the funds of the socialised enterprises and is represented in the expenditure on such items as social insurance, the workers' welfare improvement funds, etc. It is further necessary to take into consideration the huge allocations of the State budget to public education, the health services and housing construction, bearing in mind not only the exceptionally rapid rate of present development in these spheres, but also the fact that they represent a socialised form for the reproduction of labour power.

These elements by no means exhaust the whole content of what is to be understood by socialised wages, since there must be added annual holidays on full pay, an item that involved the expenditure of 107 million rubles in 1927/28, rising to 364 million roubles in 1931; the maintenance of students in the factory apprenticeship schools, which meant the expenditure of 19 million rubles in 1927/28, rising to 154 millions in 1931—an increase of more than eight times in the short space of four years, and many other items involving big expenditure by the Workers' State which serves to considerably increase the share of socialised wages. It should suffice to mention such a relatively unnoticed item of expenditure as the short term training courses for workers now organised on such a mass scale as to induce over a million workers and involving the expenditure of a sum running into over 235 million rubles.

In the USSR we are witness to a process that stands in glaring contradiction to what is taking place in all surrounding capitalist countries. We have, from year to year a steady reduction in the proportion of low paid workers. This point is very clearly brought out in the following figures.

Percentage of Workers receiving wages:

Up to 40 rubles	40—60	60—80	80—100	100—150	over 15
63.8	22.8	8.7	3.2	1.4	0.1
52.4	28.3	11.4	4.6	2.9	0.4
31.4	31.2	18.2	9.8	8.0	1.4
21.3	31.4	22.2	12.7	10.6	1.8
13.7	27.2	24.7	15.0	15.4	4.0
11.1	25.6	24.8	16.8	17.2	4.5
9.8	25.4	25.0	17.20	17.9	4.7
8.0	20.9	23.4	18.2	21.9	7.6

These figures plainly show that during the period from 1924 to 1930 the proportion of workers on low wages running no higher than 40 rubles is 8 times less while the proportion of workers earning over 100 rubles has increased almost 15 times.

No less marked has been the advance during the same period in the level of the material well being of the workers employed on the state farms. Simultaneously with the wide-spread development of state farms, the specialisation of these farms and their technical re-equipment, there has been a big change in the wages paid the workers on the state farms.

average monthly wage (in rubles)

	1928	1929	1930	1931
All workers	22.40	26.33	40.00	55.35
Of these permanent	34.00	38.50	53.58	60.66
Seasonal	28.16	35.00	40.66	43.72
Casual	17.08	19.16	30.83	50.16

Thus, in 1931 the level of wages in the state farms is two and a half times that of 1928.

It should be noted that in certain soviet farms, such as the Gigant (in the Northern Caucasus), the wages of the workers in 1930 had already attained the level of the average wages earned by industrial workers in that region, which indicates that considerable progress has been made in eliminating the hitherto existent gulf between the city and the village.

The systematic rise in wages is accompanied by a decrease in working hours. It was not so very long ago that in Tsarist Russia workers sometimes worked 16 to 18 hours a day. A ten or twelve hour day in pre-revolutionary Russia was the common thing. It required the October Revolution to make the 8-hour day in law and practice the maximum working day for the adult worker and the 6-hour day the maximum for adolescents and then also to introduce the seven hours day. The changes that have occurred in the length of the working day in industry are as follows: the average working day for the whole of industry in 1904 was 10.7 hours; in 1913 9.87 hours; in 1918 7.69 hours and in 1931 7.02 hours. In the coalmining industry the length of the working day has been reduced from 10.06 hours in 1913 to 7.0 hours in 1931; in the metal industries from 10.07 hours to 7.10 hours; machine building from 9.73 hours to 6.25 hours; chemical industries from 10.1 hours to 7.00 hours and in the textile industry from 10.11 hours to 7.02 hours.

Soviet law provides for a shorter working day for harmful and dangerous industries. Thus in 1928, even before a section of the industries were put on an 7-hour day, 14.62 per cent. of the workers were working a reduced day: 14.4 per cent. of the adult workers, 4.72 per cent. of the adult women and 99.17 per cent. of the adolescents.

Since in a number of factories working on a multiple shift system it has been found necessary to increase the working day to 7½ hours in order to extract the greatest possible use from the machinery and equipment, the government passed a law making it incumbent on the industrial and labour bodies to

preserve the former number of hours worked a month, i. e. 168 (7 by 24). Under this system the worker after every four days work receives two complete days (48 hours) rest.

In addition to the establishment of the 7-hour day, a further reduction of working time results from the increase of the number of rest days owing to the introduction of the uninterrupted (for the machines) five-day (for the worker) working week. At the present time over two-thirds of the workers employed in industry are working on the five-day week system.

In connection with the subject of the length of the working day in the USSR, mention should be made of the compulsory break for meals established by law, the time allowed off for nursing mothers, the practice that is now spreading in industry of allowing periodic breaks for rest and physical exercise, etc.

Thus, from the data cited it will be seen that the Soviet Union has the shortest working day in the world.

The Manifesto of the Central Executive Committee of the USSR establishing the 7-hour working day was a further step in the direction of reducing the working day, which under Soviet conditions must accompany increased productivity of labour. The reduction of the working day has been adopted as a definite plan in the USSR and is being systematically extended.

In 1931 70 per cent. of the workers are on a 7-hour day and in 1932 92% of the workers will have the seven-hour day. At the commencement of the second Five Year Plan, when the foundation of the structure of socialism will have been completed it is intended to pass to a normal working day of six hours, as the programme of the Communist Party provides.

The profound difference between the socialist economic system and the capitalist is clearly manifested in the sphere of labour protection and in the endeavour to create conditions of labour answering the requirements of safety and sanitation.

The correct illumination of the place of work, ventilation, the supply of working clothes, safety devices, sanitation—all these factors were taken into account when each factory of the socialist industry of the USSR was reconstructed. One example, at a first glance not an important one, will suffice: in the Moscow Region where the textile industry is particularly developed, prior to the revolution only 71 mills had ventilation systems. In the six years, from 1925 to 1930, 1080 new ventilation systems were installed. In addition to the sums expended by each enter-

prise, the national economic plan provides for special funds being assigned each year for the purpose of safety and sanitation in industry. Thus, in 1928/29 54.5 million rubles were spent in industry, while in 1931 124 million rubles will be spent in industry and 30 million rubles in the transport services. As a result of the measures taken for the protection of labour the number of cases of industrial disease and accidents is falling. According to the figures of the insurance bodies there were in the year 1925-26 10.7 days of sickness per worker, and in 1931 9.0 days.

Under the system of recording industrial accidents in the USSR not a single case can be overlooked. In capitalist countries compensation for accidents are provided by insurance societies and institutions, who are only too willing to lay the burden on the general hospitals, and accordingly a number of accidents fail to be recorded by statistics.

The social insurance legislation in capitalist countries creates a form of statistics that conceals the facts.

Nevertheless if we examine the official statistics of fatal accidents we find that the index in the USSR was considerably lower in 1929 than the indices for Germany and the USA; in Germany the figure was 0.45 per thousand fully insured persons, in the USA 0.4 and in the USSR 0.26. The same is true of cases of serious, but non-fatal, accidents.

The systematic work being done to improve conditions of labour has resulted not only in a comparative lower percentage of accidents as compared with other countries, but also an absolute reduction in the proportion of accidents from year to year. An investigation which was undertaken in a number of large metallurgical works shows that we are achieving quite a considerable reduction of industrial accidents. Thus, at the vast Krasny Putilovets Works accidents decreased in one year by 8.6 per cent; at the Elektrosila Works by 16.6 per cent; at the Elektrika by 25.1 per cent.; at the Baltic Shipyards by 34.4 per cent; at the Optical Works by 36.6 per cent, while at certain factories the reduction is as much as 50 per cent. It should be noted that during the year in question the piece-work system was widely developed at the works mentioned; but under our political conditions, with the growing activity and conscientiousness of the workers and the wide application of socialist forms of work, piece work does not only not result in an increase of industrial accidents, but, thanks to the heightened emotional state

and concentrated will power of the worker, tends rather to their reduction. It should also be mentioned that our practice in the sphere of labour protection is based on the theoretical material provided by a large number of scientific research institutions. There are at present 80 institutions and laboratories engaged in research on labour conditions. The joint budgets of these institutions amount to 7½ million roubles annually. It should further be borne in mind that they are not isolated, but work in close association with the factory laboratories and research stations and with a wide network of special technical research institutes that are subsidised independently.

Measures taken in the sphere of social insurance are as extensive as those in the sphere of labour protection. In the Soviet Union insurance embraces all persons employed in any branch of the national economy and covers all forms of social risk. Insurance in the USSR also covers the vast majority of students. There is, of course, no capitalist country that is at all comparable in the extent of its insurance system.

While in the USSR the organization expenses constitute 1%, in Germany for example, the maintenance of the apparatus swallows nearly 10% of the insurance budget. If the expenses, per head, of the insured, in the different countries are considered, then in England they constitute 53 roubles 78 copeks, in France 47 roubles 75 copeks, in the USSR 131 roubles 57 copeks. The sharp decrease of sickness figures in the USSR and the fight for the further increase of health in the working population called forth a rise of expenses which fell on the improvement of medical provisions. The expenses in this field alone, out of the fund for social insurance, rose per insured head, from 22 roubles 10 copeks in the year 1927/28 to 32 roubles in the year 1931. In close connection with the medical provisions exists the prophylactic activity, which is concerned with the organization of convalescent homes, sanitoria, curing resorts, etc., in which not less than 80% of the places are reserved for the workers. So the number of accepted in the convalescent homes at times grew from 437,200 in the year 1927-28 to 799,440 in the year 1931; correspondingly the number accepted in the sanitoria grew from 742,000 in the years 1927-28 to 1,256,000 in the year 1931.

In the activity of social insurance in the Soviet Union, an important place is occupied by the invalid, orphan and old age provisions for which purpose, in the year 1930-31 306.1 mill. and 1931 371.4 mill. roubles are to be expended.

The total number of recipients of insurance in the year 1931 amounts to 1,234,200 persons, of whom invalids in general make up 680,000, accident and occupational sicknesses—54,900, families whose provider died of natural causes—426,000, and families whose provider was lost through accident or occupational disease —19,200.

Mention should be made of other forms of assistance (nursing of children feeding, burial) for which 60,000,000 roubles will be provided in 1931. The insurance bodies also participate in the cost of housing construction (331,600,000 millions in 1931), child nurseries and milk centres (22,000,000 roubles) kindergartens and the feeding of schoolchildren (20,000,000 roubles), the training of skilled workers (100,000,000 roubles), etc.

Mention should be made of house construction for the workers. Beginning with the year 1924 the rapid restoration of the heavy industries resulted in a considerable increase in the number of workers living outside of urban areas, in which they work, while the houses inherited from pre-revolutionary days are insufficient in number and unsuitable in character and quality.

The housing problem was aggravated by the fact that the larger number of new workers came from other districts. This tendency assumed particular intensity beginning with the year 1928, when parallel with the growth of industries in the old industrial centres, new centres of habitation began to spring up, distinguished by a great concentration of population and an absence of old houses. As a result, a large portion of the funds assigned for house construction falls on new enterprise, viz., 45 per cent in 1929-30 and 57 per cent in 1931. In addition to the numerical and geographical features of the migration of the working population, housing conditions are also largely affected by the increase of the number of workers living with their families in housing belonging to industrial enterprises. While in 1911 the number of workers living with their families in the houses of the Azerbaidjan Oil Trust was 22 per cent, in 1926 the proportion had increased to 78 per cent. The dwelling space occupied by members of families in the houses of the Azerbaidjan Oil Trust amounts to 57 per cent of the total dwelling space.

In spite of the complexity of the housing problem that faces industry, certain progress was made in the last few years, thanks to the great increase of capital invested in housing construction. For instance, in the year 1927-28, all industries jointly invested 419.7 million roubles, while in 1931 they will invest 1,117 million

roubles. The increase of investments in housing greatly exceeds even the rate of increase of workers. Finally, in addition to the great increase of workers with families occupying houses belonging to the industries, in a number of regions, the workers dwellings have been brought closer to their place of work. Thus, in the Donbass, houses situated within one kilometre of the place of work amounted to 41 per cent in 1929, as against 15.8 per cent in 1923; within two kilometres 30 per cent in 1929, as against 14 per cent in 1923; within three kilometres 1 per cent, as against 29.7 per cent.

Reference must also be made to the conditions of tenancy in our country. Occupation of municipalised houses is not limited to any given period, as it is in capitalist countries, and the worker cannot be ejected when he ceases to work at the given enterprise. Rent is not established by contract (and, in particular, is not determined by the amount of ground rent), but in accordance with a scale based on class principles; the amount of rent depends on the amount of earnings and the number of members of the family to be supported. The extent to which preferential rates are practised will be seen from the fact that certain categories of workers enjoy rebates of as much as 80 per cent. While in capitalist countries the kind of dwelling occupied depends on the amount of wages earned, in our country the lowest paid workers are able to occupy the best apartments.

All the measures above referred to for improving the material conditions of the working class affect in the most intimate way the movement of vitality statistics of the proletariat. In spite of the sufferings of the civil war; in spite of the extremely unfavourable production and housing conditions inherited by the proletariat from the bourgeoisie; in spite of the famine and destruction to which the proletariat of the USSR was subjected in the struggle against foreign intervention, the rapid development of our economic life and the activity of the toiling masses have not only overcome all difficulties but has also with comparative rapidity raised the general level of living conditions. This is reflected in the comparative statistics of births and deaths for our country and for capitalist countries. In Germany (for the purposes of a more exact comparison we must take a definite type of insurance funds, namely the factory insurance funds, which embrace industrial workers) in the years 1909-13, out of every 1000 insured persons the annual death rate was 7.1 for males, 5.3 for females and 6.8 average; in 1928 6.9, 4.2 and 6.3, respectiv-

ely, in 1929 7.3, 4.5 and 6.7, respectively. In spite of the lowering of the average age of the German workers since the war, the mortality of German industrial workers has not only not declined, but has rather increased. The mortality of factory workers in Russia in the years 1913-16 was 8.0 males, 5.1 females and 6.9 both sexes. Since in pre-revolutionary days only factory workers were almost exclusively the only ones entitled to insurance, for purposes of comparison we must take today not all insured workers, but only the industrial proletariat. The figures of mortality are as follows:

	1924/25	1925/26	1926/27	1927/28	1928/29	1929/30
			per thousand			
USSR	6.0	6.0	5.4	5.1	4.8	4.3
RSFSR	6.2	6.2	5.4	5.2	4.9	4.4
Ukrainian CCR	5.0	4.9	4.3	4.3	4.0	3.5

A few words need to be added on the connection between labour conditions and the increase of labour productivity.

In capitalist society, the reproduction of labour power is regulated by wages, which are the only factor tending to stimulate an increase in the efficiency of labour. Under our conditions, the supply of labour power is, on the whole, subject to planning, and at the same time there are growing up new communist forms for stimulating the productivity of labour—socialist competition and shock brigades even though the level of wages still plays a part as a factor stimulating the efficiency of individual workers.

The continual efforts made by the proletarian government to raise the material and cultural level of the workers, while at the same time shortening the working day and week, was bound to have an effect on the planned growth of labour productivity in the USSR, though this is based primarily on the amount of electrical energy and capital at the service of the workers. For instance, the quantity of energy consumed in industry per worker per annum in thousands of kilowatt-hours has been as follows:

1926—27	1928	1929	1930	1931
1.12	1.22	1.42	1.78	2.40

The importance of this capital outlay for the improvement of the productivity of labour can be seen by the example of a number of industries. For example, in the Donetz Basin in 1913, there were 4 coal cutting machines, and only ½% of the coal was obtained mechanically, but in 1930, the amount of coal got by

mechanical means had risen to 56.3%, and in 1931 will increase to 78%, the number of coal-cutting machines being increased to 1,491.

In the oil industry, the performance of the workers has been changed from the ground up, thanks to the application of modern technique and the improvement of the organization of oil production. While in the year 1913 98.8 of the entire oil production was handled with primitive methods, in the year 1929-30 these methods produced only 3.1% of the entire oil output, while the other 96.9% fell upon the mechanized output, which was carried on by deep-boring and by means of compressors.

The productivity of the worker in the steel and iron industry rose, essentially owing to the putting into operation of 24 new high ovens and 61 Martin ovens in the last three years.

Analogous examples can be shown from all industries. In connection with this, the ever larger equipping of industry with mechanical power and machines leads to the following increase of productivity per working day:

Working Performance — per Worker and Working Day
(in roubles, 1926/27 value)

1921	1922/23	1925/26	1927/28	1928/29	1929/30	1931
7.3	10.27	15.32	20.94	23.61	25.64	32.79 (plan)

This uninterrupted growth of the productivity of the worker creates in turn the necessary material and technical basis which guarantees the real possibility of the systematic raising of the standard of living of the working masses thro the simultaneous assurance of the necessary accumulation for the further acceleration of the tempo of economic development.

I believe that many of those present will not deny the indisputable fact, that in the countries they represent, the growth of the productivity of labour in the course of the last years is essentially to be attributed to the lengthening of the working day, and the more intensive utilization of the muscle power of the worker, while at the same time the growth of energy and machine equipment remains behind the corresponding growth of the productivity of labour.

We will pass on to comparing the conditions of labour in the USSR and in capitalist countries with regard to various categories of labour, and in particular with regard to the use of female and child labour. In the capitalist countries the drawing in of women and children into production is an appearance

of the same kind as the substitution of white workers by coloured workers and is a tendency, for the worsening of the situation of the working class as a whole. The tendency to extend the sphere of application of female labour in the USSR in the conditions of socialist construction has of course an entirely different economic significance. In the USSR this serves to draw into the active process of production new detachments of workers, to the increase of the general labour resources and at the same time free the women from the burden of the difficult home conditions, which were characteristic of pre-war Tzarist Russia. No reduction of the wages of the women takes place; on the contrary, by a series of legislative measures we have created privileged conditions for the protection of female labour and a considerable improvement of the cultural and living condition of women and of maternity and child welfare, unequalled, not only when compared with the conditions of old Russia, but even with those in the most advanced European capitalist countries.

In the USSR the introduction of female labour into production does not serve to reduce the conditions of male labour, which would be absolutely unthinkable under Soviet conditions. In spite of the fact that the number of women workers in industry has increased from 673,000 in 1927-28 to 1,276,000 in 1931, the total percentage of female labour remains unaltered. The participation of women varies largely according to industry and ranks from 63% in the cotton textile industry up to 8% in the mining and ore production industries. We note, in passing, the absolute incomprehensibility for us of the statement made by the International Labour Bureau that female labour is being widely used in agriculture in order to free male labour for industry and that in industry female labour is most common in the textile and metallurgical industries.* In reality on State farms women up to 18 years of age constitute 0.5%, male adolescents—0.9%, women over 18 years of age 12.5% and men 86.7%. As for the metallurgical industry, we have already stated that women constitute 8% of the total number of workers.

In spite, however, of the necessity of keeping women for a certain time in certain branches of industry at work requiring but little skill, we have not the system of unequal pay of men and women for similar work. This is a phenomenon which is exceedingly characteristic of the capitalist countries.**

* see "L'Année Sociale" 1930.
** see Revue Internationale du Travail—April 1931.

In Germany for instance even in those industries where female labour is predominant, as for instance the textile and clothing industries, the pay of women workers is not more than 65% to 73% of the wages received by men. In the United States, the difference between the wages of men and women varies from 39% in the printing industry up to 64% and 70% in textile; in Great Britain the variation is from 42% in the chemical industry to approximately 59% in the textile, etc.

In the light of these facts how sharp is the contrast when we compare the wages of men and women workers at similar jobs in the USSR. The data for 1929-30 which we have at hand (and we know that in the subsequent period the situation has been improved) shows that the ratio between the wages of female labour and those received by men is 93.9% for the engineering industry, varies in the textile industry according to trade from 85.2% to 102.3% with an average of 97—98% and ranges in the printing industry from 81.1% to 94.5%, in the rubber industry around 86.6% and so on.

First, the pregnancy furlough before and after birth, for working women, a maximum of eight weeks before and after birth, for office workers, six weeks before and after birth.

Second, with us, labour immediately before birth and after birth is categorically forbidden, while in most capitalist countries, a furlough is provided for, only after birth. Before birth, the working woman has the right to a furlough "if she wishes". We know what these wishes will amount to under the conditions of the crisis and mass unemployment.

Thirdly, only in our country does the pregnant woman and the one about to give birth to a child lose nothing from her wages, while in the rest of the world, motherhood means an unconditional loss of a part of the wages, in other words, a punishment for motherhood.

In addition, we must consider the tremendous expenses we have for the organization of eating halls, children's nurseries kindergartens, sanitoria, hygienic institutions, which relieves the woman of a large part of the fetters of domestic burdens.

We now turn to the question of child labour. In all capitalist countries child labour is still used and exploited in the most ruthless manner. In England there are some suggestions for the protection of child labour in the law of 1920 concerning adolescents in industry and the law of school education of 1921. However, according to the report of the chief Factory Inspector for 1929 the

total number of children and youth up to the age of 18 years working in shops and factories to which this law extends constitute only 16 per cent of the total number of industrial workers. There are in addition 97,000 working in the mine industry, among whom 70,000 work underground and not less than 400,000 working in industries which are not included in the scope of these laws, for instance, in transport, as errand boys, in theatrical and amusement enterprises, in commercial enterprises, etc. Judging from the report of the chief inspector the number of cases of violation of the laws concerning the labour of youths and children is very great. The intensity of labour is also very great if we are to judge from the number of accidents. In 1929, 16 per cent of the total number of accidents involved youth and child workers. Particularly great was the number of accidents to young female workers (30 per cent of the total number of accidents among women). The conditions of children and youth working in non-industrial enterprises are still worse.

During the discussion on the proposal of Lord Astor relative to child labour, it was made clear, during February and March, from the speeches of various speakers that the condition of the working class youth in 1931 judging by the reports of the ministerial commission does not differ in any way from their condition in 1913. 186,000 young workers are employed as messenger boys, porters, etc. 250,000 are working in hotels, clubs and restaurants where the working day is up to 12 hours and over and that a large number of youth are working as "boys" on the elevators in the gardens etc. and in reality accomodating a small group of parasitic non-toiling elements.

Another Commission of Mrs. Anderson which investigated child labour in Egypt in the winter of 1930 has established that there only a small part of the women workers are adult women and the majority are children of 7 to 8 years. Up to very recent times, in the old factories, the children of 9 and 10 years, and at any rate not older than 15 years have carried on the work of cleaning and operating machines. As a result of this the number of accidents to children is exceptionally great and is not regulated by anyone. Whenever it is necessary, the young workers are simply stricken off the rolls of the factory workers.

In the USA, in spite of the fact that the official reports record that the existing conditions are destructive for the spiritual and physical development of the children, all the attempts at securing a unified federal law for the protection of child labour have not been

successful so far, in as much as the Constitution of the USA provides that the adoption of every Federal law requires the agreement of all States and it is sufficient that one of the particularly reactionary States (particularly in the South) should not agree to the adoption of this law in order that they may not be accepted. According to the data of the factory inspectors, out of 12,176 young workers in the State of New York 3611 worked illegally and some of them worked in the harmful industries, and 2,836 either did not have labour certificates or worked more than the required time. In USA as well as in Europe the inspectors are entrusted with carrying into effect the law regarding child labour. However, the effect of such a provision is very small as can be seen from the fact that out of 924 cases raised in last year by inspection in New York for violation of laws regarding child labour only 204 manufacturers were fined, which is less than one-fourth and all others received only conditional sentences.

The matter is still worse in the British colonies in India (Investigation of the Wheatley Commission), in Egypt (the Investigation of Anderson), and also in China and Japan. In the USSR, on the other hand, the employment of children and youth under 16 is forbidden in industry and transport, while an adult wage for the corresponding working qualification is guaranteed. Young workers must not only be paid and trained without cost, but the wide masses in the USSR find it impossible to understand how it is possible to exploit and exhaust children instead of teaching them and developing their powers. The situation in the capitalist countries appears to the workers in the Soviet Union as downright barbarism and backwardness.

The investigation carried out by the USA Department of Labor in the canning industry in 7 States disclosed that out of a total number of young workers under 16 years of age employed there, 78 per cent worked illegally, that is they were given work when younger than the age established by the law. More than two-thirds or 69 per cent of the total number of young workers work 10 and more hours a day and more than one-fifth or 22 per cent work 12 hours or more and almost two-fifths or 37 per cent work nights.

We will have to supplement our review with some of the figures characterizing the economic conditions of the proletariat in the capitalist countries. In order to characterize the dynamic of the wages we shall have to deal with the three main capitalist countries Germany, England and USA. In France the data about

wages of workers in that country which is compiled by the "experts" is so poor that we shall have to touch upon them only in passing. The dynamic of the wages of industrial workers in Germany (nominal and real) is characterized by the following table.

Year	Index of Occupation of Labour Power	Index of cost of Living	Index of Nominal Fund of Wages	Index of Real Fund of Wages	Wages in Percentage To Living Minimum	Social Duties and Taxes in % to Wages
1913/14	100	100	100	100	87.1	——
1925	96	140	121	86	77.8	7.0
1926	86	141	115	81	74.4	9.0
1927	94	148	133	90	85.1	10.6
1928	94	132	146	96	87.1	11.0
1929	90	134	143	93	85.0	11.0
1930	79	147	126	86	77.7	13.0

If we refer to the latest data of 1931 we find that the wages of the German worker is being systematically lowered. Instead of 51.1 marks, which constituted the average weekly wages of the German worker in 1930 it was lowered in Germany to 30.25 of the average weekly income.

The data of the German economist Kuczynski confirms and even deepens the indicators cited by us. From the calculation given above it is clear that in comparison with the pre-war period, when the wages of the German worker were absolutely insufficient for maintenance of his family, the economic condition of the German proletariat in the post-war period has considerably worsened.*

Bourgeois economists have established a minimal worker's budget, which is necessary for the maintenance of a worker's family of five persons, and which in the last years preceding the crisis, constituted 2,100 dollars (the so-called budget that guaranteed a healthy maintenance of existence). According to the statistical data, without considering unemployment, the majority of skilled workers earned 74 per cent of this existence minimum in the year 1929, the unskilled worker 58 per cent, while in some branches of industry, for example in the textile industry, averagely, only 42 per cent of this minimum was earned.

According to the national economist Kuczynski, the purchasing power of the American worker constituted only 70 per cent of the purchasing power of the year 1899 (which is figured at a 100), and the procentual relationship between the actual income

* J. und M. Kuczynski, Die Lage des deutschen Industriearbeiters.

of the worker and the expenses which are necessary for the healthy maintenance of a family constituted in the year 1928 a little more than the half, namely, 56 per cent of the amount necessary. In connection, it must be established that the year 1928 was a year of prosperity, in which the working class of America found themselves in an exceptionally favorable position. These figures are much smaller in the crisis years 1930-1931.

We will see particularly clearly the changes in the material condition of the working class in the countries of capitalism and in the USSR for the year 1929-30 on the basis of the following information:

In the United States the amount of wages of industrial workers has decreased at least by	— 20 %
in Germany it has decreased by	— 10 %
in USSR the increase for industrial workers is	+ 30 %
and for the industrial and construction workers	+ 37 %

In this way the USSR compares with the "mighty powers" of capitalism with its intensive growth in the actual number of the proletariat as well as in the total amount of wages. And this we must take into account when we consider that in the USSR was proceeding the extended construction of Socialism and in the above table was not taken into account the socialized part of wages. The American bourgeoisie spends 11 billion dollars, almost one-third of the income, in unproductive expenditures and in the USA social insurance is generally absent.*

We have already indicated that in capitalist countries there is observed a continuous process of increasing the intensity of labour with a simultaneous decrease of the general amount of wages and the individual earnings of workers; in the USSR such a situation is naturally impossible. We observe an analogous situation in relation to the hours of labour which characterizes a decisive offensive of the capitalists on the material conditions of the workers.

For instance, in Germany over 54.7 per cent of workers are occupied more than 48 hours, among them over 13 per cent are working over 54 hours. The investigation carried out by the

* For the United States, we have taken the figures from the Monthly Labor Review, 1931, Nr. 2. There the decrease of wages is indicated, as the statistics do not take into consideration the closing of factories. For Germany, we have taken the figures from the "Reichsarbeitsblatt" No. 15 of the year 1931. Pages IV-234 and "Amtliche Nachrichten für Reichsversicherung", No. 12, of the year 1930.

German association of trade-unions in Feb. of 1930 shows that the percentage working more than 48 hours is 75.6 per cent.

As it is known, in England the question of repealing the 8 hour day for miners occupies the centre of attention although this law was established by the Conservative Government of Baldwin in 1926.

According to official information, in 1930 more than 100,000 miners worked over the established working time. In the United States the hours of work in 25 industries, without mining, was in 1927 49.6 hours, in cotton textile industry 1928, 53.4 hours, in woolen industry 1926, 49.3 hours, in steel industry 54.4 and this lengthening of the working day applies in essence to the recent period.

Characteristic figures are given by the Monthly Labour Review 1930 about the duration of the working week in the oil industry of the Southern States. The drillers are working from 48 to 80.3 hours a week, crane workers from 48 to 84 hours, mechanics and pump workers from 48 to 81.5 hours, stokers from 48 to 82.1 hours, labourers from 48 to 65 hours, drivers from 48 to 70 hours, toolmakers from 48 to 81.4 hours. We see in this way that the capitalist exploitation does not limit the application of ruthless exploitation only to unorganized workers but also to the skilled workers.

Czechoslovakia was one of the countries which had established after the World War an eight-hour day for the industrial and agricultural workers by adopting a law to that effect in 1921.

However, a year after the law was enacted the overtime hours which were permitted constituted 1.934.949 in 1927—17,787,426 in 1928—15,331,331 in 1929 and 16,277,873 in 1930.

We could cite further figures regarding Poland, Italy, France, Switzerland, Estonia, Brazil, Australia, etc. However we shall limit ourselves only to the XV Session of the International Conference in Geneva which completed the sessions on June 18, 1931, and adopted proposals regarding working time in the coal mines. This regulation limits the working time of underground workers in the coal mines to 7¾ hours a day. However, if we shall take into account all the "normal and extra overtime" permitted by it then we shall come to the conclusion that the International Bureau of Labour has in reality established an 8½ to a 9 hour working day for the coal miner. Such are facts from the daily reality in the countries of "organized" capitalism.

All these facts testify that the comparison of the two forms of competition—on the one hand the competition of the Soviet proletariat of the USSR for the highest productive indicators, for increasing the technical basis of production, for increasing productivity, for drawing in new masses into production, for the systematic raising of the cultural level and the material welfare of the working class with the competition of the bourgeoisie in the capitalist countries directed towards highest increase of personal gain at the expense of systematic worsening of the living conditions of the working class with the rapacious exploitation of the labor power, with the excessive extravagant waste in this sphere, the suppression of technique, the limitation of the productive forces of labor. It is not necessary to be particularly farsighted in order to determine which of the two forms of competition shall determine in the near future the direction and development of the entire world economy.

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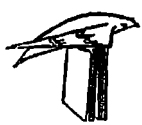
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