

Some Recent Developments in the Labour Field in the USSR

V. JALNINE ¹

Introduction

RECENT DEVELOPMENTS in the labour field in the USSR have been influenced by the economic reform undertaken in the country in the 1960s. This article reviews in broad terms the effects of the reform in the field of labour, and particularly in that of wages.

For this purpose it provides an analysis of the employment structure, covering the recent and projected growth of employment. It examines the increase in labour productivity and its effect on personal earnings, together with the implications of developments in national income distribution for consumption and investment. The role of the incentive funds established at individual undertakings and their effects on wages, as well as some recent experiments directed towards increasing labour productivity and wages, are also studied. The article notes the trends in the distribution of earned income and the Government's policy and role in this connection. Some statistics are provided on past experience and future projections in the field of wages and wage differentiation. The article concludes with a review of the changes in the systems of wage payments, pointing out the extent of application of time- and piece-rate systems and trends in their development.

Some macro-economic aspects of development planning considered in relation to labour problems

General indicators

The recent period of economic development in the Soviet Union has been marked by rapid industrial growth. The industrial labour force has been increasing at a faster rate than the natural growth rate of the work-

¹ International Labour Office.

ing age population by drawing men and women from non-industrial occupations, domestic work and, above all, the agricultural sector.

However, the pattern of utilisation of the country's labour resources is changing. In the coming years the growth of labour in absolute and relative figures in industry is expected to become less pronounced and equally is expected to cause less of a drain on agricultural labour resources.

TABLE I. GROWTH OF EMPLOYMENT IN SOME PRODUCTIVE SECTORS

Period	Industry		Construction		Agriculture
	Number of workers ('000 000)	Percentage increase	Number of workers ('000 000)	Percentage increase	Number of workers ¹ ('000 000)
1966-70	+4.3	+14.6	+1.7	+21.3	-1.4
1971-75	+2.1	+ 6.3	+0.7	+ 7.3	-0.8

¹ Without personal plots.

Source: G. Zelensky and E. Voronin: "Trudovye resursy v devyatoy pyatiletke", in *Planovoe khozyaistvo*, No. 8, 1971, p. 29.

More than half of the projected total growth of employment under the most recent Five-Year Plan (1971-75) is to be diverted to the services sector and other non-material production sectors (trade, education, medicine, science, etc.).¹

Future industrial growth will have to be based primarily on the more intensive utilisation of existing labour resources and increased output will have to be achieved essentially through improving labour productivity rather than through increasing the number of workers.

The desire to improve labour productivity and to link it more closely with wages is manifested in the 1971-75 Plan. The Plan calls for an increase over the five-year period of between 36 and 40 per cent in labour productivity ², which is intended to secure 87 to 90 per cent of the projected increase in industrial output. It has been calculated that in terms of labour input this will mean an economy of 12 million industrial workers and 32 million workers in the whole of the economy at the 1970 productivity level.³

The growth of productivity is intended to permit further increases in wages and salaries amounting to 20 to 22 per cent for production workers and office employees and 30 to 35 per cent for farmers, with prices for consumer goods remaining stable.

¹ *Trud*, 25 Nov. 1971.

² *Pravda*, 14 Feb. 1971.

³ *Trud*, 25 Nov. 1971; A. Omarov: "Problemy povysheniya effektivnosti obshchestvennogo proizvodstva", in *Planovoe khozyaistvo*, No. 11, 1971, p. 69.

It is anticipated that there will be a substantial rise in consumer goods output which should counterbalance the increased volume of money paid out in remuneration. Consumer goods growth rates are expected to surpass those of capital goods. For example the growth rate in the light industry sector—known as group “B”—is to rise by 44 to 48 per cent, whereas that in the heavy industry sector—group “A”—is to rise by 41 to 45 per cent.¹

The attribution of such importance to consumer goods output represents a marked change. The process of levelling output rates for capital goods and consumer goods already started during the previous Five-Year Plan period (1966-70) and particularly in the last two years when consumer goods output rates exceeded those of capital goods.² Output rates for capital goods were planned to increase by from 49 to 52 per cent and for consumer goods by from 43 to 46 per cent in that period as compared with respective projected increases of 58 and 36 per cent under the preceding Five-Year Plan.³

These shifts in investment and planning policy have become possible partly as a result of greater returns on previous investments and the increased volume of the national income which can consequently be used for consumer goods, and partly as a result of efforts to define workers' needs more precisely.

Increasing importance is being attached in wage planning to establishing scientifically the relationship between wage levels, productivity and workers' basic needs. This relationship is taken into account in planning the share of wage bill and, more generally, of consumption in the national income.

Increasing incentives

The new methods of planning and the economic incentives introduced as part of the economic reform undertaken in the Soviet Union are expected to have a considerable impact as regards over-all production efficiency and the development of wages. The reform calls for better management methods and the wider use of incentives.

One of the features of the reform is the increase in the independence of individual undertakings and groups of undertakings as regards both planning economic development and wage determination. The range of centrally planned production targets is being reduced substantially, while

¹ *Pravda*, 14 Feb. 1971.

² N. Lebedinsky: “Novy pyatiletny plan (1971-1975 gody)—kontsentririvannoe vyrazhenie ekonomicheskoy politiki KPSS na sovremennom etape”, in *Planovoe khozyaistvo*, No. 3, 1971.

³ A. Kosygin: “Direktivy XXIII syezda KPSS po pyatiletnemu planu razvitiya narodnogo khozyaistva SSSR na 1966-1970 gody” in *XXIII syezd Kommunisticheskoy partii Sovetskogo soyuza. Stenografichesky otchet*, Vol. II (Moscow, Politizdat, 1966), p. 18.

direct contractual delivery relationships among undertakings and between undertakings and the market are expanding.¹

At the same time the central planning authorities have more flexibility in shaping general development through the use of such economic planning instruments as prices, taxes, credit and interest and the issue of the major controlling development indicators, which now cover, *inter alia*: (i) the total volume of output to be sold; (ii) the main assortment of goods; (iii) the sum of profits and the rate of profitability²; (iv) the wage fund³; (v) payments into and allocations from the state budget; (vi) the rate of introduction of new technology; (vii) the volume of centrally allocated raw materials and equipment.

Another important feature of the reform is constituted by the measures for the economic stimulation of undertakings and their personnel. With a view to improving production, undertakings now have more say as regards the formation and distribution of profit.

A larger part of the total profit⁴, defined as the difference between the selling price and production costs, less various payments to the state budget, is left with the undertakings and turned into a material incentives fund, from which wages are partly paid, and a fund for social and cultural needs and housing construction—the two main incentives funds. A third fund financed out of the profit left with the undertaking is for production development. The latter is not, strictly speaking, an incentives fund, but when, as a result of investment from it, there is an improvement in the economic performance of an undertaking, which is reflected in decreased costs of production, increased sales and larger profits, the true incentives funds receive more money and this, in turn, benefits the workers in the form of bonuses, improved housing conditions, child-care centres, etc.

The production development fund is particularly important for industries in which development is financed largely from the undertaking's own resources. These are mostly consumer goods industries, where the ratio of non-centralised to centralised investments (i.e. financed from the state budget) is high: 1:2 in light industry, 1:1 in the food industry and 10:1 in local industry.⁵

¹ For a more detailed presentation of this aspect, see M. Kabaj: "Evolution of the incentives system in USSR industry", in *International Labour Review*, Vol. 94, No. 1, July 1966, pp. 22-38.

² The rate of profitability is determined on the basis of the ratio of profit to fixed and working assets.

³ The wage fund is composed of the part of the total payments to workers that is financed from government funds.

⁴ For the interpretation of profit in a socialist economy, see E. G. Liberman: "The role of profits in the industrial incentive system of the USSR", in *International Labour Review*, Vol. 97, No. 1, Jan. 1968, pp. 1-14.

⁵ P. Tadzhiyev, A. Arisyan and V. Uspensky: "Problemy effektivnosti mestnoy promyshlennosti", in *Planovoe khozyaistvo*, No. 8, 1971, p. 45; local industry is composed of various industrial branches under the jurisdiction of regional authorities and producing goods from local raw materials and for local consumption.

Developments in the Labour Field in the USSR

With the expansion of the reform, the significance of the incentive funds is growing. During the first five years of the reform these funds accounted for more than one-quarter of the total increase in average wages.

TABLE II. GROWTH OF THE INCENTIVES AND PRODUCTION DEVELOPMENT FUNDS IN INDUSTRY

Year	Material incentives fund		Social and cultural needs and housing fund		Production development fund
	Roubles ('000 000)	% of wage fund	Roubles ('000 000)	% of wage fund	Roubles ('000 000)
1966	196	7.3	67	2.5	136
1967	1 094	9.2	372	3.1	713
1968	2 581	8.7	852	2.9	1 873
1969	3 559	9.1	1 180	3.0	2 969
1970	3 900	10.0	1 294	3.3	3 165

Source: E. Gorbunov and L. Timonina: "Khozyaistvennaya reforma v SSSR: Dinamika, problemy, perspektivy", in *Planovoe khozyaistvo*, No. 5, 1971, p. 66.

Approximately 62 per cent of the material incentives fund is presently spent on monthly bonuses and the remainder on annual bonuses (based on the results of the year's work) and subsidies.¹ The undertakings have coefficients for the formation of this fund. These are worked out and approved by the appropriate ministries with the active participation of the undertakings and in agreement with the trade unions at the sectoral and regional levels.

The scope of the reform is now being extended in a vertical direction—from separate undertakings to trusts and ministerial departments, to which the principles of accounting and profitability of operations are also being applied.

The experience of the last few years shows that, in the undertakings covered by the reform, sales, labour productivity and wages have increased compared with those of undertakings not yet converted to the new system. This trend became apparent in 1966 and 1967, when a relatively small number of economically strong undertakings were being switched to the new system, and has since continued, with the majority of undertakings now operating under the new conditions.

In 1968 higher productivity accounted for 70 per cent of the total increase in output over 1967 in undertakings converted to the new system, compared with only 53 per cent in other undertakings, and,

¹ E. Gorbunov and L. Timonina: "Khozyaistvennaya reforma v SSSR: Dinamika, problemy, perspektivy", in *Planovoe khozyaistvo*, No. 5, 1971, p. 66.

despite the acceleration in the rate of wage growth, in many of the former undertakings expenditure on wages per unit of production went down while profits per rouble of wages increased.¹

Wages have increased faster than labour productivity² in a number of undertakings and in some branches of industry. One of the main reasons for this is that during the transition period a comprehensive system of incentives had not yet been worked out. At the start of the change-over these undertakings were able to mobilise much of their reserve capacity that had previously been under-utilised. This was achieved mainly by greater use of available fixed assets and the fulfilment of the increased planned targets they were stimulated to adopt. They also sold unnecessary equipment. All this brought about a sharp rise in profits and profitability—the two major coefficients for the creation of incentives funds—and a corresponding increase in the size of the incentives funds and over-all earnings.

There is also a certain lack of uniformity as regards the size of incentives funds. Undertakings have applied the coefficients suitable to their particular conditions.

Understandably, some of the early regulations governing wage incentives were of a temporary nature and changes in procedures were subsequently required. The search for methods of improving labour productivity and correlating it with wages is going on. Thus productivity growth rates for undertakings are now fixed by higher planning authorities and are correlated with the amount of the incentives fund, which increases or decreases in line with every 1 per cent by which the rate exceeds or falls short of the target.

Great importance is attached to the experiment conducted at the Chekino chemical plant. The plant had a fixed wage fund for a period of five years. Annual savings in the wage bill achieved by the more economical use of manpower were turned over to the incentives fund and used for the payment of bonuses to the staff. Consequently, the total number of production workers and salaried employees at the plant dropped considerably, while at the same time there was a marked improvement in over-all efficiency. During 1966-70 total output nearly doubled and labour productivity increased by 2.4 times, while more than one thousand workers were released from their jobs.³ Productivity increased as a result of better management methods and additional vocational training which gave the workers a broader range of skills and qualified them for multiple job-holding, i.e. performing several occu-

¹ B. Sukharevsky: "Khozyaistvennaya reforma i stimulirovanie rosta proizvoditel-nosti truda", in *Sotsialistichesky trud*, No. 8, 1969, p. 13.

² V. Garbuzov: "Ekonomicheskaya reforma i finansy", in *Kommunist*, No. 3, 1968, p. 53; E. Kapustin: *Metodologicheskie problemy ekonomiki truda*, Vol. I (Moscow, 1970), p. 71.

³ *Ekonomicheskaya gazeta*, No. 47, 1971, p. 22.

pational functions. Thus control operators in one department qualified also as fitters and the fitters could be released from the staff. The workers were given financial incentives to attain the additional qualifications.

At the plant, average wages in 1969 were 30.7 per cent higher than in 1966. This is to be compared with the estimated 19 to 20 per cent gain in average earnings throughout the undertakings operating under the new system.¹ At the same time, as a result of increased productivity, wage costs (per rouble of output) at the plant were halved during 1966-70.²

Additional payments over and above standard monthly rates are being accorded at the plant to 57.3 per cent of the staff, including 63.2 per cent of the production workers and 15.1 per cent of the engineering and technical staff. Eighty-five per cent of the workers are receiving these payments for multiple job-holding and 15 per cent for servicing a larger number of machines and various types of equipment. The additional payments constitute on the average 12.1 per cent of the standard rates.³

The experiment at the Chekino chemical plant has also resulted in better labour discipline, and labour turnover has decreased.

It has now been extended to other plants, where it is also proving to be a success. During one year—1970—the staff requirements of twenty-five oil-processing and chemical plants were cut by 7,000 workers (8.4 per cent of the total number). In general, in all the undertakings participating in this experiment it is intended to release more than 65,000 workers during a period of two to three years and to increase labour productivity by 22 per cent compared with the previously planned 12 per cent.⁴

In the various undertakings which were already applying the Chekino experiment in 1968, 32.7 per cent of the resulting reduction of manpower was accounted for by workers servicing a larger number of machines and various types of equipment, 18.7 per cent by multiple job-holding, 14.7 per cent by centralisation of repair services, 11.1 per cent by improved management and 22.8 per cent by other measures.⁵

The reduction of staff which has taken place has not created an employment problem, since there is a demand for labour in most branches of industry and particularly in the services sector. Facilities have been created by the Government for the planned transfer of workers to vacant jobs at the same plant or in other undertakings, and for their retraining.

¹ *Komsomolskaya pravda*, 6 Feb. 1970.

² S. Semin: "Razvitie opyta i rekomendatsii ministerstva", in *Sotsialistichesky trud*, No. 7, 1970, p. 31.

³ K. Zhironkin and N. Saveliev: "Puti ekonomii truda i stimulirovanie po chekinskoy sisteme", in *Sotsialistichesky trud*, No. 1, 1970, p. 43.

⁴ S. Shkurko: "Voprosy stimulirovaniia proizvoditelnosti truda", in *Planovoe khozyaistvo*, No. 8, 1971, p. 10.

⁵ S. Novozhilov: "Sovershenstvovanie sistemy materialnogo stimulirovaniia rosta proizvoditelnosti truda", in *Sotsialistichesky trud*, No. 5, 1970, p. 14.

Most of the workers released from the Chekino plant obtained employment in the same town at a new plant producing chemical fibres. At the Balakovsky chemical fibre plant 70 per cent of the 319 released workers got jobs at new work sites in the same undertaking and this was the case for 80 per cent of the released workers at the Novomoskovsky chemical plant.¹

The Chekino experience is now being tested in 121 undertakings in various sectors employing a total of 700,000 workers.² At the same time other wage experiments are also being undertaken. Thus one affecting 12,000 workers has recently been launched at the Gorky car plant, where the wage level now depends on the workload (assignments) of the worker and on the complexity of the operations performed by him. The wage increases with an increased workload. Simultaneously, new improved standards for the use and servicing of equipment have been introduced.³

Up to now the total annual wage bill (wage fund) of undertakings has been fixed by higher planning authorities. In order to provide greater financial incentives and raise productivity, it is now proposed to plan wages costs per unit of output, in which case undertakings would take more part in fixing the amount of the wage bill.⁴

After revaluing their fixed assets in accordance with the recently adopted new wholesale prices for industry, transport and other sectors, undertakings should be able to establish more precisely the level of their production costs, profits and material incentives funds.

Trends in the distribution of wage income

The initial stage of wage planning involves analysing trends in the growth of wages of the main social groups—production workers, salaried employees and peasants—and the distribution of wages according to their level among various wage earners' groups (by quartiles, deciles, etc.).⁵

Statistical series in this field constructed for a period of twenty years reveal evident changes in the distribution of earned income.

As can be seen from the following figure, the distribution curve shifted to the right so that the minimum level of wages in 1966 equalled the median level of 1946.

More detailed statistics indicate that, over the twenty-year period, the number of workers in the lowest wage groups declined and the

¹ Shkurko, op. cit., p. 11.

² Ibid., p. 10.

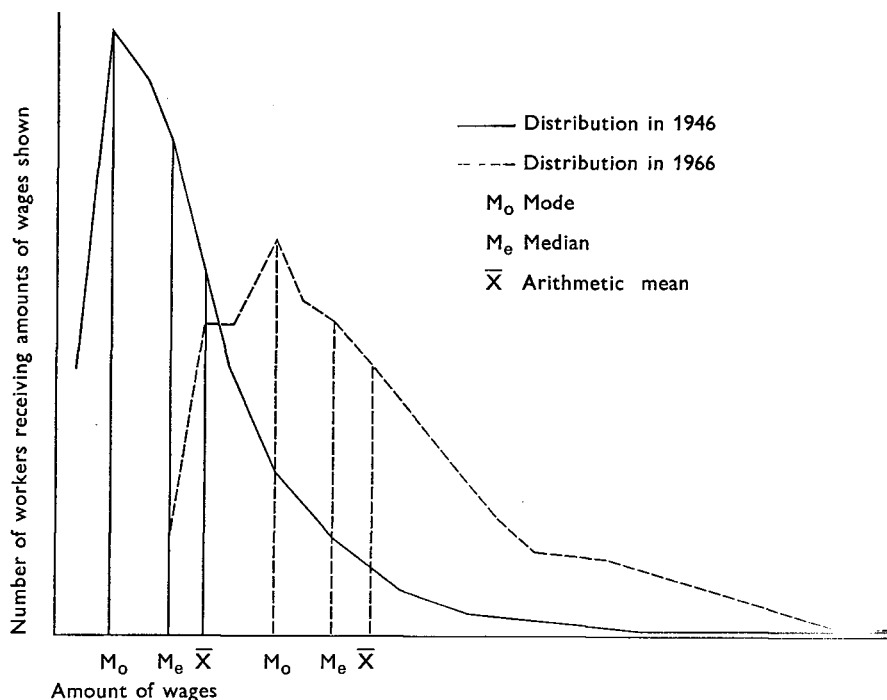
³ S. Novozhilov: "Nauchnaia organizatsia truda: nekotorye itogi vosmoi i perspektivy deviatoi piatiletki", in *Sotsialistichesky trud*, No. 11, 1971, p. 68.

⁴ Shkurko, op. cit., p. 13.

⁵ For the methodology of wage distribution analysis see A. Aganbegian: "O metodakh analiza i raschetov raspredelenia rabochikh i sluzhashchikh po razmeram zarabotnoy platy", in *Sotsialistichesky trud*, No. 2, 1960, pp. 23-25.

Developments in the Labour Field in the USSR

DISTRIBUTION OF PRODUCTION WORKERS AND SALARIED EMPLOYEES IN THE USSR ECONOMY ACCORDING TO LEVEL OF WAGES IN 1946 AND 1966



Source: M. Lozneva: "Matematicheskie metody v planirovanii zarabotnoy platy", in *Sotsialistichesky trud*, No. 10, 1968.

number of those in the middle wage groups (earning between 120 and 140 roubles per month by the end of the period) increased sixfold, while the growth of numbers in the higher-paid groups gradually declined with each successive wage group. Thus, the number of personnel with wages higher than 140 roubles, 160 roubles, 200 roubles and 300 roubles per month, grew by 5.6 times, 5.3 times, 4.3 times and 3.3 times, respectively.¹ While the arithmetic mean grew by 2.2 times over twenty years, the median, which expresses the wage level below which the earnings of 50 per cent of workers fall, increased by 2.5 times and the mode—the most prevalent level of wages—by 3.9 times.

Although in 1946 the mode hardly amounted to more than one-third of the arithmetic mean (38 per cent) and to about half of the median (49.8 per cent), in 1966 it was 67.4 per cent of the mean and 76.9 per cent of the median. The relationship between the median and the arith-

¹ M. Lozneva: "Matematicheskie metody v planirovanii zarabotnoy platy", in *Sotsialistichesky trud*, No. 10, 1968.

metic mean changed less markedly but also substantially. Thus, in 1946 the value of the median was 76.2 per cent of that of the arithmetic mean and in 1966 it was 89.7 per cent.

There has also been a narrowing of the difference between the remuneration of professional staff and production workers. In 1940 the average remuneration of engineering and technical staff was more than double that of production workers, whereas in 1967 it was 44.5 per cent higher.¹

The greater uniformity in remuneration was mainly achieved by the faster rate of growth of the wages of the lower- and medium-paid categories of workers than those of higher-paid staff, as a result of government policy. An important contribution was made by the upward revision of minimum wages and the decrease in taxation for lower income groups.

Apart from considerations of equity, the raising of minimum wages also reflects the continued need to increase participation in the labour force. On this account also there has been a further easing of pension provisions for pensioners who continue to work.²

Besides wage regulation, an important role in achieving a more equitable distribution of the national income is played by the public consumption funds, which provide an important supplement to wages in the form of social benefits, both in cash and in kind, and services afforded free of charge or on advantageous terms to the population by the State. They include benefits which tend to have equal impact on the living conditions of all citizens, irrespective of their actual earnings and social group, such as free education and medical care, housing, pre-school institutions, libraries, cultural centres and sports and other facilities. On the other hand, there are benefits which are provided on an individual basis—for example, pensions, allowances and grants.

Social benefits considerably increase the earned income of workers. It is estimated that if the level of wage income from work is taken as 100, public consumption funds increase it by a further 35 per cent.³ The lower income group enjoy a proportionately greater part of these benefits.

In some cases social services, such as the provision of government-subsidised housing or the availability of pre-school child-care centres and educational and cultural facilities, may even have a decisive influence on a worker's choice of employment.

In recent years the services and payments provided by the public consumption funds have been developing faster than wages. In 1970 they amounted to slightly more than twice as much per head as in 1960,

¹ NIEI pri Gosplane SSSR; *Sovershenstvovanie planirovaniya truda i zarabotnoy platy v usloviyakh ekonomicheskoy reformy* (Moscow, 1969), p. 105.

² *Izvestia*, 1 Apr. 1969.

³ United Nations: *1967 Report on the World Social Situation* (New York, Sales No.: E.68.IV.9), p. 186.

Developments in the Labour Field in the USSR

whereas average monthly wages had increased by one-and-a-half times over the same period. In the next planning period their projected growth is 40 per cent while that of wages is from 20 to 22 per cent.¹ It is hoped to achieve a more equitable distribution of important services by accelerating their rate of growth.

The improvements in wages and social benefits provided for in the latest Five-Year Plan include the following ²:

- introducing a new minimum wage level during 1972 and progressively ensuring its application throughout the different economic regions in the course of 1973 and 1974. At the same time the basic remuneration of middle-bracket workers and office employees will be increased, starting first in the Far North and going on to other areas;
- raising the salaries of schoolteachers and doctors simultaneously throughout the country by an average of about 20 per cent, and those of teachers in children's pre-school institutions by a still larger margin;
- introducing cash allowances for children where the income per family member does not exceed 50 roubles per month; increasing the number of leave days with pay allowed for caring for a sick child; and authorising maternity leave on full pay for all working women, regardless of length of employment;
- raising minimum old-age pensions for production workers and office employees;
- raising minimum pensions for collective farmers and calculating their amount on the same basis as those of production workers and office employees;
- improving the pension provisions for invalids and families of production workers, office employees and servicemen who lose their breadwinner;
- increasing scholarships and extending scholarship eligibility for higher educational establishments and specialised secondary schools;
- increasing meal allowances in hospitals and urban vocational and technical schools.

Attempts are being made to overcome the irregularity in the distribution of social services among regions and sectors, and in recent years they have been rapidly developing in the agricultural sector, where their rate

¹ L. Kunelsky: "Shirokaya sotsialno-ekonomicheskaya programma povysheniya urovnya zhizni naroda" in *Sotsialistichesky trud*, No. 5, 1971, pp. 13, 8.

² A. Kosygin: "Direktivy XXIV syezda KPSS po pyatiletnemu planu razvitiya narodnogo khozyaistva SSSR na 1971-1975 gody", in *XXIV syezd Kommunisticheskoy partii Sovetskogo Soyuz. Stenografichesky otchet*, Vol. II (Moscow, Politizdat, 1971), pp. 55-56; and L. Brezhnev: "Otchetny doklad Tsentralnogo Komiteta KPSS XXIV syezdu Kommunisticheskoy partii Sovetskogo soyuza", *ibid.*, pp. 67-68.

of growth (nearly fourfold between 1962 and 1967¹) considerably exceeds the average for the whole of the national economy.

Other factors contributing to the reduction in wage differentiation include technological and economic progress and structural changes in the economy accompanied by the development of manpower resources.

The slowing down in the movement of manpower from agriculture to the manufacturing sector as industrial development has progressed has had a bearing on wages. The differences in this respect between the two sectors are being reduced, mainly as a result of the improvement of wage levels in agriculture. Recent data indicate that wages in agriculture have been rising faster than anywhere else in the economy. Collective farmers' incomes in cash and in kind have increased by 42 per cent over the past five years, compared with a 26 per cent rise in the average remuneration of production workers and employees.²

The number of professional staff and skilled workers in the main sectors and the various branches has also grown considerably and the wage differential between these categories of workers has become smaller as the result of the greater supply of trained personnel.

As a rule wages are raised on the basis of increased productivity achieved by the introduction of technical equipment, better organisation of work and improved skills. In other words, higher earnings are to an increasing extent attributable to the "vertical" mobility of labour, i.e. the movement of workers from low-skill (and low-paid) jobs to highly skilled (and better-paid) jobs.

Reduction of the gaps in wage incomes does not, however, imply the equal distribution of wealth.

Wage differentials continue to be an important instrument of economic development policy. They help to safeguard priorities, to ensure the desirable geographical and sectoral distribution of labour and to stimulate the workers to perform more efficiently and to attain additional qualifications and higher skill levels.

For example, to increase the incentive provided by remuneration for technological progress, a large-scale experiment on wage differentiation was launched in a number of institutions. It was started in the L. I. Karpov Physio-Chemical Institute. Under the regulations adopted there wages and salaries may not only be increased by 40 per cent but also decreased by 25 per cent compared with the basic rate, depending upon the employee's actual performance. The difference between the highest and lowest earnings of a production worker may be as much as 2.2 times. For professional staff holding a scientific degree, the possible difference is somewhat less, amounting at the most to 1.7 times. Job

¹ M. I. Sidorova: *Obshchestvennye fondy potrebleniya i dokhody kolkhoznikov* (Moscow Kolos, 1969), p. 70.

² A. Kosygin: "Direktivy XXIV syezda KPSS...", op. cit., p. 9.

evaluation is carried out by a qualification committee, using a ten-step scale whereby the minimum remuneration is equivalent to the first step and the maximum to the tenth step. The experiment was recently extended to nine other institutes and fifty more were due to join it by the end of 1971.¹

In general wage differentials are related to basic rates reflecting the skill levels and expected performance of workers. There is also a system of additional payments accorded for improvements in the quality of work, economic use of raw materials, better use of equipment, etc.² Wage coefficients are broadly used to stimulate regional and sectoral development.

Systems of wage payment

In recent years there has been a considerable expansion of the time-rate system of wage payment, though the piece-rate system is still predominant.

The spread of time rates is mainly due to technical progress, including the wider use of automation and the introduction of new processes. The level of output and productivity has become more dependent on the technological process applied and on the efficient use of new equipment by the workers concerned. There is accordingly greater reliance on equipment and methods of management and less on individual effort, with smaller wage differentials for workers servicing automatic equipment.

The number of time-rate workers has also increased as a result of the application of technically sounder output norms in some industrial branches, which has simplified and heightened the efficiency of methods of work control and permitted a decrease in the number of accountants.

The granting of group bonuses is becoming more common in piece-work—or under the piece-rate collective system. This occurs mainly where workers with different skills form a team and the final results are those of the team rather than of an individual worker. On this basis the wage of a piece-rate worker is directly linked with performance and the earnings of the team to which he belongs. One of the alleged advantages of this system is that it provides an inducement for a specialised member of the team to assist the others at times when his particular speciality is not required and he would otherwise be idle; individual and collective interests are thus better harmonised. This practice accounted for 58 per cent of total wages in the wood-processing industry and 49 per cent in the

¹ A. Barukhovskiy: "Materialnoe stimulirovanie i effektivnost nauchnykh issledovaniy", in *Sotsialistichesky trud*, No. 4, 1971, p. 28.

² For details on the fixing of wages and bonuses, see S. Shkurko: "The industrial wage system in the USSR", in *International Labour Review*, Vol. XC, No. 4, Oct. 1964, pp. 352-364; and G. D. Soboleva: "The new Soviet incentive system: a study of its operation in Kiev", *ibid.*, Vol. 101, No. 1, Jan. 1970, pp. 15-33.

TABLE III. SHARE OF MAIN FORMS OF WAGE PAYMENT IN SOME INDUSTRIAL BRANCHES IN THE UKRAINE

(%)

Industrial branch	1962		1965	
	Piece rates	Time rates	Piece rates	Time rates
Iron and steel	62	38	58	42
Iron ore mining	62	38	60	40
Machine building	57	43	55	45
Electro-technical processes	60	40	60	40
Automobiles	54	46	53	47
Building materials	86	14	71	29
Chemicals	31	69	38	62
Coal mining	51	49	51	49
Non-ferrous metals	39	61	35	65
Wood processing	88	12	78	22
Light industry	85	15	82	18
Food industries	79	21	48	52

Source: *Problemy ekonomicheskogo stimulirovaniya promyshlennogo proizvodstva* (Kiev, Naukova dumka, 1968), p. 216.

food industry in 1965. It is also widely used in mining, in the iron and steel industry, in the building materials industry and others.

In general the piece-rate collective system is conducive to increased productivity and improved quality. It also strengthens labour discipline. During the four years of application of this system at the building materials factory in Grodno, there has been a more than threefold decrease in brick rejects and production costs have come down by 21 per cent.

It is successful, however, only under certain conditions. It has been found through experiment that in all cases of positive results there was a direct link between the workers' earnings and the final product. It has also been found that the size of the team, which in general depends upon the industry and the technological process involved, is important. Large teams proved to be less effective than smaller ones, for example, in the woodcutting industry. No effective mutual work control and assistance could be exercised in the large teams, and this led to equalisation of wages, irrespective of actual personal effort, which negatively affected labour productivity. A switch to smaller teams (comprising from three to six people) resulted in an increase in output and earnings per worker.

In some ways the piece-rate collective system is considered to be a link between the piece- and time-rate systems.

Forty per cent of all industrial wages are now based on the time-rate system. It is mostly used where rates of work are technologically defined or are governed by mechanical processes, such as the speed of the assembly

line. Time-rate wages are also widespread among auxiliary workers engaged in repairs, for whom job evaluation on a piece-rate basis may be rather complex or even impossible. Only 2.3 per cent of time-rate workers are paid simple time-rate wages. The remainder are remunerated according to the time-rate-with-premiums system, under which the basic wage is supplemented by bonuses awarded for higher productivity.

Recently, particularly in conjunction with the change-over of undertakings to the new system of economic planning, the time-rate system has been more widely applied to workers engaged in key jobs and especially in finishing operations.

Summing up

In short, then, there have been marked shifts in the employment structure in recent years in the Soviet Union, corresponding to structural changes in the economy. As the economy, and particularly the industrial sector, has reached a more advanced stage of development, the movement of manpower from agriculture to manufacturing activities has slackened. Employment in some non-industrial occupations (trade, services, science) has developed faster than in industry, though the latter has continued to expand very rapidly. The importance attached to continuing intensive industrial development through increased labour productivity is reflected in the economic reform which is in progress and which has had an important impact on the growth of output and wages, as well as on the redistribution of manpower.

The positive results achieved in the wage and productivity experiment carried out at the Chekino chemical plant have led to the extension of the experiment to a large number of other undertakings in various industrial branches.

Some difficulties have been encountered in the course of implementation of the reform in keeping the right balance between labour productivity and wages. It is hoped that, apart from other measures, improved prices for capital goods and a further perfection of the remuneration system will prove to be of assistance in this connection.

There have also been substantial changes in income distribution, which have resulted in a narrowing of the gap between the incomes of various categories of workers. Increases in minimum wages and in the earnings of middle-bracket workers, supplemented by the benefits deriving from the social funds, have ensured a more equitable distribution of the national wealth corresponding better to work inputs. Changes have also taken place in the forms of payment: the time-rate system has been extended, in line with technological progress and the wider use of automation. Finally, further changes and improvements in the wage structure have been provided for by the most recent Five-Year Plan (1971-75).