The Industrial Wage System in the U.S.S.R.

by
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After explaining the comprehensive basic wage scales applied to all industrial workers in the U.S.S.R. and their differentiation by skill, conditions of work, industry and so forth, the author describes the various types of incentive system in operation and the criteria on which they are based. In relation to all these matters he briefly indicates how technological progress will probably affect the wage structure. He concludes his article with a discussion of the main considerations that will guide the future evolution of the industrial wage system.

WAGES are the main source of income from which Soviet workers, both manual and non-manual, pay for their food, clothing, books, articles of everyday use and other material and spiritual needs. They account for some three-quarters of the workers' total income and it is government policy to ensure a constantly rising level of wages.

The other important source of income is supplied by the State out of the so-called social funds. It would be impossible to understand Soviet wage policy without fully appreciating how greatly the consumption expenditure of the workers is affected by these social funds, which provide various benefits in cash and in kind, including free education, care of children (either free of charge or at favourable rates), free medical treatment, pensions, temporary incapacity allowances, regular holiday pay, free cultural amenities and subsidies for housing and communal services. Together, these benefits account for about one-quarter of the real income of the workers. In addition, social benefits are increasing more rapidly than wages proper. For example, from 1953-59 wages and salaries rose by 70 per cent., while the total of benefits provided by the social funds doubled. It is by the satisfaction of material and cultural needs, through the agency of social funds, that the task of achieving the complete spiritual and physical development of Soviet citizens is being achieved.

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Basic Wage Scales and Wage Differentials

The basic principle followed in fixing wage levels is that remuneration should be proportional to the quantity and quality of work performed. Higher rates are paid for more complex operations, for exhausting, hot or unhealthy work, and in industrial branches of outstanding economic importance. In addition, as will be seen later on in this article, when workers achieve particularly satisfactory results by equalling or exceeding output standards and production targets, economising materials and strictly observing production specifications, or when they devise and introduce technological innovations, their wage packets are increased. In this way workers, foremen, engineers and salaried employees have a direct interest in the results of their own efforts and in perfected and increased production, and a pecuniary incentive is added to the moral incentive.

The present industrial wage system was introduced between 1956 and 1961, when wage and salary rates were substantially increased, the gap between low and high rates was reduced, uniform rates were introduced for whole industries (irrespective of the authority controlling the undertaking), and new payment and bonus systems were applied.

The most important element of the industrial wage system is its wage and salary scales. These establish the rates of remuneration of workers, technicians, engineers and salaried employees by the hour, the day, or the month ; and under the various systems of remuneration in force every payment, whether time-rated or by the piece, is based on the appropriate wage scale.

Wage scales for each industry or trade are fixed by centralised state machinery. This ensures uniform remuneration for all persons performing work of the same complexity, value or difficulty ; it permits planned and purposeful adjustment of wages as national income rises or the composition of the labour force changes ; and it provides the basis for granting particularly favourable rates of pay to workers in progressive industries, in the extreme north, and in other special circumstances.

Wage rates differ according to skills, conditions of work, the form of payment and the particular industry.

Skill Differentials

Differentials based on skill are fixed by scales showing, by means of a series of co-efficients, the differential between the lowest grade, which corresponds to the simplest operations performed by unskilled labour, and each subsequent grade up to the highest, which

corresponds to the most highly skilled workers. The scale usually rises progressively, so that workers have added incentive to obtain promotion.

Anticipating slightly, it should be mentioned that in each industry a grade is allocated to every job in accordance with its complexity and to every worker according to his level of skill on the basis of standard handbooks of wage rates and skills.

Most industrial wage scales nowadays consist of six grades, the ratio between the lowest and the highest standing at 1 : 2.0 or 1 : 1.8 as compared with 1 : 2.5 or 1 : 3.0 before the above-mentioned reforms. The new ratio corresponds to the present educational and technical level of the workers and also to differences in the complexity of the work ; it provides workers with sufficient incentive to improve their skills. Each trade normally has a single scale, which ensures uniform remuneration at the same levels of skill. By way of example the accompanying table shows the scale used in the metal trades.

WAGE SCALE FOR THE METAL TRADES

Grade	I	II	III	IV	V	VI
Wage co-efficient . .	1	1.13	1.29	1.48	1.72	2
Actual increase . . .	—	0.13	0.16	0.19	0.24	0.28
Percentage increase .	—	13	14.1	14.7	16.2	16.3

Skill differentials will be further reduced in further stages of wage reforms. The introduction of complex mechanisation [1] and automation is leading to the disappearance of unskilled labour and narrowing the distinction between skilled workers, engineers and technicians. If the principle of remuneration in accordance with the quality and quantity of work is to be respected, this reduction in the range of levels of skill ought to be followed by a corresponding reduction of wage differentials. However, to avoid undermining the workers' interest in improving their skill, knowledge and experience, any reduction of differentials must be strictly related to

[1] Complex mechanisation has been defined as any production process that consists in " . . . performing a whole cycle of a productive process by the use of machinery with the basic and subsidiary processes being connected together and operated at a co-ordinated speed. The control, adjustment and regulation of the machinery is performed manually." See A. ZVORYKIN : " Methods of Statistical Calculation and Determination of Levels of Mechanisation, Automation and New Technology in the U.S.S.R. ", paper presented to the Meeting of Experts on Automation held by the I.L.O. in Geneva, 16 to 25 March 1964 (M.E.AUT/IV/D.24, roneoed).

changes in the occupational skills of the labour force, and future wage reforms will have to take this into account.

Whenever wage differentials are narrowed, the rates for lower grades are increased more than those for the top grades, so that lower grades are brought closer to the medium level and medium grades closer to the top. For example, the rate for the first grade in the engineering industry was raised by over 90 per cent. in 1960-61, as compared with 60 per cent. for the sixth grade. Under measures now planned for the improvement of wages, the minimum rates for the first grades will be increased in all branches from 40 to 45 roubles to 50 to 60 roubles per month.

The handbooks of wage rates and skills on which all gradings are based are issued with the approval of the State Labour and Wages Committee and the All-Union Central Council of Trade Unions. For each grade they define the level of skill, give examples of jobs, and state the knowledge and experience required.

To quote one example, the occupational description for a setter on automated production lines (grade V) is as follows :

Functions. Sets up machine tools, automated control apparatus and transfer mechanisms for the complete machining of simple small parts (bushes, pistons, rollers, sleeves) involving different operations (drilling, milling, grinding, etc.); machines test parts for submission to inspection ; supervises the operation of the automated line ; adjusts the basic units in the automated line in course of operation ; participates in current maintenance of automated equipment and machinery.

Required knowledge. Operating principles of automated lines ; kinematic scheme of apparatus and relationship between components ; operating principles of special equipment ; technology of machining parts on the automated line ; geometry, principles of heat treatment, grinding, honing, and installation of tools made from tool steels and of tipped tools ; permissible degree of wear of tools ; use of control and measuring instruments and apparatus ; tolerances and adjustments, degrees of precision and finishing.

There are two types of handbooks of wage rates and skill classifications in industry. Occupations or trades not peculiar to any particular industry (e.g. turners, fitters or carpenters) are included in a standard handbook of occupational classification. Some 60 per cent. of all manual workers are remunerated in accordance with this occupational handbook, which applies to all such occupations irrespective of the particular industry, the authority administering the undertaking and its geographical location. In this way uniform remuneration is ensured for the majority of industrial workers.

The second type of handbook is for trades and occupations not covered by the standard occupational classification and peculiar to a specific branch (for example a welder in the metallurgical industry or a weaver in the textile industry).

These handbooks are of vital importance in the organisation of employment and wages. They fix a number of grades in each particular occupation or trade, and they allot each job its grade within the scale of rates. The accuracy of such grading plays a key role in ensuring that each worker is remunerated in accordance with his capacity and the complexity of his work. The handbooks are also used in preparing training programmes.

A worker's grade is decided by the management with the consent of the trade union organisation, and the same applies to any change of grade. Recommendations for grading and regrading are made by a worker's foreman and submitted for decision to the works or shop grading committee, which is composed of representatives of the technological department, the labour and wages department or office, and the trade union committee, the safety officer and the worker's foreman. This procedure ensures objective assessment of the worker's skill, experience and knowledge.

Differentials Based on Conditions of Work

In most branches of industry there are three groups of gradings to allow for conditions of work. The rates for hot, arduous or harmful conditions are fixed at 10 to 15 per cent. above those for normal conditions, and the rates for particularly arduous or harmful conditions at 20 to 30 per cent. above the normal rates. To take an example from the engineering industry, a fitter (grade V) on piece rates will be paid 55.0, 63.1 or 67.1 kopeks per hour depending on the conditions in which he works. This system means that, where difficult conditions still exist in spite of the great efforts made to improve the situation, workers not only have a material incentive to perform such operations, but are also compensated for their extra expenditure of physical and nervous energy.

Jobs subject to these special rates are designated in schedules issued by the authorities in conjunction with the trade unions. Moreover, whenever conditions are made less harmful or exhausting in a factory or workshop, the management, in consultation with the trade union committee, applies normal grading and rates to the jobs affected. Needless to say, the higher rates are applicable only to workers actually exposed to the conditions defined.

As the workers' technical and educational standards improve, arduous, harmful or dead-end jobs, especially if they call for no particular qualifications, become less and less attractive to them. The material incentive in such jobs must, therefore, be increased, which explains why differentials based on conditions of work have a tendency to rise, as occurred in the 1956-61 wage reforms. This trend is likely to continue.

Differentials Based on Forms of Remuneration

Piece work generally demands more intensive effort than does time-rated work, and in most industries it is, therefore, better paid. For example the hourly rate for piece workers (grade VI) in the engineering wage scale is 16 per cent. higher than that for time-rated workers.

It is a fact, however, that technical progress is little by little levelling out the intensity of effort demanded of different workers. In this respect some categories of time-rated workers—for example those concerned with strictly regulated technological processes, or maintenance mechanics servicing technological equipment in main production sections—could already be assimilated to piece workers, and managements can decide to pay them at the scales established for the latter.

The prospect is that differentials between time and piece rates will become smaller, with more and more time-based jobs being placed on piece rates until at some time in the future the same scale applies to both.

Industry Differentials

Payment of higher rates to workers in more important industries is generally based on differentials built into the wage scales of the industries concerned. The highest rates apply in coal mining, metallurgy and the chemical and other heavy industries, and the lowest in light industry and the food industry. The purpose of these differentials is to ensure that the manpower requirements of key industries are well supplied, which was particularly essential during industrialisation in the 1930s, when there was a great shortage of skilled workers. Now that industry as a whole is plentifully supplied with skilled manpower and, although heavy industry still comes first, the difference in national importance and rate of development between heavy and light industry has diminished, industry differentials have to be reduced. A start was made in 1959-61 and this will be continued in the later stages of wage reform.

Industry differentials should not be confused with variations in average earnings. The latter do not only depend on the basic wage rates ; they also reflect the structure of the labour force and conditions of work in the particular industry. Taking average earnings in the food industry as 100, the figure for the textile industry would be 107, for engineering 135 and for iron and steel 166. Average earnings in the coal industry are some 2.3 times as high as in the food industry. Both industry differentials and variations in average

earnings will be considerably reduced as technical equipment becomes more universally available and the complexity and general conditions of work in various industries become more uniform as a result.

Differentials for Salaried Employees

The salaries of engineers, technicians and non-manual employees are also fixed in accordance with the economic importance of the industry in which they work, the complexity of their functions, their level of skill and their conditions of work. The Government issues salary scales for each industry, defining the functions of salaried employees and showing the monthly maximum and minimum rate for each function. Within these limits the management of the undertaking fixes each employee's salary in accordance with his knowledge, experience and initiative.

The salaries of works or departmental managers vary from one undertaking to the next, even within the same industry, which sets their remuneration apart from that of other categories of workers. This is explained by the fact that the volume and complexity of the work of managerial staff depend on volume of output, number of employees, complexity of product, type of production process, and so on. All undertakings in a given industry, as well as their departments, are allocated a salary category, the number of categories varying between five and seven depending on the particular industry. In the coal industry, for instance, there are seven, based on the daily output of coal ; and the rate for the manager of a mine in the highest category is 70 per cent. above the figure for the lowest. The grading of the undertaking or department is reviewed whenever there is a change in the factors applied in designation of its category. This system of grading does not affect other salaried staff (engineers, economists, technicians) because the volume of their work does not depend on such factors as volume of production or size of labour force.

Foremen represent the intermediate link between wage earners and salaried employees, their rates of pay being fixed at 10 to 15 per cent. above the figure for the most highly skilled grade of manual workers in the industry. Junior engineers' salaries are based on the rates for the top grades of wage earners.

The future development of salaries will be guided by the same principles as were described above in connection with wages. The most important of these are complete uniformity in rates of payment, higher salaries, and narrowing of differentials. Differentials between wages and salaries are already diminishing, as shown by the fact that average salaries are now only 44 per cent. higher than average wages, as compared with 75 per cent. in 1950.

Regional Allowances

Regional co-efficients are applied to all grades in areas where the natural conditions are difficult and there is a shortage of manpower. The purpose of this is both to give workers a material incentive to move to such areas and to compensate them for extra outlay on food, clothing and other needs. The increase ranges between 10 and 100 per cent., depending on local living and working conditions, and there are therefore no special wage and salary scales for such areas.

Systems of Remuneration and of Payment by Results

Various systems of remuneration are used to relate rates of pay to such factors as time worked, output, savings in materials and improved quality, and thus to provide both individual and collective incentives for improved production.

Industrial employees are paid either by the piece or by time worked. Piece workers account for 60 per cent. of manual grades, representing the majority of face workers in mines, steelworkers, textile workers, flow-line workers in the sewing and footwear trades and machine-tool operators.

It has been found that piece rates should be replaced by time rates only where there is a high degree of automation, where processes are continuous and strictly regulated, where technological schemes must be very closely followed, where quality control is particularly stringent, where an exceptionally high degree of precision and finish is essential in processing, and in experimental and individual operations where it is economically impractical to prepare technically sound output standards.

Technical progress will lead to a gradual increase in the proportion of time-rated jobs. In highly mechanised operations the main part of a worker's job tends to consist of supervising automatic processes and adjusting and maintaining the machines. The productivity of equipment is coming more and more to dictate the level of output ; the worker is losing the power to push production beyond technically established limits ; so piece rates cease to be effective. This is already the case in the petroleum, electricity and chemical industries, where time rates apply respectively to 85 per cent., 92 per cent. and 63 per cent. of wage earners.

At the same time individual piece-rate systems are being progressively supplanted by group systems for whole production teams or sections, which provide a collective incentive to improve standards. This method is applied to production lines, operation of units of machinery by teams of workers, maintenance of tech-

nological equipment, assembly work, building, etc. The extent of the change-over to collective payment is due to the wide-scale mechanisation of production processes, the introduction of integrated plant and the development of flow-line production, such systems already being general practice in several industries including coal and ore mining, metallurgy and timber.

Individual piece rates, on the other hand, are the rule where each worker determines his own pace of work, typical instances being machine-tool operators in the engineering industry, textile workers, etc.

Incentive Systems for Wage Earners

Systems combining time rates or piece rates with bonus payments now cover 67 per cent. of industrial wage earners.

Time Rate Plus Bonus.

Straight time rates based on the worker's grade and the hours worked are not related to actual output. It is normally only workers who cannot affect output to any noticeable degree (e.g. caretakers, storekeepers, cleaners) who are paid in this manner, and they account for only 5.5 per cent. of industrial wage earners.

What is much more common is for time rates to be supplemented by bonuses when specified quality and quantity requirements are met. This system applies to 34 per cent. of wage earners.

Bonus payments for workers on time rates may be based on various standards. For example in non-ferrous metals, the chemical industry, oil refineries and other branches involving chemical and physio-chemical processes, correct application of technological systems is the criterion. Where machining and assembling of parts demand extreme precision, bonuses are calculated on the quality of a standard output per unit of time, or even on quality alone without regard to output. In such cases workers are not usually encouraged to exceed their norms.

Quality also governs bonus rates for auxiliary workers, whose work cannot be assessed on precisely determined output standards. Bonuses can be paid to such workers when the production targets of the section they serve are achieved, thus giving them an interest in the results of the production team as a whole.

Bonuses for time-rated workers average 15 to 20 per cent., but sometimes rise to 30 per cent., of basic wage rates.

Piece Rate Plus Bonus.

Since straight piece rates by their very nature relate remuneration to output of a specified quality, there is no need to provide bonuses in addition, except where workers must be given an added

incentive to improve the quality and quantity of production. Bonus piece-rate systems cover 33 per cent. of wage earners, or one out of every two who are paid by piece rates. The criteria applied are attaining or exceeding planned production, exceeding technically attested output standards, higher quality of output and better use of materials.

Bonuses for attaining or exceeding planned production are paid to face workers in coal and ore mines, and to workers operating metallurgical and chemical plant and production lines in the engineering, building components, clothing and footwear industries. They amount to 10 to 20 per cent. of the normal piece-rate earnings if targets are met, and 1 to 2 per cent. more for every percentage point in excess of targets.

Bonuses for exceeding technically attested output standards apply mainly to machine tool operators in the engineering industry and to machine operatives in textiles. Their purpose is to provide the greatest possible incentive to use equipment to capacity, and 1-3 per cent. of piece rate earnings is awarded for each percentage point in excess of standard output.

Quality bonuses are awarded primarily to piece workers in the textile and food industries and in light industry, where products are graded. The standard is based either on the percentage of increased production of top grades or on the percentage of reduced production of inferior grades.

Examples of bonus payments for improved use of materials include re-use of pit props, higher ore extraction rates in the metallurgical industry, economy in consumption of steel for reinforced concrete and economy of leather in pattern-cutting in the shoe industry. Maximum bonus rates are 20, 30 or 40 per cent., depending on the industry, the items produced and the particular section.

Bonuses for Salaried Employees

Engineers, technicians and other salaried staffs are naturally paid on time rates. To provide further incentive for higher and better-quality production, however, they receive bonuses for fulfilling and exceeding the cost-reduction plans, and in some industries for exceeding output and quality-improvement targets. In sections where production costs are not covered by plans, there are bonuses for fulfilling and exceeding plans for the principal cost items, such as materials, wages or power.

The system in operation before 1959, under which bonuses for salaried staffs depended on fulfilment or over-fulfilment of production targets combined with reduction of costs, tended to force up the volume of output only. With the increasing importance of

economic indices it was necessary to find a system under which due emphasis would be placed by engineers, technicians and other salaried staff on quality as well as quantity.

Cost of production reflects all aspects of the activities of an undertaking and its various sections. Bonuses for salaried staffs therefore encourage them both to increase output and to cut costs. But as production cost plans can be fulfilled even though other important requirements are neglected, no economy bonuses are paid unless all requirements are satisfied with regard to productivity and delivery. This provides the material incentive for all-round efficiency.

Subject to these general rules, salaried employees in production subsections receive bonuses on the basis of the performance of the department or shop to which they are attached, whereas for those in the management of the undertaking it is the performance of the undertaking as a whole that counts. Members of auxiliary sections are awarded bonuses according to the output of the whole undertaking or of the principal sections they serve, provided that their own sections meet quality and output standards.

Bonuses are calculated on monthly results. Managerial staff, however, receive only 50 per cent. of the bonuses at the end of each month, the remainder being paid to them only upon fulfilment of the plans for each quarter as an incentive to achieve satisfactory results not only in a favourable month but also over a longer period.

Depending on the particular industry or group of undertakings, the bonus rate for fulfilment of cost-reduction plans is set at 8 to 15 per cent. of basic monthly salaries ; and for every 0.1 per cent. reduction in cost the rate of bonus is raised by 1 to 1.5 per cent. In addition, for every 1 per cent. by which the production target is exceeded, a further bonus of 3 to 5 per cent. of the basic salary may be paid. The aggregate of bonuses payable is subject to a monthly ceiling of 40 to 60 per cent. of the basic monthly salary.

Bonuses for Technical Innovations

In addition to the forms of bonus payment described above, undertakings also award bonuses to employees who devise or introduce technical innovations or methods leading to complex mechanisation and automation of production. This form of bonus is payable on one occasion only, and only to the workers directly involved. The sums awarded depend on the benefits obtained during the year from introduction of new machinery, materials or process. Staff are informed of the amount of these awards at the same time as the plans for the innovations are made known.

Engineers and technicians are entitled to these innovation bonuses (over and above cost-reduction bonuses) up to an annual ceiling equivalent to six months' salary in the engineering industry and three months' salary elsewhere. Wage earners may also be awarded such bonuses (over and above their bonuses for fulfilling or exceeding monthly targets) up to an annual ceiling equivalent to three months' wages.

Future Trends

The future development of wage and bonus systems lies in several directions. In the first place, there will be extra emphasis on collective forms of material incentives to encourage personal interest in the achievements of production units, departments or whole undertakings. The rapid expansion of complex mechanisation and automation results in greater interdependence between individual units, and it is becoming increasingly difficult to evaluate final results other than through the work of complete sections and sometimes of the undertaking as a whole. Consequently, collective indices and group piece rates and bonus systems will become more and more common. That does not mean that individual performance will cease to affect individual remuneration ; but it is essential to strike a proper balance between rewarding this and stimulating collective efforts.

A second important trend will consist in increasing personal incentives with a view to improvement of economic indices, more profitable operation, lower production costs, and more effective use of production funds. Since personal income tax was abolished, the accumulated profits of industrial or other undertakings have been the only basis for expansion of production in the U.S.S.R. The proportion of production costs represented by labour is constantly rising, so that, as output increases, savings in labour become an important source of further capital accumulation. The value of every percentage point saved is increasing phenomenally : in 1965 an economy of 1 per cent. will represent 2,100 million roubles. Technical progress means that equipment becomes more productive but also more costly so that unsatisfactory utilisation of plant considerably reduces the benefit of technical advances.

In these circumstances, economic indices play an increasingly important part in the expansion of production. Bonus systems for wage earners are already directed towards encouraging economy and better use of materials. With regard to salaried staffs, proposals are being studied for linking bonus payments with planned and additional economies, profitability indices and utilisation of installed capacity.

Quality control is a further essential factor in economic expansion. Systematic improvement of quality does not merely mean better goods : since what is produced will last longer, it also means that more goods will be available. Moreover, as machinery becomes increasingly complex, high standards of quality and precision are vital to smooth and efficient operation of production plant, transfer mechanisms and other equipment. To existing quality grading methods, incentive systems will sooner or later have to add such factors as reliability and durability.

The need for greater incentives to improve quality does not imply that output incentives should be abandoned ; on the contrary, it is planned to step up industrial production sixfold in the next 20 years. Ensuring that the workers have a material interest in higher output therefore remains the most important function of incentive systems, despite the increased weight that will be attached to economic indices and improvement of quality. One of the essential principles which must guide such systems in the near future is the need to reward quantity and quality in the right proportions.

One last requirement should be mentioned in conclusion. According to the current economic plans, a vast amount of new automated plant, remote-control installations, flow-lines and strictly regulated continuous processes will be brought into operation in the next few years. Only by means of such technical progress can a high rate of increased production be obtained, conditions of work steadily improved and wage differentials reduced. Accordingly, all personnel must have a material as well as a moral interest in technical advance. It is therefore necessary to perfect methods of incentive payment for the preparation and introduction of new machinery and techniques, for inventions and organisational proposals.

Improvement in wage systems is still one of the most important economic tasks of state authorities and undertakings. Its performance will enable appropriate wage levels and ratios to be established, and provide the workers with greater material incentives to extend and improve production.