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AN EVALUATION OF THE SOVIET WAGE REFORM  
1956-62



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AN EVALUATION OF THE SOVIET WAGE REFORM  
1956-62

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## FOREWORD

The recent Soviet program for the reform of wages and salaries, in progress from 1956 through 1962, is described and evaluated in this report. Particular emphasis is placed on the impact of the program on wage rate differentials by occupation, geographic area, branch of industry, and conditions of work. In evaluating the wage program, special attention is given to problems of pricing labor services in a planned economy, such as the establishment of wage differentials that will distribute labor in accordance with the economic priorities of the regime and the coordination of earnings with output of consumer goods and services.

This report is limited to the state sector of the Soviet economy. Primary attention is given to wage changes in industry (including manufacturing, mining, and electric power). Wage changes for blue collar workers are treated in detail, but changes in salaries, bonuses, and awards for white collar workers are given less attention. The descriptive parts of this report are limited to direct labor payments financed through the wage funds of the various enterprises. Wage supplements -- overtime pay, production bonuses, and the like -- are included, but other, less direct forms of remuneration -- pensions, plant-wide awards for socialist competition, educational stipends, and other governmental transfer payments -- are excluded from consideration. The closely associated program of reducing the length of the Soviet workweek is not described in detail, but the conclusions of a previous report (CIA/RR ER 61-13, An Evaluation of the Program for Reducing the Workweek in the USSR, March 1961) are incorporated in the discussion.

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AN EVALUATION OF THE SOVIET WAGE REFORM  
1956-62

Summary and Conclusions

The recent Soviet wage reform, in progress from 1956 through 1962, was the most comprehensive attempt ever made by the USSR to improve the wage system. The reform sought to recover central administrative control over wages and to reduce inequities and inconsistencies in wage rates and output norms. By these means it was hoped that the inflationary pressures of the "wage creep" would be contained, that waste and misallocation of labor would be reduced, and that individual workers would be spurred to increase output and improve job skills. As of early 1963, some of the goals of the wage reform appear to have been at least partly achieved, whereas other goals appear to be incapable of achievement by wage reform alone.

After a period of experimentation in 1956 and 1957, the wage adjustment program was linked in April 1958 with a program for reducing the length of the workweek. The combined program progressed slowly throughout much of 1958 but was accelerated in late 1958 and early 1959. By the end of 1960, all workers and employees had been placed on a scheduled 41-hour workweek compared with 48 hours in 1956; and by the end of 1961, 40 million workers and employees -- nearly two-thirds of the total -- had been transferred to the new wage rates and scales. A further reduction in the workweek (of 1 hour) was not carried through as scheduled in 1962, but apparently the transfer of workers and employees to the new wage system continued.

The wage reform accomplished its objectives in varying degrees. The reform eliminated the large number of uncoordinated "ministerial" wage systems and established (1) a set of coordinated job classification manuals; (2) a simplified set of wage rates; (3) higher minimum wages, up from 270 to 350 rubles\* to 400 to 450 rubles per month; (4) a single schedule of regional wage differentials; and (5) a consistent set of differentials for "hot, heavy, and hazardous" work. The widely used

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\* Ruble values in this report are given in old rubles, which were the rubles in use before the currency reform of 1 January 1961. These old rubles may be converted to new rubles at a rate of 10 to 1. The current official Soviet rate of exchange is 0.9 (new) ruble to US \$1.

but inequitable system of progressive piece rates\* was practically eliminated, and the number of workers paid according to time rates was increased. The use of higher output norms -- based on careful technical study -- was increased, although not enough to satisfy Soviet labor economists. Longevity pay, which had been intended to be applied only in priority industries but which had spread to all industry, was largely eliminated, and the use of bonuses as incentives was increased. By raising basic wage rates substantially -- 50 to 100 percent in many cases -- and simultaneously reducing the extent of supplementary pay, the basic wage rate was reestablished as the major factor in the pay structure. Finally, central financial and administrative controls were strengthened to combat the overspending of wage funds by enterprise managers.

Analysis of the changes in minimum wages and wage scales suggests that, in general, the new wage rates represent largely an institutionalization of previously existing levels of pay. Changes were made in the composition rather than in the level of earnings. The new minimum wages raised the level of earnings of only a few low-paid workers -- chiefly custodial workers, some apprentices, and some clerical workers. The average annual money earnings of all workers and employees rose about 3 percent a year in 1956-62, the period of the wage reform, not much more than the annual increase of 2 to 3 percent that had prevailed since 1947. The wage reform, in effect, incorporated into the new basic wage rates the many previous, unofficial deviations in earnings that had been introduced piecemeal in response to pressures of the "labor market." The reform thus has tidied up the structure of wages for the moment and takes account of recent technological change, but it remains to be seen whether or not the system has the flexibility to respond to future change.

Analysis of the changes in wage differentials suggests three probable deficiencies. First, the set of differentials established by branch of industry have been retained and could perpetuate the buildup of redundant labor in high-priority industries because plant managers in these industries may continue to use their priority positions to purchase "reserves" of underused labor as insurance against contingencies; on the other hand, the changes in output norms are designed to reduce featherbedding in industry, and the amount of redundant labor may be cut. Second, the regional differentials in the new pay schedules are insufficient to move workers to remote areas because the housing and consumer goods on which to spend the extra money are not being provided by the government. Third, the new differentials for "hot, heavy, and hazardous" work, which are based solely

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\* Under the system of progressive piece rates a worker is paid proportionately more, the more his production exceeds the norm. For example, he might be paid 1.5 times the straight piece rate for production above norm up to 20 percent overfulfillment and two times the straight rate for further above-norm production.

on the "physiological needs" (largely food consumption requirements) of the workers on these jobs, are not large enough to attract sufficient numbers of workers to these jobs. In addition, the new standardized wage rates do not reflect differences in job requirements and working conditions that exist among individual plants. Because the cost of changing jobs is much lower than in the Stalin era and because managers are now faced with abnormally small numbers in the new age classes entering the labor market, labor turnover at specific plants will continue to be a vexing problem. Evidence published in late 1962 and early 1963 of high labor turnover in widely scattered industrial plants supports this conclusion. As for the effect on incentives to produce, it is difficult to conclude that the Soviet workers as a whole have speeded up their effort because of the wage reform.

The over-all performance in holding the line against the "wage creep" has been good over the last decade. By recovering central control over wages as part of the wage reform, the Soviet leadership has perhaps an even stronger assurance that the future level of wage expenditures will stay within the general guidelines of the Seven and Twenty Year Plans (1959-65 and 1961-80). Wages and wage expenditures are to increase slowly but at rates considerably below gains in productivity. However, because planned wage levels for any year are based largely on the experience of the previous year at each enterprise and because the new system of control requires a certain degree of administrative flexibility to meet the practical needs of enterprise managers, the Soviet leadership cannot be certain that planned earnings levels will not be exceeded. Finally, no system of wage control will substitute for inadequate provision of more and better consumer goods on which wages may be spent.

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## I. Introduction

### A. Historical Setting

In 1955 the USSR began preparations for the first comprehensive revision of the wage system since 1931-33. 1/\* On 25 May 1955, Pravda announced that a new organization -- the State Committee on Labor and Wages\*\* -- had been established under the chairmanship of L.M. Kaganovich. 2/ The Committee apparently was formed to survey the changes needed in the wage system and to provide central direction in carrying out a comprehensive wage adjustment program. During the preceding 20-to-25-year period, the Soviet wage system had developed without the coordinating influence of a central agency. Within formally designated limits, each ministry and department made those wage rate changes that appeared to be necessary for its workers and employees\*\*\* subject only to the pro forma approval of the Council of Ministers. During this period the Council of Ministers seldom challenged the power of the ministries and departments to set wages. A few basic changes were made by the government, but no attempt was made to accomplish a general reform of the wage system.† Despite the few nationally directed changes and the many adjustments and modifications made by the various ministries and departments, the structure of the wage system in 1955-56 differed little from the 1931-33 model.

### B. Formal Structure of the Soviet Wage and Salary System

The Soviet wage and salary system, established in 1931-33, was borrowed largely from the work of the leader of the Scientific

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\* For serially numbered source references, see Appendix C.

\*\* The State Committee of the Council of Ministers, USSR, on Questions of Labor and Wages (Gosudarstvenniy Komitet Soveta Ministrov SSSR po Voprosam Truda i Zarabotnoy Platy).

\*\*\* Workers and employees is a technical term used by the Soviet government. It includes all wage and salary earners but excludes members of the armed forces and collective farmers.

† In November 1937 the Soviet government established new minimum wages for workers in industry and in rail and water transport. 3/ On 1 September 1946 the government decreed a special wage increase of 20 percent for workers in heavy industry in the Urals, Siberia, and the Far East. 4/ This increase apparently was granted in an effort to reduce the return flow of workers who had been relocated during World War II. On 16 September 1946 a cost-of-living adjustment was announced in preparation for the abolition of the rationing system in 1947 and the accompanying currency and price changes. 5/

Management Movement, Fredrick W. Taylor, and his followers\* and was similar to that used by other industrial nations. The system distinguishes between blue collar and white collar workers, although this terminology is not used by Soviet economists. All blue collar workers -- wageworkers, apprentices, and junior service personnel\*\* -- are paid according to the wage scales of wageworkers, whereas white collar workers -- managers, engineering-technical workers, and clerical workers\*\*\* -- are paid according to separate salary schedules.

Under the first system, wageworkers' jobs are classified into labor grades (razryady) according to the level of skill required for the job. The nature of the job and the skills required are outlined in standard job classification manuals (tarifno-kvalifikatsionniye spravochniki). Wageworkers are then paid the appropriate wage rate (tarifnaya stavka) for the labor grade of their positions. For example, the following wage scale (tarifnaya setka) was introduced experimentally in the Astrakhan Fish Combine during 1957 8/:

	Labor Grades						
	I	II	III	IV	V	VI	VII
Coefficient	1.00	1.12	1.27	1.45	1.66	1.90	2.20
Daily piece rate (rubles per day)	15.04	16.84	19.10	21.81	24.96	28.57	33.09
Daily time rate (rubles per day)	13.75	15.40	17.46	19.94	22.84	26.12	30.25

As indicated in the example above, wageworkers are paid according to either piece or time rates. Time rates are used for those wageworkers whose jobs do not permit the establishment of output norms.

\* For a discussion of Taylor and the development of the scientific management movement, see Villers, source 6/; for an appraisal of the impact of the scientific management movement on Soviet wage determination, see Aganbegyan and Mayer, source 7/.

\*\* Wageworker -- rabochiy (a Soviet statistical category which is similar to the US concept of production worker but which is somewhat more limited in coverage)

Apprentice -- uchenik

Junior service personnel -- mladshiy obsluzhivayushchiy personal

\*\*\* Manager -- rukovodyashchiy

Engineering-technical worker -- inzhenerno-tekhnicheskiy rabotnik  
(a term in Soviet statistical compilations, that usually includes managers)

Clerical worker -- sluzhashchiy

Under the piece rate system, which included about 75 percent of all wage-workers in industry in 1956, 9/ the established daily, weekly, or monthly wage rate is converted into rubles per unit of output according to an output norm (norma vyrabotki) established for the task or job. Two kinds of output norms have been used: experience-statistical norms (opytno-statisticheskiye normy) and technically based norms (tekhnicheski obosnovanniye normy). The former reflects largely what a worker has done in the past, and the latter is based on his potential output as determined by technical studies. Actual pay under the piece rate system reflects either underfulfillment or overfulfillment of the output norm.\*

In addition to earning the pay specified in the wage scales, workers also may earn supplementary pay and bonuses. Supplementary pay may be earned on the basis of either straight or progressive piece rates (pryamaya sdel'naya or sdel'no-progressivnaya sistema).\*\* Regular bonuses are linked to achievement of output or quality plans, and special bonuses may be paid for specified purposes from the enterprise fund or from special state funds, such as those designated for socialist competition awards.

Managers, engineering-technical workers, and clerical workers are paid according to a separate "official" salary system (sistema dolzhnostnykh okladov). Monthly salaries are set in accordance with the standard tables of organization established for all state enterprises. In addition, salaried workers may receive bonuses for the accomplishment of production tasks on either the plant or the shop level.

Before October 1959 the bonus system for salaried workers was based solely on fulfillment and overfulfillment of the monthly output plan, contingent on meeting the cost plan. New bonus regulations were put into effect on 1 October 1959 in construction, transportation, communications, and part of industry and on 1 January 1960 in most branches of heavy industry and in state agriculture. 10/ The new regulations established quarterly bonuses based on the fulfillment and overfulfillment of the cost reduction plan, contingent on fulfillment of the output plan, the assortment plan, the labor productivity plan, and the delivery plan.

\* For example, if the monthly rate of a lathe operator is established at 700 rubles per month and his output norm at 7,000 spindles per month, his piece rate (compensation per unit of product) would be 0.1 ruble (10 kopeks). Only if he produced exactly 7,000 spindles would his actual pay equal his established monthly wage.

\*\* Under straight piece rates, above-norm output would be compensated according to the same pay rate per unit of output as was established for the normed work. Under progressive piece rates the pay rate per unit of output would be increased for the above-norm work by some multiple or multiples of the straight rate, such as 1.5 times up to 20 percent overfulfillment and 2.0 times thereafter.

In industries of exceptional importance to the growth of the national economy, however, bonuses for exceeding the output plan were continued. Additional bonuses are provided for success in the implementation of new technology according to regulations adopted on 3 July 1960.\*

### C. Wage System Before 1956

During the early and mid-1950's, Soviet leaders and economists noted that the wage system was in need of adjustment. Their dissatisfaction apparently was not directed toward the formal structure itself -- wage scales, grades, job classification manuals, and the like -- because the formal structure subsequently was not altered. Rather, they were dissatisfied with the ways in which the formal structure had been adapted to departmental needs and to strong economic pressures such as the wage inflation experienced during World War II, the postwar tightening of the labor market with concurrent pressures for still higher earnings, and the effects of rapid technological change.

Before 1956, each ministry or department generally was responsible for setting its own wage scales and rates within the limits of the formal structure, subject to the approval of the Council of Ministers, and for enforcing these rates in subordinate enterprises. The alteration of wage rates and scales as the need arose in each ministry or main administration created numerous, different wage rates for workers of equal skill and experience. Even within a single ministry or department, workers with identical skills and job responsibilities often were paid very different wage rates -- depending on the plant, the type of production, and other characteristics considered important by the responsible ministry in the setting of wages.

Other differences between ministerial wage systems created additional problems. For example, plants of the ferrous metallurgical, chemical, machine building, paper, and a few other industries had no provisions for regional wage differentials, although other industries had numerous zones and differentials. 12/ Therefore, even if the wage rate of a grade IV machinist in a Moscow machine tool plant was 20 percent above that of a grade IV machinist in a Moscow textile plant, the opposite might be true in the Far East or North. Thus transfers or migrations to distant machine tool plants were discouraged, and managers of these plants were forced to find other ways of attracting qualified workers.

Closely related to the problems created by multiple wage scales were the problems created by obsolete output norms. During World War II and the postwar period, output norms had not been revised often enough to

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\* A discussion of the salary and bonus system for managers, engineering-technical workers, and clerical workers may be found in source 11/.

reflect the increasing production potential of the various workers. By 1955-56, output norms often were being exceeded by 50 to 100 percent, although production plans of the enterprises were barely fulfilled or even underfulfilled. 13/ Rapid changes in technology made existing experience-statistical norms and job classification manuals obsolete, and there was no coordinated system for standardizing norming methods, job descriptions, or grades for new jobs.

Confronted by strong pressures of the labor market, managers took advantage of the lack of coordination in the system and established low output norms in order to obtain higher earnings levels to attract or hold workers. 14/ Slight modifications often were made in job content to provide an opportunity for raising the grade and wage rate of the job. 15/ By 1956, as a result of both actual and fictitious improvements in skills and job content, only 0.4 to 0.5 percent of the wage-workers in major chemical enterprises, for example, were paid according to grades I and II, which were designed generally for unskilled or low-skilled workers. 16/ A similar absence of workers in lower wage grades existed in other industrial branches as diverse as the machine building and the fish industry.\* 17/ Special supplements such as longevity pay and the use of fictional piece rates had to be created for time workers whose earnings otherwise would have remained relatively fixed compared with earnings of pieceworkers. 18/ The wage system was being widely manipulated to raise earnings in specific jobs closer to competitive levels, despite the formal safeguard of ministerial review of proposed changes.

The following data show the growth of earnings of industrial wageworkers from 1950 to 1954 by various types of pay 19/:

	Average Increase per Worker** <u>(Percent)</u>
Total earnings	8.9
Longevity pay	38.8
Supplementary pay via progressive piece rates	15.2
Additional pay to pieceworkers in connection with changes in work conditions	9.5
Overtime pay	9.5
Pay in accordance with basic piece rates	9.1
Pay in accordance with basic time rates	4.8

\* See also Table 9, p. 39, below.

\*\* Data refer only to wageworkers under the jurisdiction of the various ministries, excluding those subordinate to local industry.

## II. Rationale of the Wage Reform

A rationale for the wage reform might easily be found in the wage and norm aberrations and the managerial manipulations of the prereform period. It might be claimed, and with considerable support, that the wage reform was intended to reduce labor turnover, reduce labor costs per unit of product, raise labor productivity, or establish more effective incentives. These considerations, however, do not explain why the adjustment was begun in 1956 or why a thorough overhaul of the wage system was attempted rather than piecemeal alterations. Although the wage system needed repairs before 1956 and some were made, no over-all reform was hinted. The former wage and allocation system was performing some tasks reasonably well. Large numbers of workers were being supplied to key industrial and construction organizations (except perhaps to those in the more remote regions\*), and apparently the system more than adequately met the needs of enterprise managers in priority areas for a reserve of labor to meet production goals.\*\*

The nature and timing of the wage reform might be traced to a potentially disturbing situation growing out of a gradual deemphasis of the physical allocation of labor and a simultaneous tightening of the labor market. After the death of Stalin in 1953, the physical allocation of labor was deemphasized as a result of changes that included the widespread dismantling of the labor camps system of the Ministry of Internal Affairs (MVD), 21/ the gradual reduction in the activities of the central labor recruitment agency (Orgnabor), 22/ and the 1956 relaxation of legal barriers to mobility.\*\*\* During this period the urban labor market was becoming tighter under the impact of rising agricultural incomes and the trend toward more schooling for young persons. Moreover, by 1955-56 the labor market was beginning to feel the effects of the reduction in the size of the age groups reaching labor force age, a result of the low birth rates of the World War II period. This tightening of the urban labor market gradually was drawing the determination of wage rates (and therefore the level of aggregate money earnings) outside the control of the Soviet leadership and the national planning agencies. The post-Stalin leadership must have felt growing uncertainty that the wage rates set in this market would allocate labor to desired activities and would

\* See IV, E and F, pp. 43 through 47, below.

\*\* For comments on the size of these reserves of labor, see source 20/.

\*\*\* The departure from physical allocation of labor, however, has not been complete. Legal provisions still permit enterprise directors to transfer workers between enterprises in a number of cases, and higher and technical school students still receive specific, 2-to-4-year job assignments on graduation.

remain within the bounds of established plans for consumption, investment, and defense.\*

The Soviet leadership was faced with two interrelated problems. The first was to set relative wages so that earnings differentials between occupations, types of work, and industrial and economic sectors would encourage an allocation of labor consistent with plans. The second problem was to establish a system of control that would avoid a recurrence of the situation in 1953-54 when average real earnings of industrial wageworkers rose faster than their average productivity. <sup>23/</sup> If this latter condition were to become widespread throughout the economy, the leadership would be faced either with inflationary pressures or, alternatively, with the need to divert resources to consumption from other uses such as investment or military expenditures. Although moderate increases in real earnings had been planned for the period 1947-54 -- primarily through price reductions on consumer products -- the actual rise in money earnings during this period represented in part an unplanned increase.

The poorly conceived and sometimes inconsistent approach of the regime in 1955-56 to these wage problems suggests that the leaders may not have seen all of these problems. During the period of experimentation in 1956-57 the State Committee on Labor and Wages worked out a number of specific measures for the adjustment of wage rates and salaries, but it was not until 1958-59 that the leadership formulated its present position on aggregate wage levels and social consumption.

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\* The need for a thorough overhaul also may be ascribed to the need for more efficient use of labor, a corollary of a tightening labor market. The wage and salary system established in 1931-33 was designed to provide incentives for increased production with little specific regard to labor costs. The need for efficient use of labor became more pressing in the period of relatively "tight labor" beginning in the mid-1950's and continuing to the present.

### III. Course of the Wage Reform

#### A. Early Organizational Inertia

On 4 July 1955, shortly after the formation in May of the State Committee on Labor and Wages, N.A. Bulganin emphasized at the Communist Party Plenum the need to eliminate obsolete work norms and to alter the wage system in order to provide better incentives and reduce labor turnover. 24/ However, no activity by the State Committee was evident during the first year of its existence. Two wage adjustments were announced during this period -- one for construction workers (23 August 1955) 25/ and one for animal husbandry workers on state farms (1 January 1956) 26/ -- but the State Committee was not mentioned in the original decrees or in the available information on their implementation. These two wage adjustments probably represent the last of the series of wage changes prepared and directed by the ministries.

The apparent inactivity of the State Committee during its first year might be accounted for by the normal time-consuming initial tasks of organizing and staffing and the initial study of wage problems. This explanation is partly supported by the fact that the Soviet leadership did not become firmly committed to the wage reform program until January and February of 1956. 27/ A second possible contributing factor, however, might have been the resistance to the program by the first Chairman of the Committee, L.M. Kaganovich, as contended in the issue of Sotsialisticheskiy trud for July 1957. 28/ Although the replacement of Kaganovich by A.P. Volkov in June 1956 29/ (not officially announced until July) probably was connected primarily with the intra-Communist Party struggle underway at that time, the charge by Sotsialisticheskiy trud may have been a valid one. A third contributing factor might have been resistance to the State Committee by the ministries. An editorial in the January 1956 issue of Sotsialisticheskiy trud stated pointedly that the broad powers granted to the new State Committee did not usurp the traditional powers of the ministries but rather were a complement to them. In addition, the editorial described the establishment of Inspectorates of the State Committee to work with the various ministries in preparing for the adjustment of wages in their respective jurisdictions. 30/

#### B. Period of Experimentation, 1956-57

##### 1. Provisions of the Sixth Five Year Plan (1956-60)

Both the original draft of the Sixth Five Year Plan (1956-60) published in January 1956 and the final draft approved by the Twentieth

Party Congress in February 1956 called for the following changes in the wage and salary system 31/:

- a. Extensive introduction of technically based output norms,
- b. Increase in the proportion of base pay in workers' earnings and the establishment of a proper relationship among branches of the economy and different occupations, considering both relative skills and working conditions,
- c. Adjustment of the pay of engineering-technical and clerical workers and an elimination of the multitude of existing systems of pay for these persons, and
- d. Increase in the role of bonuses in stimulating technical innovations, higher labor productivity and lower production costs.

In addition, the final draft included an amendment that provided for the transfer of all workers and employees from a general 48-hour workweek to a 41-hour workweek by the end of 1960. The workweek was to be shortened by 2 hours in 1956 and then was to be reduced further on an industry-by-industry basis. Both the wage program and the hours program were under the guidance of the State Committee on Labor and Wages but were implemented separately. Each program remained in a preliminary stage during 1956 and most of 1957.

## 2. Early Experiments, 1956-57

Several experimental tests of the new wage schedules were begun in mid-1956 and later in the year. Experiments took place during August and September at 14 selected machine building plants, 32/ during September and October at 7 nonferrous metallurgical plants, 33/ and throughout the latter half of 1956 in the coal mines of the Donets and L'vov-Volynsk Basins. 34/ In November 1956, approval was granted by the State Committee for experimental trials of three new wage scales for the ferrous metallurgical industry. 35/ In December 1956 a new wage schedule for medical and pharmaceutical enterprises was approved for testing at two plants in early 1957. 36/

The stream of decrees and approvals for experimental testing of new wage schedules, which began in June 1956, continued throughout the first half of 1957. In January the State Committee directed those machine building enterprises that were not subordinate to the machine building

ministries to bring their norms and wages into line with the job classification manuals of the machine building ministries.\* A uniform eight-grade scale with a ratio between the lowest and highest basic wage rate of 1 to 2.8 was approved together with three separate wage rates for grade I. 37/ In February 1957 the State Committee approved the testing of new wage scales for the Ministry of the River Fleet, RSFSR, 38/ as well as a new eight-grade scale with a ratio of 1 to 2.8 for electric power stations. 39/ Similar test scales were approved, and tests were begun, among the workers of the Ministry of Motor Transport and Highways, RSFSR 40/; the printing houses of the Ministry of Culture, USSR 41/; the fish industry 42/; and the Omsk oil refinery. 43/ In addition, the State Committee approved proposals for testing three wage scales for various parts of light industry -- two eight-grade scales with ratios of 1 to 2.6 and 1 to 2.4 and one seven-grade scale with a ratio of 1 to 2.1. 44/

The Ministry of Light Industry also was instructed in March to prepare a new job classification manual by the second quarter of 1957 and to make proposals for further experimental wage rates with the stipulation that the resulting aggregate wage expenditures must not exceed existing planned wage funds. Similarly, approval was given to the relevant ministries and inspectorates for tests of wage scales of seven grades and eight grades, respectively, in the woodworking industry and in the salt and tobacco industries. 45/ The new scales represented at a minimum an attempt to substitute one or a few wage scales for the multitude of scales used within each ministry or industry.

Soviet reporting on these early experiments is incomplete, but several general characteristics can be seen. First, all of the major experimental wage changes except those in the coal mines of the Donets and L'vov-Volynsk Basins were undertaken without a simultaneous reduction in hours of work.\*\* Second, in contrast to the six-grade scales with ratios ranging from 1 to 1.8 to 1 to 2.8 that finally were adopted by the end of 1960, most of the experimental wage scales were comprised of seven or eight grades with ratios ranging from 1 to 2.1 to 1 to 3.2. In addition, the experiments did not significantly alter the payment of large and growing longevity supplements, the widespread use of "fictional" and progressive piece rate systems, and the overrating of job categories.

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\* The existence of machine building enterprises subordinate to ministries other than machine building was one aspect of the trend toward ministerial autarky that was widely criticized before the ministerial reorganization in 1957.

\*\* Separate experimental changes in hours of work, however, were conducted in selected automobile, machine tool, ferrous metallurgy, and non-ferrous metallurgy plants.

These early experiments were resisted widely by both workers and enterprise managers. Worker resistance to higher work norms led to protests and even to strikes. 46/ Enterprise managers were reluctant to alter work norms because of the possibility of adverse reactions on the part of workers and because of their desire to maintain flexibility in matters of wages and norms. In addition, managers were reluctant to change norms because they were unable to predict accurately the extent to which the new norms would be met and therefore the amount of supplementary piecework pay.

At the experimental plants it proved to be very difficult to predict closely the share of basic wages in total earnings and the final level of average earnings. In some plants, large increases in average earnings were experienced. Particular note was taken by Soviet economists of those instances in which average earnings rose faster than labor productivity. In other plants, where an attempt was made to avoid additional wage expenditures by shifting workers to a rigid set of technically based norms, average earnings were reduced. The latter instances probably were responsible for the considerable labor unrest -- protests and strikes -- observed during late 1956.

In May 1957 the State Committee on Labor and Wages instructed its Division of Labor and Working Conditions to prepare a new job classification manual covering all jobs common throughout the economy by 1 December 1957 and instructed "leading" ministries to do likewise. The ministerial manuals -- intended to provide uniform guidance for the various ministries, departments, and plants in grading and paying workers -- were to be drawn up on the basis of job lists previously prepared by the State Committee. 47/ The progressive abolition of the economic ministries beginning in July 1957 48/ disrupted these and other activities connected with the wage reform. The personnel of the labor, wage, and norm departments of the economic ministries were reassigned to departments of labor and wages at the 105 newly established councils of national economy (sovnarkhozes), to various planning agencies, and probably even to the State Committee itself. Most wage experimentation stopped during the second half of 1957, with the exception of that for the river fleet of the RSFSR 49/ and highway transport workers, 50/ who were unaffected by the reorganization.\*

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\* The adjustment of wage rates in the state trade network during 1957 represents an interesting anomaly. Although it was undertaken more than a year after Volkov's appointment as Chairman of the State Committee on Labor and Wages and although it appears to follow the general lines approved by the State Committee, information on this change contains no reference to an active role by the Committee. 51/ In addition, wage rates in state trade were later scheduled for readjustment during 1962 under the guidance of the State Committee.

In late 1957 and early 1958 the State Committee again began to implement the wage reform in industry, working through the new labor and wage departments of the sovnarkhozes. 52/

### C. Acceleration of the Program, 1958

During the last quarter of 1957 and in early 1958 a simultaneous transfer to shorter hours and new wage schedules was begun at selected mining (other than coal), metallurgical, and chemical enterprises. 53/ This action apparently was based on previous experimentation with simultaneous transfers in coal mining. In April 1958 the government decreed that both the wage reform and the reduction in hours be introduced simultaneously and completed by the end of 1958 in ferrous and nonferrous metallurgy and in the coal, chemical, and cement industries. 54/

The linking of the wage and hours programs had several important effects. The reduction of the workweek apparently quieted the resistance formerly experienced to upward adjustments in output norms and changes in methods of compensation. It also put pressure on Soviet managers to make better use of labor and to introduce technical and organizational improvements in order to transfer to shorter hours and new wage rates without incurring shortfalls in the output plan or overspending the wage fund except where specifically authorized.

The program, however, continued to lag behind schedule throughout 1958 and much of 1959. Much of the lag apparently was due to the inability of some managers to formulate satisfactory plans to accomplish the transfer to new wages and hours without shortfalls in productivity and production or without unwarranted increases in the wage bill.

A new feature of the program was introduced in the Seven Year Plan (1959-65), published in February 1959, which called for minimum wages to be raised from 270 and 300 rubles per month\* to 400 and 450 rubles per month by 1962, and to 500 and 600 rubles per month by 1966 for rural and urban workers and employees, respectively. 55/ The grade I wage rates on all wage scales established after February 1959 accordingly were set at 400 rubles or more per month. Those established before February 1959 presumably were at least equal to the new minimum because they all involved industries "of national economic importance" in which grade I rates were established well above the former minimums. The Seven Year Plan reaffirmed the goal of a 41-hour workweek by the end of 1960

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\* For workers in industrial, construction, transportation, and communications enterprises, the minimum wages established on 1 January 1957 were 300 and 350 rubles per month in rural and urban areas, respectively. These rates did not apply to junior service personnel.

and further specified that an additional hour was to be cut in 1962.\* The plan also announced that a transfer to a 35-hour workweek would begin in 1964 and would be completed in 1968.\*\*

D. Drive for Completion of the Wage and Hours Revisions, 1959-62

1. New Administrative Procedures

By mid-1959, standard administrative procedures had been developed so that changes in hours and wages could be made with a minimum of adverse effects on output, productivity, and wage expenditures. 56/ Enterprise managers, foremen, and local trade union committeemen proposed new work schedules, wage rates, and work norms consistent with guidelines provided by the State Committee and with preliminary technical plans of the enterprise for the organization of "internal reserves" and for capital and noncapital using innovations. The expected earnings of each worker under the new conditions then were computed and aggregated to determine whether the enterprise wage fund would be overexpended, and earnings differentials were examined for conformity with the over-all earnings patterns stipulated by the planners.

Readiness for conversion was then reviewed by the appropriate higher organs -- the sovnarkhoz, ministry, or local executive committee, depending on the administrative subordination of the enterprise, and the appropriate city, oblast, kray, republic, or central trade union committee. In those cases where the transfer was to be made to a 5-day week of 8 hours daily instead of the usual 6-day week of 7 hours on weekdays and 6 hours on Saturdays, additional review and approval were needed by the appropriate departments of the union republic Councils of Ministers or the appropriate USSR ministries and departments, in agreement with the State Committee on Labor and Wages and the All-Union Central Council of Trade Unions.

2. Timing of Transfers to the New Wage and Hours System

On 20 September 1959 a new schedule for completing the wage reform and the transfer to the shorter workweek was announced (see Table 1\*\*\*). 57/ Transfers were to be made on a territorial basis rather than on a branch-of-industry basis, presumably to facilitate supervision by the sovnarkhozes and to reduce the movement of workers from plants in which the wage and hours adjustments had not yet been made to neighboring plants already operating under the new conditions.

\* To date, there has been no announcement that the 1-hour reduction planned for 1962 was granted.

\*\* For underground workers a 30-hour, 5-day workweek was to be established.

\*\*\* Table 1 follows on p. 19.

Table 1

USSR: Planned Time Schedule for Adjustments in the Workweek and in Wages  
1959-62

Industry	Economic Branch and Geographic Area	Establishment of the Shorter Workweek	Introduction of New Wage Scales and Work Norms
In the North, the Far East, Siberia, the Urals, Kazakhstan, Moscow and Moscow Province, Leningrad and Leningrad Province In all other areas		4th quarter 1959 - 4th quarter 1960 3d and 4th quarters 1960	4th quarter 1959 - 4th quarter 1960 3d and 4th quarters 1960
Construction and geological survey work		2d quarter 1960 4th quarter 1960	2d quarter 1960 4th quarter 1960
Transport and communications		4th quarter 1959 - 4th quarter 1960 4th quarter 1960 2d and 4th quarters 1960	1960-61 a/ 1960-61 a/ 1960-61 a/ 1962 a/
State agriculture Scientific research and design organizations Trade, public catering, procurement, material and technical supply, educational, public health, cultural, art, and other establishments as well as governmental and other "nonproductive" branches		3d and 4th quarters 1960	1962 a/

a. In those cases where changes in wages and work norms were not made concurrently with the reduction in hours, wage schedules were adjusted arithmetically at the time of the changeover to shorter hours in order to maintain earnings until the detailed wage changes could be completed.

Under the new schedule the rate of implementation of the program increased. By the end of 1959, only 13 million workers and employees, out of a total of about 58 million to 60 million,\* had been transferred to the new wage and hours system. 59/ By 30 June 1960, 20 million were on the shorter workweek and by 30 September, 40 million. 60/ By 31 December 1960 the transfer of all workers and employees to the shorter workweek was completed. 61/ The completion of the wage reform was scheduled to proceed more slowly. The number of workers and employees on the new wage schedules by 31 December 1960 probably approximated the planned number of 30 million, 62/ including almost all workers and employees in industry, most of those in construction, and some workers in other economic branches. By the end of 1961, 40 million persons had been transferred to the new wage schedules. 63/ Workers and employees whose wages had not been adjusted by the end of 1961, primarily those in trade and public dining and in health, government, and other "nonproductive branches," were scheduled to have their wages changed in 1962. The few observed references to wage changes in these areas in 1962 suggest that the planned schedule was being followed, but there has been no announcement that the wage reform has been completed.

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\* The average number of workers and employees was 56.5 million in 1959, 62.0 million in 1960, and 66.0 million in 1961. 58/

#### IV. Evaluation of the Wage Reform

##### A. Introduction

The wage reform is evaluated in this section in terms of what the Soviet leadership expected the wage reform to accomplish and what it actually did accomplish. The wage reform, in most general terms, was designed to insure that each industrial enterprise was furnished the proper number and assortment of workers, given the productive assignment of the enterprise and its priority in the Soviet scheme of things. The demand for labor from this point of view is a "given" -- that is, the level of industrial output and construction has been set independent of wage issues, and the task of the wage system (and other controls) is to see that the supply of labor is distributed among the productive enterprises according to this demand. Thus the optimum distribution of labor refers to the appropriate distribution of labor among geographical areas, among industries, and among enterprises, given national economic priorities as embodied in the national economic plan.

A second task that the wage reform was addressed to was the elimination or at least the reduction of "bad practices" within industry, especially cases of excess pay for a standard amount of work or standard pay for a feeble work effort (featherbedding). In many cases, such inequities had arisen from the inability of management at all ranks to keep work norms in harmony with the rapidly changing technological conditions of work. The wage structure did not respond properly when new methods of production were introduced or when new machines replaced old. In addition, it was the hope of the Soviet leadership that the complete overhaul of the pay structure and work norms, together with the introduction of more systematic and up-to-date incentive provisions, would induce workers to increase output; improve job skills; and, in some cases, move to Siberia.

A third task that the wage reform was expected to accomplish was to hold the line on over-all wage expenditures. To avoid general rises in price, wage rates could advance only at a slow pace, a pace considerably slower than gains in productivity. The Soviet leadership presumably thought that central administration of wages must replace the varying degrees of autonomy enjoyed by ministries, sovnarkhozes, and enterprises in the administration of wages. Despite instances in which enterprises seemed to be inflating wage payments under various guises, it should be noted that the "wage push" was really not of alarming proportions at the time of the wage reform.

A detailed assessment of the success achieved in meeting these objectives is given in the sections that follow.

## B. Simplification of the Wage System

### 1. Consolidation of Wage Rates and Scales

A major factor contributing to the chaotic wage system before the wage reform was the lack of uniform job classification in the various ministries and departments. This lack was removed in 1958-60 with the introduction of a uniform job classification manual 64/ prepared by the Scientific Research Institute of Labor.\* The manual covered about 60 percent of all jobs in industry together with equivalent positions in other economic branches. 65/ Similar manuals were prepared for jobs specific to particular industries and branches of the economy and were coordinated with the basic manual. Thus enterprise managers were provided with uniform guidance in classifying and rating of jobs, and control and planning agencies were given a fixed standard against which to judge managerial actions.

As a step toward manageability of the wage system, the number of major wage scales (in the form of grade coefficients) for workers in industry and construction was reduced from about 2,000 to 12,\*\* 66/ thereby sharply reducing the possibilities for manipulation of wage rates by managers. A number of the newly established wage scales are presented in Table 2.\*\*\* A few branches of industry (such as coal and metallurgy) have unique scales, but most of the branches use six-grade scales similar to those of the machine building industry or the consumer goods industries (wage scale key numbers 11 and 12).

The wage reform also reduced the number of different wage rates for the first grade from several thousand to 40. An example of this simplification may be found in the Soviet machine building and metalworking industry, where more than 5 million wageworkers now are paid according to one wage scale with 12 separate rates for the first grade. Rates for the first grade (and therefore all subsequent grades) are differentiated according to conditions of work and type of production.† This arrangement contrasts sharply with the old system of more than 1,000 wage scales and 1,000 separate rates for the first grade in the machine building and metalworking industry.

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\* Nauchno-Issledovatel'skiy Institut Truda Gosudarstvennogo Komiteta Soveta Ministrov SSSR po Voprosam Truda i Zarabotnoy Platy -- Scientific Research Institute of Labor of the State Committee of the Council of Ministers, USSR, on Questions of Labor and Wages.

\*\* In addition to the major wage scale in each branch of industry, however, unique scales for special enterprises are used in a number of branches (see Appendix A).

\*\*\* Table 2 follows on p. 23.

† For the applicable rates for the first wage grade in each branch of industry, see Appendix A.

Table 2

USSR: Major Wage Scales in Construction and in Selected Industries a/ \*  
1960-61

Wage Scale Key Number	In Terms of Grade Coefficients									
	Wage Grades									
	I	II	III	IV	V	VI	VII	VIII	IX	X
Construction b/	1.00	1.156	1.328	1.525	1.756	2.00				
Coal mining c/ -- underground work	1.00	1.125	1.333	1.667	2.50	3.125	3.333	3.75		
-- surface work	1.00	1.121	1.33	1.58	1.88	2.237	2.67	3.20	3.684 d/	
Ferrous metallurgy e/										
Productive workers in metallurgical and tube shops	1.00	1.13	1.28	1.45	1.64	1.87	2.13	2.43	2.78	3.20
Workers in auxiliary shops and for both productive and auxiliary workers in subsidiary shops	1.00	1.15	1.32	1.52	1.77	2.06	2.40	2.80		
Workers in open-pit ore mining and in concentrating and agglomerating plants	1.00	1.121	1.33	1.58	1.88	2.237	2.67	3.20		
Nonferrous metallurgy f/										
Underground workers	1.00	1.186	1.41	1.68	2.00	2.38	2.86			
Workers in basic shops	1.00	1.17	1.37	1.60	1.88	2.21	2.60			
Workers in auxiliary shops	1.00	1.15	1.33	1.54	1.79	2.10	2.44			
Cement g/	1.00	1.15	1.32	1.52	1.77	2.06	2.40			
Reinforced concrete products h/	1.00	1.15	1.33	1.54	1.79	2.10	2.30			
Chemicals, i/ including synthetic leather j/	1.00	1.14	1.30	1.49	1.71	1.98	2.30			
Petroleum and gas, k/ underground work	1.00	1.08	1.26	1.47	1.74	2.05	2.42			

\* Footnotes for Table 2 follow on p. 24.

Table 2

USSR: Major Wage Scales in Construction and in Selected Industries a/  
1960-61  
(Continued)

Wage Scale Key Number	In Terms of Grade Coefficients									
	I	II	III	IV	V	VI	VII	VIII	IX	X
11	1.00	1.13	1.29	1.48	1.72	2.00				
12	1.00	1.11	1.25	1.41	1.59	1.80				

Machine building and metalworking, l/ petroleum and gas refineries, drilling, and exploration units, k/ construction materials other than cement and concrete products, m/ fishing n/ and timber, cellulose, and paper and woodwork- ing o/ Textiles, p/ sewing, q/ and bakery r/ and flour and feed milling s/

a. The scales represent the major scales used in each industrial branch. In a number of branches, other scales -- of seven, eight, or ten grades -- also are used (see Appendix A).

b. 67/  
c. 68/. Introduced in the Donbas and the L'vov-Volynsk Basin (1956-57); Aganbegyan and Mayer cite the 1959 extreme ratio as 1 to 3.3.  
d. Special grade for excavator operators.  
e. 69/. For a detailed discussion of new wage scales in ferrous metallurgy in comparison with those in other nations, see source 70/.

f. 71/  
g. 72/  
h. 73/  
i. 74/  
j. 75/  
k. 76/  
l. 77/  
m. 78/  
n. 79/  
o. 80/  
p. 81/  
q. 82/  
r. 83/  
s. 84/. Mechanical, repair, and service workers in all consumer goods industries are paid according to the scale for the machine building and metalworking industry (key number 11).

Wage rates for the first grade are influenced by the legal minimum wage, conditions of work, and national economic significance of the industry or branch of the economy. In general, the new grade I rates were established at 560 rubles per month in construction, 460 to 560 rubles in heavy industry, 450 to 540 rubles in important light and food industries, and 400 to 450 rubles -- the newly established minimum wages -- in other consumer goods industries. 85/ In addition, within each branch of industry, a number of grade I wage rates were established for differing work conditions, including a differential for pieceworkers generally 10 to 15 percent above the rate paid to time-workers and a set of differentials for work under "hot, heavy, and hazardous" conditions generally up to 15 percent above the rates for work under normal conditions and for work under "extremely hot, heavy, or hazardous conditions" up to 30 percent. 86/ Examples of these grade I wage rates, by industry and type of work, are presented in Table 3.\*

## 2. Shift in Emphasis from Progressive Piece Rates to Time Rates and Bonuses

Before the wage reform, 70 to 75 percent of all wageworkers in industry were compensated according to piece rates, with 35 to 40 percent of all wageworkers in industry paid on progressive piece rate schedules. 87/ After the wage reform on 31 March 1961, 63 percent of the wageworkers in industry were paid according to piece rates, with only 1 percent of all wageworkers in industry paid on progressive piece rate schedules.\*\* The wage reform, however, substantially increased the number of piece and time workers paid bonuses for the fulfillment of plant or shop goals.

The deemphasis of piece rate pay in favor of more time rates, the elimination of nearly all progressive piece rates, and the increased use of bonuses are shown by the data in Table 4.\*\*\* Although these data cover only the higher priority industries, the changes shown probably are representative of the shift that took place throughout industry and construction. Isolated references, such as the report that the share of textile wageworkers on piece rates declined from 84 to 67 percent of the total, 88/ support this view.†

Many factors apparently motivated Soviet leaders to de-emphasize the piece rate system. Under conditions of rapidly rising††

\* Table 3 follows on p. 26.

\*\* See Appendix A.

\*\*\* Table 4 follows on p. 27.

† See also Appendix A, which shows the distribution of wageworkers by system of payment in construction and in the various branches of industry as of 31 March 1961.

†† Text continued on p. 29.

Table 3

USSR: Base Wage Rates of Wagerworkers  
in Selected Branches of Industry a/  
1960-61

Branch of Industry	Type of Work	Grade I Wage Rate		Rubles
		As Reported	Monthly Approximation	
Oil industry b/				
At refineries and synthetic plants				
	Timeworkers under normal conditions	Rubles per day	17.90	460
	Timeworkers under heavy and harmful conditions	Rubles per day	20.30	520
	Timeworkers under especially heavy and harmful conditions	Rubles per day	24.30	620
	Pieceworkers under normal conditions	Rubles per day	20.30	520
	Pieceworkers under heavy and harmful conditions	Rubles per day	22.90	585
	Pieceworkers under especially heavy and harmful conditions	Rubles per day	26.90	690
At mines				
	Underground operations	Rubles per day	25.80	660
	At surface of mines	Rubles per day	21.90	560
Bakery industry c/				
In cities and workers' settlements				
	Under normal working conditions	Rubles per hour	2.56	450
	Under hot, heavy, and harmful conditions	Rubles per hour	2.86	500
In rural areas				
	All jobs	Rubles per hour	2.30	400

a. For a more complete listing of base wage rates in Soviet industry, see Appendix A.

b. 89/

c. 90/

Table 4

USSR: Distribution of Wages of Workers in Selected Industries, by System of Payment Before and After the Wage Reform a/ \*

	Piece Rates				Time Rates			Percent
	Total	Straight Piece Rates	Straight Rates Plus Bonuses	Progressive Piece Rates	Time Rates		Time Rates Plus Bonuses	
					Total	Straight Time Rates		
Coal mines b/								
Before	56.7	11.4		45.3	43.3	11.6	31.7	
After	48.8	2.4	46.4		51.2	6.2	45.0	
Ferrous metallurgy c/								
Before	69.6	16.7	8.4	44.5	30.4	1.8	28.6	
After	64.0	16.4	41.1	6.5	36.0	2.8	33.2	
Nonferrous metallurgy c/								
Before	62.5	30.5	5.3	26.7	37.5	14.0	23.5	
After	42.3	11.8	28.8	1.7	57.7	12.2	45.5	
Chemicals d/								
Before	58.6	32.2	11.4	15.0	41.4	4.1	37.3	
After	36.3	16.9	19.2	0.2	63.7	4.5	59.2	
Cement e/								
Before	79.3	40.3	10.5	28.5	20.7	18.0	2.7	
After	66.3	22.0	43.3	1.0	33.7	14.2	19.5	

\* Footnotes for Table 4 follow on p. 28.

Table 4

USSR: Distribution of Wageworkers in Selected Industries, by System of Payment Before and After the Wage Reform a/ (Continued)

	Piece Rates					Time Rates		Percent
	Total	Straight Piece Rates	Straight Rates Plus Bonuses	Progressive Piece Rates	Total	Time Rates		
						Straight Time Rates	Time Rates Plus Bonuses	
Reinforced concrete <u>c/</u>								
Before	82.6	60.9	1.4	20.3	17.4	9.2	8.2	
After	70.3	15.9	53.4	1.0	29.7	5.0	24.7	
Machine building and metalworking <u>c/</u>								
Before	67.0	3.0		64.0	33.0	4.0	29.0	
After	58.0	12.0	46.0		42.0	5.0	37.0	
Oil refining <u>f/</u>								
Before	63.0	N.A.	N.A.	N.A.	37.0	4.0	33.0	
After	12.0	N.A.	N.A.	N.A.	88.0	2.0	86.0	

a. 91/. For a complete series of post reform percentages (as of 31 March 1961), see Appendix A. Several additional sources 92/ give slightly different figures.

b. Before, as of 5 May 1954; After, as of 1 August 1959.

c. Dates for Before and After unspecified.

d. Before, as of 30 June 1958; After, as of 30 June 1959.

e. Before, as of 31 April 1958; After, as of 31 March 1959.

f. In the closely associated oil extraction industry, payment by time rates also grew -- from 44 to 77 percent of all wageworkers.

output due to technological improvements, piece rates and obsolete work norms resulted in excessive levels of earnings for piece workers. The problem was particularly pressing in those instances where progressive piece rates were used. Moreover, piece rates were becoming an obsolete form of pay in those instances where automated processes effectively fixed the pace of production. <sup>93/</sup> Consistent with the latter factor, there was a greater shift to time rates during the wage reform in industries characterized by flow production and a homogeneous product, such as chemicals and electric power, than in those characterized by batch production and a heterogeneous product, such as machine building and textiles.\* Soviet labor specialists have indicated the hope that piecework in industry will be reduced even more by the scheduled changes in wage rates during 1963-65. One source notes that piecework in the chemical industry will be limited to 20 to 25 percent of all wageworkers by 1965. <sup>94/</sup>

### 3. Introduction of Collective Piece Rates

In addition to reducing the proportion of workers on piece rates, the wage reform introduced a new piece rate system -- that of collective piece rates. This system, which ties individual earnings to the total output of the brigade, was instituted in activities requiring or conducive to teamwork, such as on the coal faces in mines, on construction sites, and on assembly line operations. The specialized brigade member -- such as the blasting specialist on a coal mining brigade who cannot work full-time at his assigned task -- thus is encouraged to perform work in addition to his specialty, thereby increasing the total earnings available for division among the members of the brigade. The share of total brigade earnings paid to each worker is proportional to his skill level and/or to other measures of his relative contribution to the product, thus maintaining both the desired relative wage differentials among brigade members and the incentives for personal improvements in skill levels.

Although few figures are available on the current extent of collective piece rates, the Soviet press has announced that collective piece rates have become the basic form of wages in mining, lumbering, construction, and many assembly line and complex machine groupings at particular manufacturing plants. <sup>95/</sup> Collective piece rates are reported to cover 70 percent of all underground workers in the Donbas coal mines, 65 percent of all workers employed in timber cutting, and an "absolute majority" of the production workers in the ferrous metallurgical industry. <sup>96/</sup>

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\* To some extent the observed shift represents the elimination of the previous use of "fictional" or meaningless piece rates, which were intended solely to make possible a particular level of earnings.

#### 4. Elimination of Longevity Payments

The longevity pay system -- intended initially for the encouragement of long service in high-priority industries -- apparently was regarded as unsuccessful largely because it gradually had spread to industries of low priority and to other sectors of the economy and because it did not motivate young workers to remain employed in the industries or enterprises that had provided them with on-the-job training.

The technique used by the State Committee for the gradual elimination of longevity benefits is indicative of the conservative approach that characterized the entire wage reform. On 1 March 1957, payment of longevity bonuses was abolished for workers in central and republican governmental organizations who were earning more than 800 rubles per month. In addition, the accumulation of new longevity bonuses was stopped for most other workers, although bonuses previously accumulated continued to be paid until the affected workers were transferred to the new wage system. Certain workers in crucial branches of industry such as coal, metallurgy, chemicals, petroleum, and timber work in the Far North and East continued to accumulate new bonuses for longevity until 1 July 1959. These favored workers still receive bonus payments for longevity accumulated up to that time, and underground workers still are permitted to accumulate bonuses for longevity, with a maximum annual payment equal to two times the monthly wage rate for 15 or more years of service. <sup>97/</sup> Longevity supplements are scheduled for review and probable elimination at the next regular review of the wage scales, <sup>98/</sup> presumably in 1963-65.

#### 5. New Bonuses for Wageworkers

The wage reform sharply increased the proportion of workers eligible for bonuses, as shown in Table 4.\* This increased emphasis on bonuses -- which are paid to each worker when group goals are met in contrast to supplementary piece rate pay that is based on overfulfillment of individual output norms -- reflects dissatisfaction with earlier attempts to translate final output plans for an enterprise, shop, or department into equivalent individual output norms. Many articles cite instances in which workers under progressive or straight piece rates received supplementary pay for overfulfillment of output norms even though the output plans for the plant, shop, or department were not met.

The new bonus system for wageworkers provides for the payment of bonuses for fulfillment and overfulfillment of the output plan of the enterprise, shop, or department as well as for improvements in quality and for savings of raw materials. Bonuses are established for

\* P. 27, above.

fulfillment of the monthly output plan of the enterprise, shop, or department and are paid to each worker in amounts equal to 10, 15, or 20 percent of the monthly wage rate depending on the branch of industry and the type of production. In addition, bonuses for overfulfillment of output plans are fixed at 1.0, 1.5, or 2.0 percent of monthly wage rates for each percent of overfulfillment. Bonuses for the improvement of quality -- widely used for workers in auxiliary shops not involved directly in the production process -- are established in amounts up to 30 percent of the monthly wage. Bonuses also may be paid for savings of raw and semifinished materials by the enterprise, shop, or department, but such bonuses may not exceed 40 percent of the savings. Finally, and of crucial importance to the control of the aggregate wage level, the sum of all bonuses may not exceed 30 or 40 percent of basic monthly wage rates -- depending on branch of industry and type of production. 99/ By limiting the sum of all bonuses to a fixed percentage of established wage rates, the State Committee reestablished the wage rate as the controlling factor in the level of total earnings.

#### 6. Increased Use of Technically Based Output Norms

Many of the norms used in industry before the wage reform were experience-statistical norms, which were based both on previous work experience and on work standards established on an ad hoc basis by foremen and norm setters. One of the objectives of the wage reform was to replace these experience-statistical norms with technically based norms, which are established on the basis of comprehensive examinations of machine speeds, productive reserves, advanced methods of production, and time and motion studies. 100/

Experience-statistical norms never provided an accurate foundation on which to build a satisfactory piece rate system, despite continued attempts to reform them. Annual revisions of these norms in January or February entailed a flat percentage increase in most norms, with little or no study of the specific requirements of each job. This procedure seriously affected the morale of the work force and contributed to labor turnover because many pieceworkers suffered reductions in earnings during the first few months of the year, even though productivity rose. Managers attempted to compensate for the effects of the annual norm revision on earnings by reserving organizational and technical improvements specifically for this period and by introducing new "fictional" and progressive piece rates. These actions often provided opportunities for increases in earnings in the latter part of the year that were greater than increases in productivity. 101/

The "mass" annual changeover to new norms was discontinued after 1 January 1957, and enterprise managers were ordered to determine output norms, in agreement with the appropriate trade union committees,

as an integral part of the annual technical, industrial, and financial plan of the enterprise. Changes in norms had to be justified by specific organizational and technical changes. 102/

The introduction of these new technically based norms, however, proceeded very slowly, as shown in Table 5.\* Proper norming was hampered by the lack of a standard system for calculating new norms and by the related failure to review and "correct" newly established norms. New norms, therefore, often were immediately overfulfilled with the resulting overexpenditures of the wage fund.

Despite the difficulty experienced in introducing technically based output norms, they continued to be pushed by Soviet officials. In April 1962, A.P. Volkov, Chairman of the State Committee, strongly expressed dissatisfaction with the norm system, which he claimed still leads to overfulfillment of output norms (by 70 percent in some instances) and to labor turnover 103/:

Some ... workers transfer to those enterprises where [output] norms are lower and where workers can provide themselves therefore with higher earnings. It is necessary to eliminate these deficiencies. Improvement of the organization and payment of labor is a decisive condition for overcoming labor turnover.

V.V. Grishin, Chairman of the Central Council of Trade Unions, also called for an increase in the number of technically based norms at the plenum of the All-Union Central Council of Trade Unions on 27 July 1962. 104/

#### 7. Changes in the Composition of Earnings

Before the wage reform, basic wage rates accounted for only about one-half of total earnings, ranging from 40 to 60 percent in the various industries. The remainder comprised supplements for above norm work, bonuses, longevity pay, and various other items. One of the objectives of the wage reform was to raise the relative share of basic wage payments in the total earnings of pieceworkers to 70 to 75 percent and of timeworkers to 80 to 85 percent. Considerable progress toward this objective by August 1960 was suggested by data reported for sovmarkhoz industry, as shown in Table 6,\*\* although the source did not make clear whether the data referred to all sovmarkhoz enterprises or merely to those that had shifted to the new wage system by that date.

\* Table 5 follows on p. 33.

\*\* Table 6 follows on p. 34.

Table 5

USSR: Proportion of Pieceworkers in Selected Industries on Technically Based Output Norms During the Period of the Wage Reform a/

Branch of Industry	Beginning 1956 b/	Date				Percent of Total
		1 April 1959	31 December 1959	1 April 1960	31 December 1960	
Coal mining c/	72	73		79		86
Ferrous metallurgy	77	70		74		93
Nonferrous metallurgy		58		64		
Oil refining		58		69		
Chemicals			55		67	
Electrical and thermal energy		30	27	40	41	46
Machine building and metalworking						
Heavy machine building	51					
Machine tool building and tools	20					
Transport machinery	47					
Motor vehicles	42					
Instrument building	16					
Construction materials			66		77	
Paper			49	72	56	
Textiles			46		64	
Sewing			16		63	
Leather, fur, and footwear			14		50	
Dairy products			36		59	
Fish			27		49	
Bakeries			35		55	

a. 105/. Exact coverage of each industry is unspecified in the original sources. Figures, therefore, are representative only of general trends.

b. Exact date of earliest recorded percentage unknown -- reported only as "before" the wage reform. These data probably cover only enterprises in the pre-1957 Ministries.

c. Majority of enterprises probably transferred to new wage conditions before earliest recorded percentage above.

Table 6

USSR: Relative Share of Basic Wage Payments  
in the Total Earnings of Wageworkers in Sovnarkhoz Industry a/  
as of 1 August 1960

Branch of Industry	Basic Wage Payment as a Percent of Total Earnings
All sovnarkhoz industry	75.2
Ferrous metallurgy	70.1
Nonferrous metallurgy	69.5
Fuel	69.2
Electrical and thermal energy	69.4
Machine building and metalworking	79.3
Chemicals	71.8
Timber, paper, and woodworking	74.9
Construction materials	83.3
Light industry	77.6
Food industry	78.8

a. 106/. Data refer to all workers whether timeworkers or pieceworkers.

The transfer of the meat processing industry to the new wage system provides an example of the merging of all forms of pay into the new wage rates (see Table 7\*). The old rates and supplements for six jobs in this industry roughly add up to the new wage rates. The higher earnings possible under the new system depend largely on meeting and overfulfilling output plans so as to qualify for bonuses. On four of the six jobs, earnings according to the new system would be equal to or less than previous earnings if bonuses were not earned.

The hypothesis suggested by these data that the new wage rates and bonus provisions represent largely an institutionalization of existing earnings levels among wageworkers is consistent with the Soviet objective of reestablishing workable and controlled incentives in the wage system. The institutionalization of the existing level of earnings made central administration of the wage system more feasible, and the rationalization of work norms (where carried out) made incentives for fulfilling output goals more uniform and effective. Work incentives

\* Table 7 follows on p. 35.

Table 7

USSR: Effect of Changes in Wage Rates and Output Norms  
on the Composition of Earnings for Selected Jobs in the Meat Industry a/

Job Title	Wage System	Hourly Wage Rate	Norm Fulfillment (Percent)	Base Wage Rate	Composition of Earnings					Total Gross Monthly Earnings
					Payment for Overfulfillment of Norms		Plus Additional Pay Under Progressive Piece Rates	Bonuses b/	Other Additions	
					Additional Pay at Straight Rates	Additional Pay				
Cutter	Old	1.25	205 (actual)	219.80	230.79	143.97	141.31	60.75	655.31	
	New	3.25	105 (assumed) c/	565.25	28.27				734.83	
Skinner	Old	1.44	177 (actual)	252.87	194.70	121.94	159.25	23.50	593.01	
	New	3.64	105 (assumed) c/	637.00	31.85				828.10	
Apparatus operator in fats division (grade IV)	Old	1.44	245 (actual)	252.87	366.66		159.25	23.50	643.03	
	New	3.64	105 (assumed) c/	637.00	31.85				828.10	
Apparatus operator in fats division (grade V)	Old	1.73	245 (actual)	303.80	440.51		179.38		779.03 d/	
	New	4.10	105 (assumed) c/	717.50	35.87				932.75	
Breeder	Old	1.73	158 (actual)	303.80	265.95	205.90	42.07		817.72	
	New	4.10	105 (assumed) c/	717.50	35.87		179.38		932.75	
Curer	Old	2.08	178 (actual)	364.00	286.00		67.50		717.50	
	New	4.64	105 (assumed) c/	812.00	40.60		162.40		1,015.00	

a. 107/

b. Paid to workers for the overfulfillment of plant or shop output plans rather than for individual output norms.

c. The low overfulfillment of output norms assumed in the original source reflects substantial increases in output norms.

d. As reported in the source the components do not add to the total shown.

under the new wage system were simplified considerably in contrast to those of the old system that had become blurred through "unjustified" additions to basic wages; longevity bonuses; and manipulation of rates, job categories, and work norms. Although previous earnings levels for most jobs were institutionalized, the relative position of some jobs was raised or lowered, as seen in the example above of the wage changes in the meat industry. Moreover, the standardization of wage rates over broad industrial categories probably led to reductions in earnings for some workers and increases for others. Over the period of the wage reform as a whole, increases in absolute earnings considerably outnumbered decreases because average earnings were steadily increasing. Further evidence on the degree of institutionalization of the old level of wages is present below in the sections on minimum wages and skill differentials.

### C. Minimum Wages

Minimum wage levels were raised twice during the period of the wage reform. The first increase to new levels of 270 to 350 rubles per month took place at all enterprises during 1957, and the second increase to 400 to 450 rubles per month became effective as each enterprise transferred to the new wage scales during 1959-62.

In January 1957, minimum wages were established at 270 and 300 rubles per month, respectively, in rural areas and in cities and workers' settlements and at 300 to 350 rubles per month in industry, construction, transportation, and communications (exclusive of junior service personnel). 108/ Wherever the established wage rate was below the newly established minimum wage for the relevant area, a supplement was paid to the affected worker to raise his basic wage rate to the new level of minimum wages. In granting these supplements, no attention was given to actual levels of earnings even though most wageworkers were receiving other supplementary wages ranging from 50 to 100 percent of their basic monthly wage rates.\* 110/ Thus, after the 1957 change in minimum wages, a grade III wageworker with a monthly wage rate of 240 rubles per month\*\* -- a representative rate for unskilled workers in low-paying industrial establishments -- easily could earn 420 to 540 rubles per month, inclusive of a supplement of 60 rubles to raise basic wages to the established minimum wage levels.

\* See Kapustin's comment on this aspect of the 1957 increase in minimum wages. 109/

\*\* As shown in Table 9, p. 39, below, the actual and therefore representative grade occupied by most unskilled workers before the wage reform was grade III. After the reform, grade I was reestablished in most branches of industry and of the economy as the appropriate grade for this category of workers.

When the higher minimum wages of 400 and 450 rubles were put into effect from 1959 through 1962, no supplements were paid. Instead, the new minimum wages became the new grade I wage rates at low-priority enterprises in rural and urban areas, respectively. Because most unskilled wageworkers in the "productive" branches of the economy already had levels of earnings equal to or larger than the new minimum wages, the new minimums represented for them a change in the form of wage payment but not an increase in earnings. The higher minimum wages probably raised earnings for those persons employed as junior service personnel, apprentices, and clerical workers who were receiving only small supplements to their basic wages. The total number of workers who realized substantial increases in earnings from the increase in minimum wages, however, was a small part of the total work force. In industry, for example, the total number of junior service personnel, apprentices, and clerical workers represented only 7.7 percent of all industrial production personnel in 1960, 111/ and some persons in these categories had wage rates that were higher than the new minimums or were receiving bonuses and other wage supplements.

#### D. Skill Differentials

Skill differentials as represented by the differences between the grades in Table 2\* were standardized to a considerable extent simply by the reduction in the number of wage scales mentioned above. Soviet economists claim further, however, that skill differentials were sharply reduced -- one of the goals of the wage reform. They point out that the extreme ratios now are primarily 1 to 2.0 and 1 to 1.8 in contrast to the previous ratios of between 1 to 2.4 and 1 to 3.8, as shown in Table 8.\*\* They argue that the reduction in these ratios was made possible by the growing average skill level of the work force and of the relative increase in the number of Soviet skilled workers.

An American economist, Walter Galenson, has demonstrated that these Soviet comparisons are spurious. 112/ No sharp reduction in differentials actually took place, because there were almost no wageworkers in the first two grades of the earlier wage scales.

Examination of the available old and new wage scales suggests that the new extreme ratios in the various industries roughly approximate the "effective" extreme ratios of the old system. Not only were the "effective" extreme ratios relatively unchanged by the wage reform, but the distribution of workers by "effective" wage grades also was not altered significantly, as shown in Table 9.\*\*\* The proportion of†

\* P. 23, above.

\*\* Table 8 follows on p. 38.

\*\*\* Table 9 follows on p. 39.

† Text continued on p. 43.

Table 8

USSR: Wage Rate Differentials Before and After the Wage Reform  
in Selected Branches of Industry a/

<u>Branch of Industry</u>	<u>Ratio of Highest to Lowest Grade</u>		
	<u>Old System</u>		<u>New System</u>
	<u>Extreme Ratios Established in 1931-33</u>	<u>Extreme Ratios Immediately Prior to the Wage Adjustment</u>	<u>Extreme Ratios</u>
Coal	1: 4.4	1: 3.8	1: 3.3
Oil	1: 3.6	1: 2.6	1: 2.0
Ore mining	1: 3.6	1: 2.8	1: 2.8
Machine building	1: 3.6	1: 2.5	1: 2.0
Leather	1: 3.0	1: 2.6	1: 2.0
Sewing	N.A.	1: 2.4	1: 1.8
Glass	N.A.	1: 2.6	1: 2.0

a. 113/

Table 9

USSR: Distribution of Wages, by Wage Grade, in Selected Industries Before and After the Wage Reform a/ \*

Branch of Industry and Type of Wage Scale	Wage Grade												Percent			
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII				
Oil extraction industry (10 enterprises for September 1959 and September 1960)	0.2	1.5	16.7	23.5	26.0	20.6	10.3	1.2								
Before: Eight-grade scale	11.2	32.9	29.6	19.8	6.2	0.3										
After: Six-grade scale																
Machine building and metalworking industry (417 enterprises for December 1959 and December 1960)																
Before	None	None	None	None	None	None	27.6	29.9	24.1	14.9	None	None	3.5			
Twelve-grade scale	1.0	2.5	17.9	24.3	26.1	17.1	10.3	0.8	None	None	None	None				
Ten-grade scale	0.2	1.9	24.6	25.6	21.7	15.6	8.0	2.4	None	None	None	None				
Eight-grade scale b/	0.6	3.6	26.6	25.9	21.6	14.2	7.5									
Seven-grade scale	9.9	13.6	27.8	24.7	16.9	7.1										
Six-grade scale																
After c/																
Ten-grade scale	None	None	6.0	16.1	36.2	22.9	12.4	6.4	None	None	None	None				
Eight-grade scale	6.1	5.6	27.8	26.0	12.5	10.7	7.7	3.6								
Seven-grade scale	17.8	21.6	24.8	21.9	10.7	2.5	0.7									
Six-grade scale b/	22.1	30.0	24.8	15.0	6.6	1.5										

\* Footnotes for Table 9 follow on p. 42.

Table 9

USSR: Distribution of Wogeworkers, by Wage Grade, in Selected Industries Before and After the Wage Reform a/ (Continued)

Branch of Industry and Type of Wage Scale	Wage Grade												Percent
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
Textile industry (426 enterprises from December 1959 to December 1960)													
Before													
Twelve-grade scale	0.6	2.4	4.1	10.2	16.4	27.2	19.9	13.1	4.1	2.0	None	None	
Ten-grade scale	0.3	3.0	4.0	11.7	12.6	26.6	28.0	11.3	2.5	None			
Eight-grade scale b/	0.5	2.6	9.4	18.6	23.8	21.5	14.3	9.3					
Seven-grade scale	0.6	3.9	18.0	26.3	25.3	16.0	9.9						
Six-grade scale	None	2.4	28.2	33.0	26.3	10.1							
After													
Eight-grade scale	None	0.5	18.8	21.0	50.3	5.9	2.9	0.6					
Seven-grade scale	4.6	21.5	57.0	9.2	7.7	None	None						
Six-grade scale b/	4.8	14.7	32.3	25.7	19.4	3.1							
Dairy industry (for 986 enterprises from December 1959 to December 1960)													
Before													
Eight-grade scale b/	1.2	3.8	27.0	22.1	20.5	13.6	9.3	2.5					
Seven-grade scale	0.8	5.3	28.8	28.7	19.1	11.3	6.0						
Six-grade scale	2.8	8.5	37.1	24.3	17.1	10.2							
Five-grade scale	0.3	3.9	48.5	23.9	23.4								

Table 9

USSR: Distribution of Wages, by Wage Grade, in Selected Industries Before and After the Wage Reform a/ (Continued)

Branch of Industry and Type of Wage Scale	Wage Grade												Percent
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
Dairy industry (for 986 enterprises from December 1959 to December 1960) (Continued)													
After													
Eight-grade scale	27.2	27.2	15.2	5.6	8.0	12.8	2.4	1.6					
Seven-grade scale	5.5	16.7	43.3	25.8	7.1	1.6	None						
Six-grade scale b/	7.3	22.1	35.5	22.6	10.0	2.5							
Chemical industry (134 chemical enterprises on 30 June 1958 and 30 June 1959)													
Before d/													
Twelve-grade scale	None	0.4	10.3	19.9	22.5	23.8	14.8	2.7	2.1	1.7	1.5	0.3	
Seven-grade scale b/	None	0.5	12.9	24.5	26.2	24.2	11.7						
After													
Seven-grade scale b/	1.6	8.3	22.6	29.0	25.8	10.4	2.3						
Cement industry (data from 30 March 1958 and 31 March 1959)													
Before													
All wageworkers	0.3	0.7	8.1	24.3	32.0	18.0	12.6	4.0					
Basic shops	0.2	0.8	5.8	26.7	31.6	18.3	12.3	4.3					
Auxiliary shops	0.5	0.7	11.3	20.9	32.6	17.5	12.8	3.7					

Table 9

USSR: Distribution of Wagerworkers, by Wage Grade, in Selected Industries  
Before and After the Wage Reform a/  
(Continued)

Branch of Industry and Type of Wage Scale	Wage Grade												Percent	
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII		
Cement industry (data from 30 March 1958 and 31 March 1959) (Continued)														
After														
All waggerworkers	1.5	10.5	24.8	28.8	20.6	10.4	3.3	0.1 e/ 0.1 e/ 0.2 e/						
Basic shops	1.5	10.4	27.3	29.3	19.2	9.4	2.8							
Auxiliary shops	1.5	10.8	20.6	27.8	22.9	12.2	4.0							

a. 114/. For the distribution of waggerworkers by grades in construction and by branch of industry as of 31 March 1961, see also Appendix A.  
b. Most widespread wage scale.  
c. The new seven-, eight-, and ten-grade scales represent either special extensions of the basic six-grade scale or are limited to particular plants with special wage and employment characteristics. The wage rates applicable to these ten-, eight-, and seven-grade scales are not available.  
d. Before the wage reform an eight- and ten-grade scale was also used at various enterprises and sections of the chemical industry in addition to the seven- and twelve-grade scales.  
e. Exceptional categories carried over from the old eight-grade system.

wageworkers now assigned to the first two grades of the new scales in each branch of industry is similar to the proportion of workers previously assigned to the third and fourth grades of the old scales. A similar relationship is evident in the higher grades. Moreover, the number of grades generally has been reduced from eight to six.

The Soviet claim appears valid only when viewed from 1931-33 to the present. In examining the period between major wage reforms, 1934 to 1956, a Soviet economist, M. Mozhina, found that earnings differentials among wageworkers by skills had widened, although the relative number of skilled workers had increased rapidly. <sup>115/</sup> Mozhina notes, however, that a change to narrower differentials began during the 1946-56 period, when the growth of earnings among low-paid wageworkers exceeded that of the higher paid workers. Mozhina's data also show that during the first 3 years of the wage reform (1956-59) earnings differentials among industrial wageworkers were reduced slightly (quartile coefficients declined from 3.38 to 3.28). These data suggest that Soviet economists are seeking a gradual reduction in skill differentials -- an action that would reflect the improved relative availabilities of skilled workers in contrast to the early 1930's.

#### E. Industry Differentials

The new grade I wage rates vary according to the "national economic significance" of each economic sector or branch of industry. As noted above, grade I wage rates were set by the wage reform at 560 rubles per month in construction, 460 to 560 rubles in heavy industry (exclusive of mining operations), 450 to 540 rubles in important light and food industries, and 400 to 450 rubles in other consumer goods industries. <sup>116/</sup> However, actual pay differentials by branch of industry or by branch of the economy -- measured in Soviet publications as the difference in average money earnings in the various branches -- reflect other factors as well as "national economic significance." They include urban-rural differentials\* and differences in working conditions, in the mix of workers' skills, in the regional distribution of enterprises, and in the size of bonuses and other pay supplements.

Basic industrial differentials are justified in Soviet economic publications in terms of the ideological doctrine of the "primacy of heavy industry." These wage differences are considered necessary to assure high-priority economic sectors and high-priority branches of

\* In a sense the urban-rural differential also is a differential which reflects "national economic significance" in that it reflects an evaluation of the relative value to the state of work in the urban and rural areas and is related to the historical treatment of the peasants or collective farmers and the rural areas generally as residual claimants on the national income.

industry with adequate supplies of labor. 117/ Presumably the differences also enable high-priority branches to recruit the best qualified and most energetic workers from each skill category. Because of the poor control of expenditures for labor, however, the special advantage in the purchase of labor services has contributed in the past as much to a buildup of redundant labor at the various priority enterprises as to the recruitment of the best workers, as seen during the changeover to the shorter workweek in 1959 and 1960.\*

Some prominent Soviet economists have suggested that the basic industrial differentials should be eliminated and that a single unified wage system should be established. These economists argue that all branches of industry and the economy would be supplied with adequate labor in the absence of special industrial differentials if the various skill, regional, and other differentials are correctly set. These economists assert that movement in this direction -- without reducing wages in the high-priority industries -- should be made in 1963-65 when wages are scheduled for further revision. 118/

Average pay differentials by branch of industry from 1928 through 1959 moved toward relatively higher pay for heavy industry (see Table 10\*\*). These data, however, do not permit a measure of the effect of the wage adjustment, because only part of industry had been transferred to the new wage schedules by the end of 1959. The available information on the increase in average earnings by branch of industry since 1956 does not show a consistent pattern of increasing or decreasing differentials among industrial branches. Soviet sources state that average earnings of wageworkers increased from 1956 to 1959 by 26 percent in the coal industry, 14 percent in ferrous metallurgy, 21 percent in nonferrous metallurgy, and 13 percent in chemicals 119/ and that earnings were scheduled to increase by 13.5 percent in light industry, 20 percent in food, and 12.3 percent in construction in 1960 (presumably also in comparison with 1956). 120/ One source noted, however, that the wage adjustment increased earnings of all workers and employees in industry and construction by 10 percent (base year unspecified) but that the increase for food and light industries was relatively larger (21 percent for wageworkers in the food industry), thus implying some narrowing of the gap between earnings in these industries and average industrial earnings. 122/

#### F. Regional Differentials

The replacement of the many and varied ministerial wage systems by a single system of regional wage differentials is one of the most

\* See p. 53, below.

\*\* Table 10 follows on p. 45.

Table 10

USSR: Earnings Differentials of Wagesworkers, by Branch of Industry <sup>a/</sup>  
Selected Years, 1928-59

	All Industry = 100						
	<u>1928 b/</u>	<u>1935 b/</u>	<u>1940 c/</u>	<u>1950</u>	<u>1956</u>	<u>1959</u>	
All industry	100.0	100.0	100.0	100.0	100.0	100.0	
Electric power	124.5	117.0	100.1	101.7	99.1	N.A.	
Coal	90.0	114.9	121.6	170.1	162.1	182.7	
Petroleum	111.7	120.5	108.5	120.3 <sup>e/</sup>	78.3	103.9	
Peat	N.A.	N.A.	N.A.	70.4		N.A.	
Ferrous metallurgy (including ore mining)	106.0	112.5	109.8	136.9	129.3	128.9	
Nonferrous metallurgy	N.A.	N.A.	112.7	N.A.	144.0	N.A.	
Machine building and metalworking	130.0	115.8	N.A.	108.0 <sup>e/</sup>	101.0	99.8	
Chemicals	116.9	104.0	104.9	101.0	101.0	92.7	
Extraction of nonmetallic minerals	N.A.	N.A.	N.A.	124.0	113.3	N.A.	
Construction materials	N.A.	N.A.	86.0 <sup>d/</sup>	88.4	89.5	N.A.	
Glass, china, and pottery	N.A.	N.A.	N.A.	87.7	90.4	N.A.	
Logging and woodworking	N.A.	N.A.	87.9 <sup>e/</sup>	84.8	93.7	N.A.	
Woodworking	86.8	86.7	N.A.	81.5	84.0	85.7	
Paper	95.4	83.6	77.8	104.5	107.0	102.7	
Textiles	82.2	83.0	79.9	85.4	83.5	78.8	
Light industry	N.A.	N.A.	78.3	N.A.	78.0	N.A.	
Leather, fur, and footwear	122.4	88.0	N.A.	78.4	84.3	82.9	
Sewing	113.6	78.4	N.A.	68.6	N.A.	65.8	
Food	96.9	77.4	77.0	72.7	75.0	73.8	
Printing	128.6	100.7	N.A.	95.8	86.5	N.A.	

a. <sup>121/</sup> Moshina reports for petroleum, 117.5 in 1950 and 111.0 in 1956; and for machine building and metalworking, 105.8 for 1950 and 104.1 for 1956.

b. Data refer only to large-scale industry.

c. Data refer only to plants of ministerial subordination.

d. Union republic industry only.

e. Logging only.

impressive accomplishments of the reform. The new differentials are fixed in part to compensate all workers in a hardship region uniformly for differences in the cost of consumer goods among regions; for differences in the clothing, heating, and food requirements of the various climatic zones; and for the relative scarcity of free or partly free housing and social services in the remote regions. The size of the adjustment in money wages for each of these factors was determined by detailed studies of price levels and of the economic and physiological needs of persons in the various regions. <sup>123/</sup> The resulting regional differentials are expressed in the following coefficients:

<u>Zone</u>	<u>Location</u>	<u>Regional Coefficient</u>
I	Central, southern, and western rayons of the European USSR	1.00
II	Specific rayons of the Urals, Southwest Siberia, Kazakhstan, and Central Asia	1.10 to 1.20
III	Remote rayons of European Far North, Southeast Siberia, and the Far East	1.20 to 1.30
IV	Northern and remote rayons (including Murmanskaya Oblast) and the central rayons of Siberia and the Far East	1.30 to 1.50
V	Far North (excluding Murmanskaya Oblast)	1.50 to 1.70

The new system of regional coefficients is supplemented by a second set of coefficients based on altitude and hardship. Regional coefficients may be increased by up to 15 percent at enterprises located 1,500 to 2,000 meters above sea level, up to 30 percent for those at 2,000 to 3,000 meters, and up to 40 percent for those above 3,000 meters (8,840 feet). Regional coefficients also may be increased from 10 to 40 percent for enterprises located in desert or arid regions. The specific increase in each case, however, is set by the appropriate sovnaarkhoz, ministry, department, or Council of Ministers of the union republic with the agreement of the State Committee on Labor and Wages. <sup>124/</sup>

The regional differentials are intended also to provide an inducement for migration as well as to compensate for economic and physical differences in the more remote areas.\* The size of the "migration differential" alone cannot be determined from existing information. The explicit recognition of the need for an additional inducement to migration is an implicit recognition of the need to compensate migrants for losses

\* The new regional wage differentials do not affect the system of travel grants and longevity pay for persons working in the Far North and equivalent regions, which also are intended to encourage permanent residence in these regions.

in the area of subjective values, including family ties, familiar surroundings, and the more "Western" social atmosphere of the European USSR.

The new system of regional differentials appears to be well structured, but it is becoming increasingly apparent to Soviet economists that regional differentials alone probably will not produce the desired level of permanent settlement in remote areas. Many recent articles stress that regional labor turnover remains high. At least two Soviet economists\* trace this high turnover primarily to lack of adequate housing and social services. 125/ Extra income may serve to compensate for deficiencies in housing and social services in the recruitment of short-term contract workers who are willing to undergo hardships temporarily for the sake of accumulating a stake, but the same compensation is less meaningful for permanent workers who face the prospect of long-term deprivation of housing and social services. In addition, high incomes coupled with inadequate housing and social services may induce some persons who initially intended to settle permanently in the remote regions to give up their plans and return, with their money hoards, to the more "civilized" regions.

Inadequate housing and social services also play a role even in those instances where graduates of higher and secondary educational establishments and vocational-technical schools are assigned to work in remote regions. The student trainee, who often leaves his initial job assignment at the end of his compulsory tour of 2, 3, or 4 years, 126/ has contributed to the problem of high labor turnover.

Although the new system of regional differentials appears to consider most of the relevant factors, it is not likely to induce the desired level of permanent settlement as long as housing and social services in the remote regions are inadequate.

#### G. Differentials for "Hot, Heavy, and Hazardous" Work

Soviet economists generally note that the pay rates for "hot, heavy, and hazardous" work are fixed at 15 percent above the pay rates for work under normal conditions and for "extremely hot, heavy, and hazardous" work at 30 percent. 127/ Actual differentials often are less. Wage rates for pieceworkers in "hot, heavy, and hazardous" work in the machine building and metalworking industry are approximately 15 percent above the rates for pieceworkers under normal work conditions,

\* One of these economists, V.I. Perevedentsev, observes that the total outflow of persons from Siberia during 1956-60 exceeded the number of new arrivals in that region, including more than 700,000 persons formally recruited for work in Siberia through the organized recruitment system.

but the same comparison in the paper industry reveals a differential of 13 percent; in the textile industry (Group II), 9 percent; and the sewing industry (Group II), 8 percent. A similar difference in the size of differentials among industries exists in the differentials for "extremely hot, heavy, and hazardous" work.\* These differences among industries may represent an attempt to reflect differences in conditions of work, an institutionalization of existing earnings differentials, or a pattern of industrial priorities similar to the basic industrial differentials mentioned above.

Differentials for "hot, heavy, and hazardous" work, however, purportedly are based on differences in "physiological needs" (food consumption requirements of persons engaged in different types of work). These needs have been measured recently by the Institute of Nutrition of the Soviet Academy of Medical Sciences as part of a larger program to establish "scientific consumption norms." 128/ The various relative needs have been established as follows 129/:

1. For persons not employed in physical labor, for persons not working, and for pensioners	0.90
2. For persons employed in mechanized labor or light physical labor (such as lathe operators, fitters, electricians, drivers, tractor operators, and milkmaids)	1.00
3. For persons employed in nonmechanized labor (such as carpenters, joiners, stokers, blacksmiths, and painters)	1.15
4. Persons engaged in heavy physical labor (such as stevedores and miners)	1.30

If the differentials established for each branch of industry actually represent only these differences in physiological requirements, they may be too small to attract sufficient numbers of workers into such labor relative to alternative work. Little attention has been given to the psychological as against the physiological needs of the human organism, and no obvious effort has been made to compensate for the usual distaste for "hot, heavy, and hazardous" labor.

\* See Appendix A.

One Soviet economist, Ye. Kapustin, has indicated an awareness of the importance of psychological factors. His remarks, however, did not refer to the present system of differentials for "hot and heavy" work but were addressed instead to the possibility that the future growth of opportunities for comparatively pleasant work on automated lines and in automated shops will require the establishment of relatively larger differentials for work in casting, forging, and "hot and heavy" shops. 130/ Although Kapustin, a deputy director of the Scientific Research Institute of Labor of the State Committee on Labor and Wages, is an influential economist, his views on psychological factors are not reflected in the current wage reform. Because the ideology of Soviet economics rejects "subjective value" as a concept of "bourgeois economics," Kapustin's ideas may not be accepted for future application unless he clothes them in orthodox Marxist terminology.

#### H. Control of Wage Fund Expenditures

Beginning in late 1954 and continuing through the wage reform, a series of changes was made in the procedures for direct control of wage expenditures with the intent of strengthening the power of financial authorities over enterprise managers, of increasing the cost consciousness of managers, and of eliminating overexpenditure of the wage fund.\* A decree of 21 August 1954 required that enterprises henceforth repay wage fund overexpenditures within a period of 3 to 5 months. 131/ On 9 August 1955, enterprise managers were granted the right to draw on wage savings made in preceding quarters for the payment of wages in subsequent quarters of the same year. 132/ Thus managers were permitted to cover extraordinary wage expenses in the latter part of the year with wage savings made during the earlier quarters. Although these two decrees increased supervision over wage funds, permitted managers to adjust to varying wage needs during the year, and presumably improved wage planning, complaints of overexpenditure of wage funds persisted throughout the 1954-60 period. 133/

Two additional controls were introduced in 1959. In early 1959 the State Committee on Labor and Wages established a list of high-level people in industry who could not be paid bonuses for plan fulfillment if the wage fund was overexpended for that period. In late 1959, control was further tightened by the decree on new bonuses for Soviet managers, engineering-technical workers, and clerical workers in industry,

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\* The term overexpenditure of the wage fund refers to an increase in the proportion of labor costs in the total costs of production above the planned proportion. Therefore, overexpenditure is a relative rather than an absolute measure. It does not refer to the overexpenditure of a fixed ruble amount.

construction, transportation, communications, and state agriculture. <sup>134/</sup> This decree, which made cost reduction the major criterion for the awarding of bonuses -- providing that output plans were met -- specified further that bonuses would not be paid to managers, engineering-technical workers, or clerical workers for the designated time period if the wage fund during that period was overexpended at the shop or enterprise level. The regulation further stipulated that bonuses would not be paid in succeeding periods to those managers and engineering-technical workers designated by the State Committee as responsible for the wage fund until the overexpenditures of the preceding periods were repaid. <sup>135/</sup> These two additional controls seem to have taken hold only to a very small degree, for few managers have been able to qualify for bonuses under these provisions.

Thus the wage reform attempted to strengthen control of the wage fund and the aggregate wage level. This objective frequently is discussed by Soviet writers in terms of the need to equalize the wage fund and the consumption fund, the desirability of holding the growth of money wages to some specified fraction of the increase in productivity, and the need for money wages per worker to grow secularly at a slower rate than the growth of "free" social services per worker in order to effect the gradual shift from the socialist form of distribution -- "to each according to his work" -- to a more Communist form of distribution -- "to each according to his needs."

The object of this increased control over wage expenditures is clear. If the growth of money earnings can be held to some fraction of the growth in productivity, the share of the total output available for government distribution will increase, and these resources may be used for priority national objectives -- increased investment, space exploration, military expenditures, and "free" social services -- without resorting to rationing, freezing of savings, and other direct controls. Although controlling the growth of money earnings is only one of the possible ways of financing increases in the relative level of state expenditures, it currently is preferred to other procedures, such as raising income taxes or sales taxes or prices of consumer goods.

Although it probably is too soon after the introduction of the new financial controls to expect a full evaluation of their effectiveness, Soviet publications give some preliminary evidence of unsatisfactory performance. An editorial in the July 1962 issue of Finansy SSSR cited a number of sovnarkhozes -- Kemerovsk, Krasnoyarsk, Perm', and Karaganda -- in which profit plans in industry had not been met for several years because of deficiencies in labor and wage planning that permitted average earnings to increase faster than productivity. The editorial called for tighter supervision over wage and productivity planning.

In addition, two Soviet economists, I.A. Orlovskiy and G.P. Sergeyeva, have suggested that the planning system as presently constituted works against the long-run effectiveness of the financial controls because the wage levels actually achieved in any one year -- whether or not consistent with wage plans -- become the basis of the wage plans for the following year. 136/ Furthermore, wage and other plans can be and have been revised in the past during the annual plan period when managers can show that changes are required to fulfill production goals.\*

#### I. Cost of the Wage Reform

The benefits received from the wage reform -- a more manageable wage system, more effective incentives, and the like -- presumably were not without cost. Average annual money earnings of workers and employees from 1956 through 1962 (shown below) increased slightly more than the rate of 2 to 3 percent that had prevailed since 1947:

<u>Year</u>	<u>Approximate Percentage Increase in Average Money Earnings Above the Previous Year <u>138/</u></u>
1956	3
1957	3
1958	2
1959	2
1960	3**
1961	4
1962	3.5

Perhaps a more significant cost might be found in the foregone output implicit in the shorter workweek, if it can be assumed that the desired

\* See David Granick's discussion of the relative influence of priority output goals as against the influence of financial and cost considerations on Soviet planning and managerial behavior. 137/

\*\* 139/. Estimated on the basis of a reported increase of 5 percent in real income, a reported increase of 6.5 percent in social consumption, a 3-to-1 weighting of money earnings and social consumption in the average income of workers and employees, and an assumed decline in the price level of 1 percent --  $X (.75) + 106.5 (.25) = 105 (.99)$

$$X = 103.1$$

changes in the wage system could not have been made without the grant of more leisure.\*

Annual data on productivity, as shown in Table 11,\*\* provide some indication of the costs implicit in the wage and hours program. Planned output goals in industry were exceeded each year from 1959 through 1962, but this achievement in 1960 and 1961 was made possible only by an unusually large increase in employment, which compensated for an underfulfillment of productivity goals in those years. A similar underfulfillment of productivity goals occurred in construction in 1961 and 1962 as follows:

Labor Productivity in Construction (Output per Person -- Percentage Increase Above the Previous Year)***		
<u>Year</u>	<u>Planned</u>	<u>Actual</u>
1959	N.A.	9.2 <u>140/</u>
1960	7.0 <u>141/</u>	8.5 <u>142/</u>
1961	7.4 <u>143/</u>	3.5 <u>144/</u>
1962	6.8 <u>145/</u>	6.5 <u>146/</u>
1963	6.9 <u>147/</u>	

Plan fulfillment reports, therefore, suggest that productivity plans in industry and construction generally were met during the period of transfer but fell far short immediately thereafter.† An explanation in industry may be found in the timing of the reduction in hours and in the distribution of internal reserves.

\* If it is assumed that the shorter workweek was introduced for other reasons, such as ideological, then the foregone output could be regarded only as a cost of the hours reduction or, after linking of the hours and wage programs, as a joint cost of both programs. Evidences of ideological and other motivations for the shorter workweek are discussed in CIA/RR ER 61-13, An Evaluation of the Program for Reducing the Workweek in the USSR, March 1961.

\*\* Table 11 follows on p. 53.

\*\*\* Based on "construction and installation workers."

† As a result of the shorter workweek, output per man-hour rose substantially faster in 1959, 1960, and 1961 than output per person. It was reported to have increased in industry by 10.5 percent in 1959, 10 percent in 1960, and 12 percent in 1961 and in construction by 11.0 percent in 1960 and 12 percent in 1961. 148/

Because many of the transfers to the shorter hours -- particularly the problem plants -- were not made until late 1960, the major impact of the shorter hours on production and productivity in 1960 would not be seen in the annual output and productivity figures -- which are annual averages -- until 1961.

Table 11

USSR: Planned and Actual Increases in Output and Productivity  
in Industry  
1959-63

Percentage Increase Above the Previous Year						
Year	Output <u>a/</u>		Productivity (Output per Person) <u>b/</u>		Employment (Implicit Series)	
	Planned	Actual	Planned	Actual	Planned	Actual
1959	7.7 <u>c/</u>	11 <u>d/</u>	5.4 <u>c/</u>	7.4 <u>d/</u>	2.2	3.4
1960	8.1 <u>e/</u>	10 <u>f/</u>	5.8 <u>e/</u>	5.3 <u>f/ g/</u>	2.2	4.5
1961	8.8 <u>h/</u>	9.2 <u>i/</u>	6.0 <u>h/</u>	4.0 <u>i/</u>	2.6	5.0
1962	8.1 <u>j/</u>	9.5 <u>k/</u>	5.6 <u>j/</u>	6.0 <u>k/</u>	2.4	3.3
1963	8.0 <u>l/</u>		5.6 <u>l/</u>		2.3	

a. Official Soviet index.

b. Based on "industrial-  
production personnel."

c. 149/

d. 150/

e. 151/

f. 152/

g. 153/

h. 154/

i. 155/

j. 156/

k. 157/

l. 158/

Employment and wage policy before the wage reform apparently permitted the accumulation of relatively larger reserves of labor in heavy industrial plants than in the lower paying and less favored light industrial plants. In 1959, when many plants in heavy industry were being transferred to new wages and hours, these reserves could be "mobilized" to meet or exceed output and productivity plans, whereas in 1960, when light industry and problem areas of heavy industry were transferred, the relative absence of such internal reserves showed up in the failure to meet established productivity goals in these industries in 1960 and 1961.\*

\* Statistical evidence of low productivity growth in light industries during the changeover period is presented in source 159/.

The poor productivity performance of the construction industry in 1961 similarly reflects the practice of transferring best enterprises first and the timing of the hours reduction. The shortfall in productivity in construction in both 1961 and 1962 may have been related to a failure to make full use of the available reserves in the rush to complete the transfer to shorter hours before the end of 1960, to the proliferation of unfinished construction work criticized by Khrushchev, and to some intensification of the chronic supply difficulties of this sector.

The transfer to new hours and wage rates, therefore, probably was not so costless as it appeared earlier, when a number of optimistic Soviet articles were published in 1959 and early 1960 on the use of internal reserves.

## V. Prospects

The prospects for success of the Soviet wage reform over the next few years may be considered under two headings, "administrative aspects" and "allocative aspects."

### A. Administrative Aspects

The establishment of rational and internally consistent pay schedules, the revision of work norms to make them more consistent with present technological realities, and the reduction of the autonomy of local economic units to set wages ought to put the Soviet leadership in an even better position to control the "wage creep" and to weed out a certain percentage of "bad practices" in industrial enterprises. Two general considerations, however, suggest that the administration of the new system will present continuing problems over the next few years.

The first difficulty is that the rapid pace at which new techniques and new machinery are being introduced into Soviet industry results in considerable changes in the content of individual jobs and considerable instability in what constitutes a fair output norm. The consequence of rapid change is the need for administrative flexibility -- the provision of reasonable leeway for subordinate managers to depart from the rules. The new wage reform by reasserting central administrative control and by eliminating inequities and inconsistencies in the system may give rise to a situation in which managers are hindered by red tape from adjusting to small problems that are properly within their own (local) sphere of authority. In this connection it is probable that the entire wage structure will gradually become untidy once more and an entirely new schedule of rates, differentials, and norms will have to be issued again eventually. The Soviet leadership is fortunate in being able to make such a revision without greatly reducing the money earnings of many workers, because the continued annual gain of 2 to 3 percent in aggregate real wage expenditures provides the means for changing relative wages without hurting any group badly in an absolute sense.

A second important difficulty is that many other important changes in Soviet economic administration have been taking place -- for instance, the bifurcation of the Party economic administrative apparatus into agricultural and nonagricultural branches, the consolidation of the sovnarkhozes from 100-odd to 40 units, and the appointment of a new Supreme Council of the National Economy. The structure for administering wages and the content of that administration are bound to

be affected by these other administrative shakeups. In particular, the question should be asked as to whether these other administrative changes will increase or decrease the administrative flexibility of the new wage system. It is not the purpose of this report, however, to speculate on the possible effects of these developments on the wage reform.

#### B. Allocative Aspects

The wage reform, by itself, would not seem to promise important changes in the manner and efficiency with which economic resources will be allocated within the Soviet economy over the next few years. As was shown in IV, above, the schedule of differentials among industries and among grades of labor remains substantially unchanged. On the positive side, there ought to be the elimination of some (we know not how many) "bad practices" through the reduction of excess individual pay and the renovation of work norms. There should be a reduction in featherbedding and an increase in the rationality and effectiveness of incentive schemes. Yet one may doubt that the Soviet worker is going to bestir himself en masse much more than he has before the wage reform. And, as described in the preceding section of the report, the leadership ought not to count on the immediate elimination of redundant labor -- squirreled away in priority industries -- or on an immediate queuing up to fill vacancies in remote areas, or on an immediate rush to "hot, heavy, and hazardous" jobs.

It is hard to see how the wage reform is going to reduce labor turnover over the next few years.\* More important to the problem of labor turnover are the post-Stalin reduction in government restrictions on changing jobs and the small size of the new age classes entering the labor market.

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\* Many articles in the Soviet press in late 1962 and early 1963 have been devoted to the problem of high turnover at plants in widely scattered parts of the USSR. 160/ In addition, a special study of labor turnover conducted by the Scientific Research Institute of Labor was published in February 1963, supplementing an earlier study which had been published in 1961. 161/

## APPENDIX A

### STATISTICAL TABLES

Tables 12 and 13 present information on the distribution of wage-workers in industry and construction by wage grade and systems of payment. These data were taken from Vestnik statistiki, no 6, June 1962. 162/ The most recent data on these topics, which do not alter the conclusions of this report, may be found in Vestnik statistiki, no 6, June 1963. Table 14 was compiled from a large number of Soviet sources, as noted in the source references to the table.

Table 12

USSR: Distribution of Wages in Industry and Construction, by Wage Grade a/  
as of 31 March 1961

Branch of Industry or Construction	Number of Grades in the Wage Scale	Wage Grade (Percent)										Average Grade		
		I	II	III	IV	V	VI	VII	VIII	IX	X			
All industry	6	14.1	23.3	29.3	19.6	10.4	3.3							3.0
	7	1.9	8.9	22.1	29.1	23.3	10.7	4.0						4.1
	8	0.9	4.5	12.9	22.4	24.9	23.3	8.5	2.6					4.8
	10	0.4	2.3	6.1	13.2	24.5	21.3	15.2	9.5	6.0	1.5			5.8
Ferrous metallurgy	6	12.1	22.7	26.3	22.8	13.5	2.6							3.1
	8	0.3	2.0	8.9	21.0	25.6	24.8	13.6	3.8					5.2
	10	0.1	0.3	2.7	11.6	25.0	24.0	17.9	11.4	5.4	1.6			6.1
Including														
Ore extraction	6	10.6	16.0	22.7	27.6	20.0	3.1							3.4
	8	1.2	4.4	10.3	19.6	25.5	22.5	11.8	4.7					5.0
Production of pig iron, steel, rolled products, alloys, and byproducts	6	12.2	24.7	27.1	22.7	11.6	1.7							3.0
	8	0.2	1.4	8.8	20.8	25.4	25.6	14.0	3.8					5.2
	10	0.1	0.3	2.7	11.4	25.1	24.0	17.7	11.4	5.7	1.6			6.1
Nonferrous metallurgy	6	7.2	14.6	39.5	22.9	11.9	3.9							3.3
	7	2.6	11.6	23.8	27.9	22.1	10.0	2.0						3.9
Including														
Ore extraction	6	6.4	13.3	41.7	22.4	12.0	4.2							3.3
	7	3.9	13.7	25.9	26.4	20.3	8.3	1.5						3.8

a. Data cover all wagers in industry. In construction the data include all wagers employed in construction and installation work and in subsidiary production.

Table 12

USSR: Distribution of Wagerworkers in Industry and Construction, by Wage Grade a/  
as of 31 March 1961  
(Continued)

Branch of Industry or Construction	Number of Grades in the Wage Scale	Wage Grade (Percent)										Average Grade	
		I	II	III	IV	V	VI	VII	VIII	IX	X		
Other enterprises	6	11.2	20.5	29.1	25.2	11.6	2.4						3.1
	7	1.8	10.4	22.6	28.8	23.2	11.0	2.2					4.0
Coal	8	1.1	7.7	15.3	22.2	24.1	25.3	3.4	0.9				4.5
	10	1.5	12.1	20.0	20.1	27.8	13.3	4.4	0.8				3.8
Oil extraction	6	7.3	22.4	30.4	23.8	15.3	0.8						3.2
	7	11.2	18.1	29.9	20.2	15.1	4.3	1.2					3.3
Oil refining	6	7.3	18.3	32.3	25.9	13.2	3.0						3.3
Electric and thermal power	6	14.0	18.4	26.8	24.0	13.4	3.4						3.1
Machine building and metalworking	6	22.4	29.5	24.5	15.2	6.9	1.5						2.6
	7	2.8	8.1	25.5	28.9	19.3	9.5	5.9					4.1
	8	0.2	0.7	15.3	26.5	24.4	20.4	10.3	2.2				4.9
	10	0.2	0.4	2.8	13.4	22.4	27.9	17.8	9.5	4.5	1.1		6.0
Chemicals (excluding wood chemicals, derivatives of alcohol, and rubber and leather footwear)	6	7.1	19.2	28.5	27.1	13.6	4.5						3.3
	7	1.7	8.8	21.2	30.7	25.6	10.0	2.0					4.1
	8	0.1	1.5	7.9	22.4	33.3	17.5	12.9	4.4				5.1
Timber	6	8.7	13.8	43.7	17.8	7.7	8.3						3.3
	7	1.7	4.5	16.8	18.9	25.4	19.1	13.6					4.7

Table 12

USSR: Distribution of Wagerworkers in Industry and Construction, by Wage Grade a/  
as of 31 March 1961  
(Continued)

Branch of Industry or Construction	Number of Grades in the Wage Scale	Wage Grade (Percent)										Average Grade	
		I	II	III	IV	V	VI	VII	VIII	IX	X		
Woodworking (including the match industry)	6	11.6	22.8	34.0	21.0	8.3	2.3						3.0
	7	0.5	2.2	14.6	29.7	26.9	17.0	9.1					4.7
Paper	6	19.7	33.0	22.4	16.0	7.0	1.9						2.6
Wood chemicals and derivatives of alcohol	7	2.9	7.9	26.0	28.8	23.5	8.9	2.0					4.0
Construction materials	6	6.4	19.5	28.3	25.7	16.3	3.8						3.4
	7	1.2	9.9	23.3	28.7	23.3	10.3	3.3					4.1
Including													
Cement	6	1.5	16.5	28.8	34.0	13.3	5.9						3.6
	7	0.8	9.8	24.2	29.3	23.5	9.6	2.8					4.0
Concrete and reinforced concrete units and items	6	3.8	16.9	28.6	28.6	16.5	5.6						3.5
	6	11.1	24.8	31.3	20.4	10.2	2.2						3.0
Light industry (including rubber and leather footwear)	6	5.9	15.2	31.6	25.0	17.4	4.9						3.5
	7	0.7	4.9	19.1	32.1	23.6	11.8	7.8					4.4

Table 12

USSR: Distribution of Wogeworkers in Industry and Construction, by Wage Grade a/  
as of 31 March 1961  
(Continued)

Branch of Industry or Construction	Number of Grades in the Wage Scale	Wage Grade (Percent)										Average Grade		
		I	II	III	IV	V	VI	VII	VIII	IX	X			
Including		5.4	14.7	32.2	25.8	19.0	2.9							3.5
Textiles	6	5.4	14.7	32.2	25.8	19.0	2.9							3.5
Of which:														
Cotton fabrics	6	5.2	15.2	35.7	21.7	20.0	2.2							3.4
Wool products	6	3.5	10.3	27.7	24.8	29.8	3.9							3.8
Silk products	6	3.7	9.7	23.9	23.7	34.3	4.7							3.9
Sewing	6	5.4	14.9	36.0	23.5	13.9	6.3							3.4
Leather, fur, and footwear (including rubber footwear)	6	8.0	17.3	22.5	24.7	17.8	9.7							3.6
	7	0.7	5.4	21.9	30.6	25.2	11.3	4.9						4.3
Including														
Hides	6	3.2	10.4	28.6	35.8	16.6	5.4							3.7
Footwear	7	0.7	5.9	21.9	30.2	25.0	10.9	5.4						4.3
Food	6	11.0	24.5	31.9	21.4	8.4	2.8							3.0
Including														
Fish products	6	10.3	21.0	43.3	18.4	5.3	1.7							2.9
Meat products	6	5.4	17.5	36.0	25.5	12.6	3.0							3.3

Table 12

USSR: Distribution of Wageworkers in Industry and Construction, by Wage Grade a/  
 as of 31 March 1961  
 (Continued)

Branch of Industry or Construction	Number of Grades in the Wage Scale	Wage Grade (Percent)										Average Grade		
		I	II	III	IV	V	VI	VII	VIII	IX	X			
Dairy products	6	9.3	28.5	33.8	19.3	6.8	2.3							2.9
Bakery products	6	10.9	20.3	25.8	29.1	10.0	3.9							3.2
Confectionery products	6	8.5	32.7	28.7	19.2	7.8	3.1							4.1
Tobacco products	6	3.8	17.3	29.9	33.3	5.2	10.5							3.5
Printing	6	18.6	19.9	27.6	17.5	11.9	4.5							3.0
Construction	6	17.5	23.6	26.4	19.6	9.7	3.2							2.9

Table 13

USSR: Distribution of Wagerworkers in Industry and Construction, by System of Payment a/  
as of 31 March 1961

	Piece Rates				Time Rates		Percent
	Straight Piece Rates		Straight Piece Rates Plus Bonuses		Total	Progressive Piece Rates	
	Total	Piece Rates	Rates Plus Bonuses	Time Rates			
All industry	63.0	32.3	29.7	1.0	37.0	6.4	30.6
Ferrous Metallurgy	60.1	14.7	42.1	3.3	39.9	2.6	37.3
Including							
Ore extraction	61.0	9.7	51.1	0.2	39.0	4.8	34.2
Production of pig iron, steel, rolled products, alloys, and byproducts	60.1	15.1	40.8	4.2	39.9	2.3	37.6
Nonferrous metallurgy	41.4	12.0	28.9	0.5	58.6	9.2	49.4
Including							
Ore extraction	42.8	12.3	29.9	0.6	57.2	13.8	43.4
Other enterprises	40.4	11.8	28.3	0.3	59.6	6.3	53.3
Coal	48.9	1.6	47.3		51.1	2.7	48.4
Oil extraction	17.7	6.6	10.2	0.9	82.3	2.0	80.3
Oil refining	8.9	7.5	1.3	0.1	91.1	17.7	73.4
Electric and thermal power	7.6	5.0	1.0	1.6	92.4	9.2	83.2
Machine building and metalworking	57.3	41.5	15.0	0.8	42.7	4.2	38.5

a. Data cover all waggerworkers in industry. In construction the data include all waggerworkers employed in construction and installation work and in subsidiary production.

Table 13

USSR: Distribution of Wogeworkers in Industry and Construction, by System of Payment  
as of 31 March 1961  
(Continued)

	Piece Rates			Time Rates			Percent	
	Total	Straight Piece Rates	Straight Piece Rates Plus Bonuses	Progressive Piece Rates	Total	Straight Time Rates		Time Rates Plus Bonuses
Chemicals (excluding wood chemicals, derivatives of alcohol, and rubber and leather footwear)	39.0	18.0	20.9	0.1	61.0	5.0	56.0	
Timber	80.0	15.5	60.6	3.9	20.0	7.6	12.4	
Woodworking (including the match industry)	76.9	33.0	42.9	1.0	23.1	6.6	16.5	
Paper	58.7	16.6	39.7	2.4	41.3	4.7	36.6	
Wood chemicals and derivatives of alcohol	42.6	20.7	20.2	1.7	57.4	6.1	51.3	
Construction materials	73.8	24.5	48.8	0.5	26.2	7.5	18.7	
Including								
Cement	64.7	17.1	46.4	1.2	35.3	10.5	24.8	
Concrete and reinforced concrete units and items	72.4	24.0	48.2	0.2	27.6	6.4	21.2	
Glass and ceramics	65.1	30.5	33.0	1.6	34.9	10.3	24.6	
Light industry (including rubber and leather footwear)	75.5	36.4	38.1	1.0	24.5	7.3	17.2	
Including								
Textiles	68.4	34.5	32.3	1.6	31.6	8.3	23.3	

Table 13

USSR: Distribution of Wagerworkers in Industry and Construction, by System of Payment  
as of 31 March 1961  
(Continued)

	Piece Rates				Time Rates		Percent
	Total	Straight Piece Rates	Straight Piece Rates Plus Bonuses		Total Time Rates	Time Rates Plus Bonuses	
			Progressive Piece Rates	Bonuses			
Of which:							
Cotton fabrics	66.1	32.0	32.6	1.5	33.9	8.4	25.5
Wool products	61.4	32.5	27.5	1.4	38.6	7.9	30.7
Silk products	66.0	26.5	36.5	3.0	34.0	9.7	24.3
Sewing	87.7	43.2	44.2	0.3	12.3	5.9	6.4
Leather, fur and footwear (including rubber footwear)	79.3	31.3	47.8	0.2	20.7	6.3	14.4
Including							
Hides	67.4	31.5	35.2	0.7	32.6	9.7	22.9
Footwear	82.9	27.7	55.1	0.1	17.1	5.4	11.7
Food	58.4	20.2	37.4	0.8	41.6	10.3	31.3
Including							
Fish products	69.1	13.9	54.5	0.7	30.9	11.8	19.1
Meat products	64.6	19.2	45.1	0.3	35.4	9.5	25.9
Dairy products	58.9	16.3	42.2	0.4	41.1	11.7	29.4
Bakery products	71.5	11.5	59.5	0.5	28.5	6.1	22.4
Confectionery products	67.2	31.9	35.2	0.1	32.8	5.7	27.1
Tobacco products	60.3	18.2	42.1	--	39.7	7.1	32.6
Printing	59.5	43.1	16.0	0.4	40.5	23.6	16.9
Construction	89.8	78.7	10.7	0.4	10.2	5.4	4.8

Table 14

USSR: Selected Grade I Wage Rates of Wagerworkers in Industry and Construction  
1960-61

Branch of Industry	Type of Work	Grade I Wage Rate		Monthly Approximation
		As Reported		
Coal industry (Donbas and L'vov-Volynsk Basins) a/*	Underground workers	Rubles per day	24	615
	Surface work, concentration, briquetting, etc.	Rubles per day	19	485
	Coal concentrating plants	Rubles per day	20	510
Construction b/	Wagerworkers	Rubles per hour	3.20	560
Nonferrous metallurgy c/	Wagerworkers in underground mining	Rubles per day	24.20	620
	Wagerworkers in basic production	Rubles per day	22.60	580
	Wagerworkers in auxiliary production-time workers under normal conditions	Rubles per day	15.70	400
Machine building and metal-working d/	Group 1	Rubles per hour	2.75	480
		Rubles per hour	3.20	560
		Rubles per hour	3.67	640
		Rubles per hour	3.90	680

\* Footnotes for Table 14 follow on p. 70.

Table 14

USSR: Selected Grade I Wage Rates of Wagerworkers in Industry and Construction  
1960-61  
(Continued)

Branch of Industry	Type of Work	Grade I Wage Rate		
		As Reported	Monthly Approximation	
Machine building and metal-working (Continued)	Group 2	Timeworkers under normal conditions	Rubles per hour 2.63	460
		Pieceworkers under normal conditions and time-workers on hot, heavy, and harmful jobs	Rubles per hour 3.05	530
	Group 3 (local industry)	Timeworkers on especially heavy and harmful jobs and pieceworkers on hot, heavy, and harmful jobs	Rubles per hour 3.50	610
		Pieceworkers on especially heavy and harmful jobs	Rubles per hour 3.78	660
	Oil industry	Timeworkers under normal conditions	Rubles per hour 2.37	415
		Pieceworkers under normal conditions and time-workers on hot, heavy, and harmful jobs	Rubles per hour 2.75	480
		Timeworkers on especially heavy and harmful jobs and pieceworkers on hot, heavy, and harmful jobs	Rubles per hour 3.15	550
		Pieceworkers on especially heavy and harmful jobs	Rubles per hour 3.40	595
	At refineries and synthetic plants e/	Pieceworkers under normal conditions	Rubles per day 20.30	520

Table 14

USSR: Selected Grade I Wage Rates of Wagerworkers in Industry and Construction  
1960-61  
(Continued)

Branch of Industry	Type of Work	Grade I Wage Rate		Monthly Approximation
		As Reported		
Oil industry (Continued)	Piceworkers under heavy and harmful conditions	Rubles per day	22.90	585
	Piceworkers under especially heavy and harmful conditions	Rubles per day	26.90	690
	Timeworkers under normal conditions	Rubles per day	17.90	460
	Timeworkers under heavy and harmful conditions	Rubles per day	20.30	520
At mines	Timeworkers under especially heavy and harmful conditions	Rubles per day	24.30	620
	Underground operations At surface of mines	Rubles per day	25.80	660
Construction glass, soft roofing, and construction ceramics f/	Timeworkers under normal conditions	Rubles per hour	2.63	460
	Timeworkers under hot, heavy, and harmful conditions and piceworkers under normal conditions	Rubles per hour	2.98	520
Chemicals (1958 scale) g/	Piceworkers under hot, heavy, and harmful conditions	Rubles per hour	3.38	590
	Timeworkers under normal conditions	Rubles per day	15.70	400
	Timeworkers under hot, heavy, and harmful conditions	Rubles per day	17.80	455

Table 14

USSR: Selected Grade I Wage Rates of Wageworkers in Industry and Construction  
1960-61  
(Continued)

Branch of Industry	Type of Work	Grade I Wage Rate		Monthly Approximation
		As Reported		
Chemicals (1958 scale) (Continued)	Timeworkers under especially hot, heavy, and harmful conditions	Rubles per day	21.30	545
	Pieceworkers under normal conditions	Rubles per day	17.80	455
	Pieceworkers under hot, heavy, and harmful conditions	Rubles per day	20.10	515
	Pieceworkers under especially hot, heavy, and harmful conditions	Rubles per day	23.60	605
	Underground workers mining most chemicals	Rubles per day	22.60	580
	Underground workers mining arsenic, apatite, and sulfur	Rubles per day	24.00	615
Synthetic leather h/ ing i/	Timeworkers under normal conditions	Rubles per day	15.70	400
	Timeworkers under harmful conditions	Rubles per day	17.80	455
	Pieceworkers under normal conditions	Rubles per day	17.80	455
	Pieceworkers under harmful conditions	Rubles per day	20.10	515
Timber cutting and float- ing i/ Logging settlements and camps Other	All Timeworkers	Rubles per hour	3.20	560
		Rubles per hour	2.67	465
	Pieceworkers	Rubles per hour	2.86	500

Table 14

USSR: Selected Grade I Wage Rates of Wageworkers in Industry and Construction  
1960-61  
(Continued)

Branch of Industry	Type of Work	Grade I Wage Rate	
		As Reported	Monthly Approximation
Cellulose-paper industry (basic and auxiliary shops) j/	Timeworkers under normal conditions	Rubles per hour 2.67	465
	Timeworkers under hot, heavy, and harmful conditions and pieceworkers under normal conditions	Rubles per hour 2.98	520
	Pieceworkers under hot, heavy, and harmful conditions	Rubles per hour 3.38	590
Textile industry k/	Timeworkers under normal conditions	Rubles per hour 2.75	480
	Timeworkers in heavy and harmful work and pieceworkers under normal conditions	Rubles per hour 3.10	540
	Pieceworkers in heavy and harmful work	Rubles per hour 3.38	590
Group I	Timeworkers under normal conditions	Rubles per hour 2.58	450
	Timeworkers in heavy and harmful work and pieceworkers under normal conditions	Rubles per hour 2.92	510
	Pieceworkers in heavy and harmful work	Rubles per hour 3.20	560
Other	Timeworkers	Rubles per hour 2.52	440
	Pieceworkers	Rubles per hour 2.75	480

Table 14

USSR: Selected Grade I Wage Rates of Wagemakers in Industry and Construction  
1960-61  
(Continued)

Branch of Industry	Type of Work	Grade I Wage Rate	
		As Reported	Monthly Approximation
Sewing industry <u>1/</u>			
Group II	Timeworkers under normal conditions Timeworkers under heavy and harmful conditions and pieceworkers under normal conditions pieceworkers under heavy and harmful conditions	Rubles per hour 2.75 Rubles per hour 2.92 Rubles per hour 3.15	480 510 550
Group I	Timeworkers under normal conditions Timeworkers under heavy and harmful conditions and pieceworkers under normal conditions Pieceworkers under heavy and harmful conditions	Rubles per hour 2.58 Rubles per hour 2.75 Rubles per hour 2.98	450 480 520
Bakery industry <u>2/</u>			
In cities and workers' settlements	Under normal working conditions Under hot, heavy, and harmful conditions	Rubles per hour 2.56 Rubles per hour 2.86	450 500
In rural areas	All jobs	Rubles per hour 2.30	400

- a. 163/  
 b. 164/  
 c. 165/  
 d. Group I covers workers in aviation, automotive, tool, defense, bearings, radio-technical, machine tool, shipyard, tractor, electromechanical, transport, energy, agricultural machinery, and instrument enterprises, and persons making metallurgical,

Table 14

USSR: Selected Grade I Wage Rates of Wageworkers in Industry and Construction

1960-61

(Continued)

heat treating, oil drilling, oil refining, chemical mining, pumping-compressing, and refrigerating equipment. Group II covers all remaining machine building and metalworking enterprises subordinate to sovmarkhozes, ministries, and departments. Workers in machine building enterprises subordinate to local soviets are paid according to group III rates -- 10 percent below those of group II. 166/

e. 167/. Wages at refineries and synthetic plants are the same as those at chemical plants. At refineries under local jurisdiction (local industry), wages are 10 percent lower.

f. 168/

g. 169/

h. 170/

i. 171/

j. 172/

k. 173/. Group I rates apply to most plants; group II may be estimated by regional councils of national economy in agreement with the state committee for individual enterprises in Moscow and Leningrad and in Latvian, Lithuanian, and Estonian cities "in consideration for wage levels already achieved"; and, finally, special rates (other) are established for plants engaged in the primary processing of cotton, flax, and similar crops.

l. Group I rates apply to most plants; group II may be established by regional councils of national economy in agreement with the state committee for individual enterprises in Moscow and Leningrad and in Latvian, Lithuanian, and Estonian cities "in consideration for wage levels already achieved"; and, finally, special rates (other) are established for plants engaged in the primary processing of cotton, flax, and similar crops. 174/

m. 175/

APPENDIX B

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APPENDIX C

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